ARCTIC BIBLIOGRAPHY

PREPARED FOR AND IN COOPERATION WITH

THE DEPARTMENT OF DEFENSE

UNDER THE DIRECTION OF

THE ARCTIC INSTITUTE OF NORTH AMERICA

EDITED BY

MARIE TREMAINE

VOL. IX



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FOREWORD

The purpose of the *Arctic Bibliography*, since its inception in 1947, has been to provide a key to scientific publications relating to the Arctic and sub-Arctic areas and to low temperature conditions available in the principal libraries of the United States and Canada, to assemble and systematize this material so that it may be readily available to scientists and others concerned with problems of northern research and development. In continuation of this program, volume 9, like the preceding volumes of the Bibliography, has been prepared by the Arctic Institute of North America for the Department of Defense under a contract with the Office of Naval Research.

The work has been carried out under the direction of Marie Tremaine, who has served as Editor and Director of the project since its beginning. In previous years the *Arctic Bibliography* has been supported almost entirely by the Departments of the Army, Air Force and Navy. In the fiscal year 1959–60 the military contributions have been supplemented by grants from the National Science Foundation, the National Institutes of Health, the Defense Research Board of Canada, and the National Geographic Society.

Subjects receiving special emphasis in volume 9 include: Acclimatization; Birds; Body systems, human and other; Botany; Construction; Ecology, animal and plant; Economic and social conditions; Environmental effects of darkness, humidity, light, and low temperature on animals, man, and plants; Eskimos; Expeditions, especially Russian; Fisheries and fishes; Forests and forestry; Geology; Growth and development; Hypothermia; Ice and ice conditions; Insects; Low temperature effects on aircraft, construction materials, lubricants, metals, motorized equipment,

rubber, etc.; Meteorology; Mineralogy; Oceanography; Physiology; Snow.

Of the 7,192 publications abstracted in this volume, 3,170 are in English, 2,548 in Russian (a marked increase over other years), 790 in Swedish, Norwegian, and Danish, 338 in German, and 346 in other languages. Over 90 percent of these publications are recent, 5,420 of them having appeared in 1957 and 1958, and 1,145 from 1950 to 1956.

The Directing Committee and the Arctic Institute wish to express their gratitude to the Librarian of Congress for continuing to provide working space for the project, to Miss Tremaine and the Bibliography staff who have prepared the volume, and to the military agencies and other organizations whose generous support has made the work possible.

Henry B. Collins
Chairman, Directing Committee
Arctic Bibliography

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INTRODUCTION

The *Arctic Bibliography*'s ninth volume, the largest in the series to date, makes manifest* our effort to provide more informative abstracts, (5.4 abstracts per page, as compared with 6.3/page in vol. 4, and 6.7/page in vol. 1–2); also our effort to refine the index toward greater efficiency and economy.

Three modes of arranging the Bibliography were considered at its inception in 1947: by subjects, regions, or authors. The extent of the literature, also the interdisciplinary and interregional character of a good deal of it, decided the Directing Committee to favor the author arrangement, and, in view of its economy, to offer full citations and content notes. A regional arrangement in 69 sectors and a subject arrangement according to major disciplines were also provided, but with abridged citations. These ancillary arrangements were combined and intercalated with additional, topical listings to form an index of a rather composite nature. This pattern is maintained, and adapted to particular features of the successive volumes of the Bibliography, also to the new subject matter and geographic nomenclature in this rapidly changing area.

The increased role of government agencies, scientific institutions, congresses, etc., in the publication as well as the initiation of research is reflected in the increasing number of corporate authors in these volumes. As a rule, a conspectus of the entire publication is offered under the name of the institution as corporate author, and the contributions to it by individual scientists are abstracted under their names, so far as they can be ascertained.

A notable feature of volume 9 is the emergence of several Soviet institutions and serials devoted exclusively or extensively to northern research. The flood of Russian geological literature which

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	v. 4	*v. 9*
*Total pages	1591	1599
Authors, pages	1204	1305
Items	7627	7192
Index, pages	387	294

has followed many years' thin trickle, includes the *Trudy*, *Informat͡sionnyĭ b͡iulleten'*, and *Sbornik statei po paleontologii* of the Institute of Geology of the Arctic in Leningrad. *Problemy Arktiki* appears again with two collections of articles a year beginning 1956. The Academy of Sciences' Commission on Problems of the North appears with its *Problemy Severa* and *Letopis' Severa*. The Academy's Kola, Karelian, Komi, and Yakut Branches with their *Izvestii͡a* and *Trudy* report work on soils, minerals, agriculture, and from the White Sea and Murmansk Biological Stations, on fisheries. The Botanical Institute's Vegetation of the far North series, the Permafrost Institute's *Trudy* and *Materialy*, all these and others indicate the multifarious activities in the Soviet North. One field of prime importance, is still but lightly reported from the U.S.S.R., namely medicine.

Among recent publications of use to a variety of specialists, attention should be drawn to statistical handbooks for the RSFSR, Komi A.S.S.R., Murmansk and Arkhangel'sk Provinces, to regional economic surveys of Chukotka by Gushchin and Afanas'ev, Khanty-Mansi National District by Kokosov and others, and of the Yakut A.S.S.R. by the Academy of Sciences' Institute of Economics; also to the new *Atlas of Canada*, to Dunbar and Greenaway's *Arctic Canada from the air*, and the new edition of *Geology and economic minerals of Canada* from the Canadian Geological Survey.

Considering the earlier material, H. H. Gran's plankton study, the Leningrad Hydrological Institute's *Issledovaniia morei SSSR* with works of Deri͡ugin, Gur'i͡anova, etc., and minor papers from Nares' expedition are among those completed for this volume. Earlier material probably will make up 5–10 percent of our program for some time to come and priority will be given to publications hitherto unavailable, the majority of foreign origin, to works cited as significant by current authors or requested by users of the Bibliography, and to background studies in subject fields lately introduced into it. Cooperative effort is needed to bring earlier foreign publications to attention. Scientists' requests and suggestions are valued by the editor, who takes this opportunity also to thank those so kind as to send reprints of their current papers.

Marie Tremaine
Director of the Bibliography Project

June 1960

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†Died Feb. 19, 1960.

LIBRARIES

in which works in

ARCTIC BIBLIOGRAPHY

have been used by the staff of the

ARCTIC INSTITUTE OF NORTH AMERICA

AMAU—Air University, Maxwell Field, Montgomery, Ala.
AkAH—Arctic Health Research Center, Anchorage, Alaska.
AkU—University of Alaska, College Alaska.
CSt-H—Hoover Memorial Library Stanford University, Stanford, Calif.
CU—University of California, Berkeley, Calif.
CaBV—Vancouver, B.C., Public Library.
CaMAI—Arctic Institute of North America, Montreal, Canada.
CaMM—McGill University, Montreal, Canada.
CaO—Library of Parliament, Ottawa.
CaOA—Dept. of Agriculture, Ottawa.
CaOAr—Public Archives of Canada, Ottawa.
CaOF—Forestry Branch, Dept. of Resources and Development, Ottawa.
CaOG—Geological Survey, Ottawa.
CaOGB—Geographical Branch, Dept. of Mines and Technical Surveys, Ottawa.
CaOH—Dept. of National Health and Welfare, Ottawa.
CaOM—Dept. of Mines and Technical Surveys, Ottawa.
CaON—National Research Council of Canada, Ottawa.
CaOS—Dominion Bureau of Statistics, Ottawa.
CaOT—Dept. of Transport, Ottawa.
CaOUS—University of Ottawa, St. Joseph's Scholasticate, Ottawa.
CaT—Public Library, Toronto, Canada.
CaTU—University of Toronto, Toronto, Canada.
CaWH—Hudson's Bay Company, Winnipeg.
CtY—Yale University, New Haven, Conn.
DA—U.S. Dept. of Agriculture, Washington, D.C.
DAI—Arctic Institute of North America, Washington, D.C.
DAWS—Air Weather Service, Technical Information Files, Andrews Air Base, Washington, D.C.
DBRE—Bureau of Railway Economics, Washington, D.C.
DBS—National Bureau of Standards, Washington, D.C.
DCE—Carnegie Endowment for International Peace, Washington, D.C.
DCGS—U.S. Coast & Geodetic Survey, Washington, D.C.

DCT—Carnegie Institution of Washington, Dept. of Terrestrial Magnetism, Washington, D.C.

DCU—Catholic University of America, Washington, D.C.

DES—U.S. Corps of Engineers, Engineer School, Fort Belvoir, Va.

DF—U.S. Fish and Wildlife Service, Washington, D.C.

DGS—U.S. Geological Survey, Washington, D.C.

DGU—Georgetown University, Washington, D.C.

DH—National Institutes of Health, Bethesda, Md.

DI—U.S. Dept. of the Interior, Washington, D.C.

DIC—Interstate Commerce Commission, Washington, D.C.

DLC—Library of Congress, Washington, D.C.

DM—U.S. Bureau of Mines, Washington, D.C.

DN-HO—U.S. Navy, Hydrographic Office, Suitland, Md.

DN-RL—U.S. Navy, Naval Research Laboratory, Washington, D.C.

DN-Sh—U.S. Navy, Bureau of Ships, Washington, D.C.

DN-YD—U.S. Navy, Bureau of Yards and Docks, Washington, D.C.

DNG—National Geographic Society, Washington, D.C.

DNLM—National Library of Medicine, Washington, D.C.

DNO—U.S. Naval Observatory, Washington, D.C.

DNR—U.S. Office of Naval Records and Library, Washington, D.C.

DP—U.S. Army Library, Pentagon, Washington, D.C.

DPHS—U.S. Public Health Service Library, Bethesda, Md.

DPR—U.S. Bureau of Public Roads.

DSI—Smithsonian Institution, Washington, D.C.

DSt—U.S. Dept. of State, Washington, D.C.

DWB—U.S. Weather Bureau, Washington, D.C.

ExPF—Expéditions Polaires Françaises, Paris, France.

GB-MO—Great Britian, Meteorological Office, Harrow, England.

IEN—Northwestern University, Evanston, Ill.

IU—University of Illinois, Urbana, Ill.

InU—Indiana University, Bloomington, Ind.

MB—Public Library, Boston, Mass.

MH—Harvard University, Cambridge, Mass.

MH-A—Harvard University, Arnold Arboretum, Boston, Mass.

MH-BH—Harvard University, Blue Hill Observatory, Milton 85, Mass.

MH-BL—Harvard University, Biological Laboratories, Cambridge, Mass.

MH-F—Harvard University, Farlow Reference Library of Cryptogamic Botany, Cambridge, Mass.

MH-G—Harvard University, Gray Herbarium, Cambridge, Mass.

MH-L—Harvard University, Law School, Cambridge, Mass.

MH-M—Harvard University, Medical School, Cambridge, Mass.

MH-P—Harvard University, Peabody Museum, Cambridge, Mass.

MH-Z—Harvard University, Museum of Comparative Zoology, Cambridge, Mass.

MWC—Clark University, Worchester, Mass.

MiD—Public Library, Detroit, Mich.

MiU—University of Michigan, Ann Arbor, Mich.

MnU—University of Minnesota, Minneapolis, Minn.
MoU—University of Missouri, Columbia, Mo.
NBuG—Grosvenor Library, Buffalo, N.Y.
NN—Public Library, New York, N.Y.
NNA—American Geographical Society, New York, N.Y.
NNAAl—American Alpine Club, New York, N.Y.
NNBG—New York Botanical Garden, New York, N.Y.
NNC—Columbia University, New York, N.Y.
NNC-M—Columbia University, Medical Library, New York, N.Y.
NNE—Engineering Societies' Library, New York, N.Y.
NNM—American Museum of Natural History, New York, N.Y.
NNN—New York Academy of Medicine, New York, N.Y.
NhD—Dartmouth College, Hanover, N.H.
NhD-Stef—Stefansson Library, Dartmouth College, Hanover, N.H.
NPOslo—Norsk Polarinstitutt, Oslo, Norway.
OCl—Public Library, Cleveland, Ohio.
OO—Oberlin College, Oberlin, Ohio.
OU—Ohio State University, Columbus, Ohio.
PP—Free Library of Philadelphia, Philadelphia, Pa.
PU—University of Pennsylvania, Philadelphia, Pa.
SPRI—Scott Polar Research Institute, Cambridge, Eng.
ViU—University of Virginia, Charlottesville, Va.

ARCTIC BIBLIOGRAPHY

49087. A., V. [Akutskie muzykanty v Moskve. (Sovetskaia muzyka, Feb. 1958. god 22, no. 2, p. 155–57, illus.) Text in Russian. ***Title tr.:*** Yakut musicians in Moscow.

Describes guest appearances in Moscow of Yakut theatrical groups on the occasion of the 325th jubilee of Yakutia's annexation by Russia. Of particular interest was the performance of the first Yakut opera "N'urgun Bootur," written by the Yakut composer M. Zirkov, libretto by D. Sivtsev (Suorun Omollon). The high musical value of this opera, using characteristic Yakut folk tunes and based on the "olonkho" heroic folk epos, is discussed. The names of performers, directors, etc., are listed. ***Copy seen:*** DLC.

49088. AAGESEN, AAGE. Das Wirtschaftsleben Grönlands. (Geographische Rundschau, Sept. 1958. Jahrg. 10, Heft 9, p. 348–53, map.) Text in German. Edited by Wolf Tietze. ***Title tr.:*** Greenland's economic life.

Discusses the natural especially climatic conditions, distinguishing subarctic, arctic and high arctic zones; population development, hunting, trapping, fishing, and sheep and reindeer breeding are reviewed; the rise of agriculture and exploration of natural resources are noted, also the growth of air transportation. Five economic regions are characterized: Julianehåb, Godthåb, Disko Bugt, the Nugssuaq Peninsula, and the east coast; the first two considered the most promising. Fisheries, stock (cattle) raising, agriculture, mining, and industry are the important branches of the economy for the future. ***Copy seen:*** DLC.

49089. ÅHLIN, K. Isfri ränna med komprimerad luft. (Svenska vägföreningen. Tidskrift, Mar. 1954. årg. 41, häfte 2, p. 76–77, illus.) Text in Swedish. ***Title tr.:*** Ice-free channels by use of compressed air.

Use of plastic pipe of one-and-half inch diam., with 75 mm. holes at 10 m. intervals, has been found feasible and economical to maintain ferry channels over Swedish lakes in winter. The method depends on overturning of warmer water from lower levels in the lake and is most successful in still water at least 10 m. deep. A compressor with 2m.³/min. capacity maintained a 900 m. channel 10–15 m. wide. In northern Sweden winter traffic is usually over the ice, although this road maintenance is expensive. ***Copy seen:*** DLC.

49090. ÅLESUND, Norway. Ålesund 100 år, 1848–1948. Utg. av Reklamekomitéen for Ålesunds 100-års jubileum. Ålesund, 1948? 55 p. 121 illus., map. Text in Norwegian. ***Title tr.:*** Ålesund centennial, 1848–1948. Published by the Advertising Committee for Ålesund's centennial.

Photographs of the city and environs, its fishery (cod, herring), sealing, boatbuilding, textile and other industries, community activities, etc., accompanied by brief text. This island seaport (62°28′ N. 6°8′ E.) is a base for arctic fishing ventures from Svalbard to West Greenland. Fifty years of sealing by Ålesund vessels was celebrated in 1948 also, they brought back half of the Norwegian catch for that year.

Copy seen: DLC.

49091. AALTONEN, VIKTOR TOIVO, 1889–1955. Boden und Wald, unter besonderer Berücksichtigung des nordeuropäischen Waldbaus. Berlin, Paul Parey, 1948. 457 p. illus., graphs, tables. Approx. 800 refs. Text in German. ***Title tr.:*** Soil and forest, with particular consideration of north European silviculture.

Detailed review of the literature on the influence of geology, geography, and climate upon soil and forest, and of the latter

upon one another. Emphasis is on conditions in Fennoscandia. Physical, chemical, and biological soil characteristics are related to the forest, undergrowth, litter, water, temperature, porosity, and aeration. The mineral, organic, and biological content of soils, their chemical reaction, changes resulting from vegetal cover, leaching and burning over, are evaluated with respect to determination of forest increment. The varying effects on soil of forest succession, competition, stand, and fertilization are analyzed. Soil and forest classifications developed in Finland, Sweden, and Norway are outlined. In modern practice they are scientifically integrated in making silviculture one of the region's chief economic activities. ***Copy seen:*** DLC.

49092. AALTONEN, VIKTOR TOIVO, 1889–1955. De finska skogstyperna i markforskningens ljus. (Svenska skogvårdsföreningen. Tidskrift, 1951. årg. 49, nr. 3, p. 228–42, illus., tables, graphs.) Text in Swedish. ***Title tr.:*** Finnish forest types from the soil-research viewpoint.

Summarizes information, from research studies and state surveys, on the relationship between different characteristics of the soil (physical properties, depth of humus layer and the A horizon, chemical and microbiological properties), and the occurrence of Cajander's forest types in Finland. ***Copy seen:*** DA.

49093. AASBØ, KNUT. Glimt fra noen finske og svenske gruver. (Tidsskrift for kjemi, bergvesen og metallurgi, 1956. årg. 16, nr. 2, p. 34–40, cross-sections, diagrs., graph.) 14 refs. Text in Norwegian. ***Title tr.:*** Glimpses of some Finnish and Swedish mines.

Describes visit to several Finnish and Swedish mines, including Malmberget, Luossavaara and Kiirunavaara. Nature of the orebodies, characteristics of deposition, types of machinery, and methods of ore removal are reviewed. The use of warm compressed air to prevent freezing of drills is noted; personnel accommodations described. ***Copy seen:*** DLC.

49094. AASEN, OLAF. Norwegian herring investigations in the Norwegian Sea 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 176–78, tables, maps.)

Includes information on fish-location activities, length and age distribution of catches, predominant year-class, distribution of maturity stages, location of herring approaching the coast for spawning. ***Copy seen:*** DI.

49095. AASGAARD, GUNNAR, 1888– . Store Norske Spitsbergen Kulkompani A/S. (Tidsskrift for kjemi, bergvesen og metallurgi, Mar. 1950. årg. 10, nr. 2B, p. 122–26, map, illus., tables.) Text in Norwegian. ***Title tr.:*** The Great Norwegian Spitsbergen Coal Company, Ltd.

Describes the coal mines at Longyearbyen, 78° N. 1000 km. north of Tromsø, Norway, and reviews their history and operation, the climate, navigation, and post-war construction. Quality of the coal assures it a competitive position in the open market despite high production costs. Two mining (and one management) shifts daily are used in operation of the main drift; 3 tons/man/day are produced. Coal is transported from the mine by a cableline with a 100 ton/hour capacity to a quay 6 km. away with 150,000 tons storage capacity and accommodation for ships up to 11,000 tons. Post-war shipments to Norway have exceeded 1 million tons and 1947–1949 operations showed a profit. Coal composition and production figures are tabulated. ***Copy seen:*** DLC

49096. AASGAARD, GUNNAR, 1888– . Svalbard og kulldriften der. (Tidsskrift for kjemi, bergvesen og metallurgi, Feb. 1951. årg. 11, nr. 2, p. 23–30, illus., map, profiles.) Also pub. in Teknisk ukeblad. Mar. 1951, årg. 98, nr. 12, p. 223–30. Text in Norwegian. ***Title tr.:*** Svalbard and the coal mines there.

Reviews the history of this industry and geology of the coal. Variations in quality and grade of seams from middle and upper Devonian, Cretaceous and Tertiary deposits of Spitsbergen and upper Devonian coal in Bjørnøya are discussed in relation to specific mines. Composition and age of the coal, nationality of the operator, annual tonnage and number of personnel are tabulated for each mine. ***Copy seen:*** DLC.

ABARCA, L. C., *see* Weiss, S. J., *and others.* Preliminary study of snow values . . . *1956.* No. 55981.

49097. ABASHKINA, A. V. Novye vidy korallov *Lithostrotion* iz verkhnevizeĭskikh otlozheniĭ Severnogo Urala i ikh stratigraficheskoe raspredelenie. (Moskovskoe obshchestvo ispytateleĭ

prirody. Bûlleten', nov. seriâ, god 129, t. 63, otdel geologicheskiĭ, Nov.–Dec. 1958. t. 33, vyp. 6, p. 137–49, illus., tables.) 13 refs. Text in Russian. ***Title tr.:*** New species of *Lithostrotion* corals from upper-Visean deposits of the Northern Ural and their stratigraphic distribution.

Describes Lower Carboniferous (-Mississippian) *Lithostrotion* and *Diphyphyllum* corals in collections from the upper and middle Pechora River basin (approx. 62°–65° N. 56°–58° E.). The stratigraphic position of these corals (listed) is outlined. The new species: *L. amplexocariniaformis, L. complexocolumellata,* and *L. breviseptata,* are fully described and illus. in photos. ***Copy seen:*** DLC.

49098. ABBOU, R., *and* **M. VALLIÈRE.** Étude de l'action hypoglycémiante de l'insuline au cours de l'hypothermie provoquée par réfrigération externe. (Société de Biologie, Paris. Comptes rendus 1956. t. 150, no. 10, p. 1697–1700, illus. table.) 4 refs. Text in French. ***Title tr.:*** Study of the hypoglycemic action of insulin during hypothermia induced by external cooling.

A study of rabbits with normal and mildly depressed temperature (33°, and 27° C.) and glycemia produced spontaneously and under the action of insulin. Under the conditions of the experiment, the hypoglycemic action of insulin did not manifest itself in the usual way: if it became apparent, it did so slowly, when the animals recovered from direct refrigeration. ***Copy seen:*** DNLM.

49099. ABEL, HERBERT, *and* **H. JESSEN.** Kein Weg durch das Packeis; Anfänge der deutschen Polarforschung, 1868–1889. Bremen, C. Schünemann, 1954. 87 p. illus., port., maps. (Schriften der Wittheit zu Bremen, Reihe D: Abhandlungen and Vorträge, Bd. 20 [i.e., 21] Heft 1.) 14 refs. Text in German. ***Title tr.:*** No way through the pack ice; beginnings of German polar exploration 1868–1889.

An account suggested by the discovery of new materials on this period in the archives of the Geographische Gesellschaft in Bremen. It deals with August Petermann's early efforts and final success in organizing a (first) German arctic expedition; with the preliminary or reconnaissance trip May–Sept. 1868, on the *Grönland,* (called *Germania* by Petermann), Karl Koldewey in command, its aim, the voyage up to the East Greenland pack ice and return (cf. No. 9021). Activities toward another attempt: the Second German North Polar Expedition, also under Koldewey, with the *Germania* and *Hansa,* June 1869 to Sept. 1870; loss of the *Hansa,* voyage of the *Germania* as far as Franz Joseph Fjord on the East Greenland coast (73°11′ N.), and return (cf. No. 5626). The expedition is evaluated; smaller summer trips to the Arctic Ocean in 1869–1871 are also described; efforts for further advances to the North, and abandonment of large-scale exploration are discussed. This account is concerned with organizational matters, the mounting of the expeditions rather than the course of the explorations or their results. ***Copy seen:*** DLC.

49100. ABELSEN, KNUD. En grønlaender ser på den ny tid. (Grønland, Nov. 1958. nr. 11, p. 423–30, illus.) Text in Danish. ***Title tr.:*** A Greenlander looks at the new era.

General survey, by a district judge, of development in local government, local policy, administration of justice, cultural work, etc., with comments.

Copy seen: DLC.

49101. ABRAHAMS, *Sir* **ADOLPHE.** Diet and clothing in winter. (Practitioner, Dec. 1957. v. 179, no. 1074, p. 685–88.)

Discusses function of clothing; variability in sensitiveness to cold; materials and fabrics for winter garments, both outer and under clothing; protection of hands and feet; hats and caps; food.

Copy seen: DNLM.

ABRAHAMSEN, NORMAN S. B., *see* Irving, L., *and others.* On the melting points of animal fats in cold climates. *1957.* No. 51960.

49102. ABRAHAMSON, SHERMAN RAYMOND, 1920– . Geography of the Naknek region, Alaska. Worcester, Mass., Clark University, 1949. 148 p. 49 illus., 16 diagrs., 16 maps incl. 4 fold. Typescript. Ph. D. dissertation. 29 refs.

The Naknek region is a representative portion of the Naknek-Nushagak lowland approx. 58°40′ N. 157° W., in southwestern Alaska, north and east of Bristol Bay; it separates the Alaskan-Aleutian ranges on the east from the Ahklun Mts. on the north and west. The geography is described and mapped, with consideration of the geology, two stages of glacial activity, climatic data, vegetation, and permafrost. Typical keys for represent-

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ing these were developed with the aid of aerial photographs. Plant species from eight communities are identified.

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49103. ABRAMOV, L. T., *and* **N. V. ZAMORINA.** Osennīĭ remont i podgotovka osushitel'noĭ seti na aėrodromakh k zimneĭ konservat͡sii. (*In:* U.S.S.R. Armiĭa. Upravlenie voenno-vozdushnykh sil. Sbornik materialov po stroitel'stvu . . . aėrodromov. Moskva, 1942. vyp. 1, p. 69–73.) Text in Russian. ***Title tr.:*** Fall maintenance of airfield drainage system for winter preservation.

"Procedures are suggested for the maintenance of drainage systems for airfields using grass runways. Maintenance work should be completed before the first freeze and snowfall. It is recommended that open drainage facilities be cleared, sodded, and equipped with reinforced sides of rock and wood wherever the grade ranges from 3 to 5 m./km. Closed drainage systems should be checked for plugs to prevent flooding sections of the airfield during the spring run-off."—SIPRE. ***Copy seen:*** DLC.

49104. ABRAMOV, R. V. Nishi vytaivaniĭa. (Priroda, July 1957, no. 7, p. 112–13, 2 illus.) Text in Russian. ***Title tr.:*** Undercutting due to thawing.

"Bank erosion along the lower Lena River associated with the thawing of permafrost and destructive action of the river water is described. These processes occur along banks consisting of frozen sand, and reach a maximum intensity near the end of summer, when the active layer (about 1.5 m. thick) thaws completely. The cohesive strength of the warming frozen strata becomes insufficient to prevent collapse of the undercut banks with their vegetation, trees, etc."—SIPRE. ***Copy seen:*** DLC.

49105. ABRAMOV, V. F., *and others.* Sravnitel'naĭa o͡tsenka otboĭki rudy glubokimi skvazhinami na apatitovom rudnike. (Gornyĭ zhurnal, May 1958, no. 5, p. 10–14, illus., table.) Text in Russian. *Other authors:* D. R. Kaplunov, *and* O. A. IÀkovlev. ***Title tr.:*** Comparative evaluation of ore breaking in apatite mines by deep bored wells.

Geological characteristics of apatite-nepheline deposits in the Kirov mines in Kola Peninsula are described. The conventional blasting method was found inconvenient because of the large amount of shattering and the removing of crushed ore along narrow passages; a new method, producing larger blocks by placing the charges at greater depth, is introduced. Boring equipment and arrangement of explosives' chambers, etc., are described and illus. Comparative production data for the two methods are tabulated.

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49106. ABRAMOVA, V. D. Plankton kak indikator vod razlichnogo proiskhozhdeniĭa v morĭakh Severnoĭ Atlantiki. (Murmansk. Polĭarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozĭaĭstva i okeanografii. Trudy, 1956. vyp. 9, p. 69–92, illus. tables, maps.) 25 refs. Text in Russian. ***Title tr.:*** Plankton as indicator of waters of different origin in the North Atlantic seas.

A study of the effects of temperature and currents on the quantitative and qualitative distribution of the plankton, based on collections made during spring and summer of 1953 and compared with such of 1951 and 1952. Main forms characteristic of certain environments are determined and used as indicators of the hydrological regime of the area. Fundamentally two groups were discerned: cold-water and warm-water forms. Their frequency, occurrence or intermingling is indicative of water masses, their movements, the cold water front, etc. Qualitative analysis of the plankton also revealed annual fluctuations in its composition. ***Copy seen:*** DI.

49107. ABRAMSON, DAVID I., *and others.* Relationship between a range of tissue temperature and local oxygen uptake in the human forearm, 1; changes observed under resting conditions. (Journal of clinical investigation, July 1958. v. 37, no. 7, p. 1031–48, illus. tables.) 10 refs. *Other authors:* A. Kahn, S. Tack, *Jr.*, G. A. Turman, H. Rejal, *and* C. J. Fleischer.

Account of investigations on 17 healthy volunteers, aged 17–41 years, with the superficial temperature of the arm raised (by a bath) to 39° C. or lowered to 35.4° and 26.9° C. Raising the local temperature increased the resting oxygen uptake while lowering it reduced the uptake. The results are in line with *in vitro* studies of tissue strips and with conditions during general hypothermia. Part 2 of this series does not deal with lowered temperatures. ***Copy seen:*** DLC.

49108. ABRAMSON, H. NORMAN. Theoretical investigations of the four-

electrode crevasse detector. (American Geophysical Union. Transactions, Dec. 1957. v. 38, no. 6, p. 849–56, illus., tables, diagrs.)

"Analyses based on general electromagnetic field equations were undertaken, but these proved tractable only for rather simple cases not extending to the presence of a cavity. After a study indicated magnetic induction effects to be negligible, analysis of the electrostatic field led to an expression for the potential at any point in the field, with allowance for the presence of a spherical or cylindrical cavity. A numerical solution of the Laplace equation afforded another technique, using the Southwell relaxation method. A third approach was to model the problem in a plane using conducting paper to obtain an analog solution. The analog technique was found to be the most expeditious one, and it is flexible as to the shape of the cavity cross-section. Specimen curves and tables are given."—Author's abstract. ***Copy seen:*** DLC.

49109. ABRIKOSOV, G. G. K faune mshanok, Bryozoa, morîa Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1932. vyp. 15, p. 141–46, illus., table.) 18 refs. Text in Russian. Summary in German. ***Title tr.:*** The bryozoan fauna of the Laptev Sea.

Nine forms of these "moss animalcules" are described and their occurrence, substrates, geographic distribution, etc., discussed. Polymorphism of colonies is also described. Material was collected in 1927 by the hydrographic party of the Academy of Sciences Yakut Expedition. ***Copy seen:*** DLC.

ACKERMAN, ROBERT, *see Expedition.* St. Lawrence Island. *1958.* No. 50820.

ACOSTA, JOSÉ de, 1539–1600, *see* Beals, R. L. Father Acosta . . . first peopling . . . New World. *1957.* No. 49592.

ACTA LAPPONICA 11, *see* Serning, I. Lapska offerplatsfynd . . . *1956.* No. 54704.

49110. ADAMOV, ARKADIĬ GRIGOR'EVICH, 1920– . Grigoriĭ Ivanovich Shelekhov, 1747–1795. (Sovetskaîa ėtnografiîa, 1948, no. 1, p. 189–201, port.) 60 refs. Text in Russian.

Describes the life of Shelekhov, including his explorations in the Okhotsk Sea region, a two-year stay on Kodiak Island, activities in Russian America and his contributions to the study of natural resources and ethnography of the Northwest. An extensive list of Russian works on Shelekhov is appended.

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ADAMS, JAMES R., *see* Sheppe, W. A., *and* J. R. Adams. The pathogenic effect of *Thypanosoma duttoni* . . . stress . . . *1957.* No. 54768.

49111. ADAMS, JOHN E., *and others.* Cerebral metabolic studies of hypothermia in the human. (Surgical forum, 1957. v. 7, p. 535–39, tables.) 9 refs. *Other authors:* H. Elliot, V. C. Sutherland, E. J. Wylie, *and* R. D. Dunbar.

Report on observations of eight patients, aged 5–72, made hypothermic for surgical purposes. Blood-O_2 and -CO_2, glucose, glutamic acid and glutamine, and lactic acid were studied. A decrease in cerebral blood flow, in utilization of O_2 and glucose, and in arterio-venous oxygen levels, coupled with a rise in lactic acid levels, were the main changes noted.

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ADAMS, P. J., *see* Cowie, J. W., *and* P. J. Adams. The geology of the Cambro-Ordovician rocks . . . *1957.* No. 50368.

49112. ADAMS, THOMAS, *and* **E. J. HEBERLING.** Human physiological responses to a standardized cold stress as modified by physical fitness. (Journal of applied physiology, Sept. 1958. v. 13, no. 2, p. 226–30, illus.) 20 refs.

Report on five adult, male Caucasians, cold-stressed before and after a physical training program, which significantly raised their physical condition. Heat production increased by 15cal./m.^{2}; mean rectal temperature was 0.5° C. lower; skin temperatures were 1°, foot and toe temperatures 3° and 4° higher. Average body temperature showed no difference.

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49113. ADAMS, THOMAS, *and others.* Racial variations to a standardized cold stress. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 1–2.) *Other authors:* W. R. Beavers, B. G. Covino, R. W. Elsner, *and* R. J. Hock.

Summary of investigation on core and surface temperatures, metabolism, sweating rate and plethysmograms of Negro, Caucasian and Eskimo subjects exposed nude for two hours to a temperature of 17° C. In contrast with the two other groups the Negroes showed a small

increase in heat production and metabolic rate which explains their greater susceptibility to cold injury. ***Copy seen:*** DLC.

49114. ADAMS, THOMAS, *and* **B. G. COVINO.** Racial variations to a standardized cold stress. (Journal of applied physiology, Jan. 1958. v. 12, no. 1, p. 9–12, illus.) 9 refs.

Report on response to brief cold stress of groups of Caucasians, Eskimos and Negroes. In the last, heat production was less than half of that in the Caucasians or Eskimos. Although the absolute levels of heat production differed between the Eskimo and Caucasian groups, both responded in a similar way to the cold stress. ***Copy seen:*** DNLM.

ADAMS, THOMAS, *see also* Rennie, D. W., *and* T. Adams. Comparative thermoregulatory responses of Negroes and white . . . cold . . . *1957*. No. 54279.

49115. ADAMSON, OLGE J. Alkalibergartenes økonomiske geologi. (Tidsskrift for kjemi, bergvesen og metallurgi, Mar. 1950. årg. 10, nr. 3, p. 172–79, diagr.) 12 refs. Text in Norwegian. ***Title tr.:*** Economic geology of the alkaline bedrock.

Alkaline bedrocks, only recently considered economically important, are found in Scandinavia, the Kola Peninsula, Greenland, Canada, the Urals, western Siberia and elsewhere, in locations of tectonic activity within the continental blocks, where they are Precambrian to Permian in age. These rocks, commonly called nepheline syenites, have been divided into four groups, according to variations in mineral content, by Russian geologists whose quantitative diagram is reproduced. The rocks are an important source of nepheline-feldspar concentrates, of economically important minerals such as apatite and barite, and as a source of niobium, titanium, strontium and other, related minerals. Their use in the glass, ceramic, and fertilizer industries are briefly noted. The Khibiny and Lovozero deposits of the Kola Peninsula, the largest known, are described. The known reserve of two billion tons is being mined near Kirovsk, with annual pre-war production reaching two million tons. One of the small deposits known in Norway is at 70° N. on the island of Seiland.

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49116. ADDIN, KURT-MAGNUS. Intryck från en dansk sommarexpedition på Östgrönland. (Jorden runt, May 1957. årg. 29, nr. 5, p. 227–38, illus., map.) Text in Swedish. ***Title tr.:*** Glimpses from a Danish summer expedition to East Greenland.

Popular account of day-to-day life at the Ella Ø (72°51′ N. 25°02′ W.) base camp during one (1956?) of Dr. Lauge Koch's annual expeditions.

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49117. ADELHOLT, ELLA. Genfangster i Danmark 1900–1955 af fugle ringmaerkede i udlandet. (Dansk ornithologisk forening. Tidsskrift, Dec. 1958. årg. 52, hefte 3–4, p. 153–280.) Text in Danish. Summary in English ***Title tr.:*** Recoveries in Denmark 1900–1955, of birds ringed abroad.

Lists all such recoveries, the international signature used throughout (key p. 154). Some recoveries from Greenland, northern Scandinavia and northern U.S.S.R. are included. ***Copy seen:*** DSI.

ADELSON, EDWARD, *see* Villalobos, T. J., *and others*. A cause . . . thrombocytopenia and leucopenia . . . hypothermia. *1958*. No. 55815.

49118. ADERIKHIN, P. G., *and* **E. P. TIKHOVA.** Izmenenie ẗsveta poverkhnosti pochv Severa. (Pochvovedenie, Oct. 1958, no. 10, p. 70–75, tables.) 6 refs. Text in Russian. Summary in English. ***Title tr.:*** Color changes of the soil surface in the North.

Reports results of experiments carried out in 1955, spreading the soil surface with peat, soot or chalk. The effect of color on soil temperature at 0–40 cm. depth, on the amount of NO_3, NH_4, P_2O_5, K_2O, and N, in the soils, also on oats grown in them, is presented in tables. Light gray soils of the far North when colored with soot or powdered peat were found to absorb more solar heat energy than do soils of natural color. Darker color provides conditions for a more active mobilization of nutrient elements in the soil. Hence much more nitrates, ammonia, available phosphorus and potassium were found in soils of dark-colored plots, than on the non-colored ones. The intake of nutrient elements at different phases of plant growth proceeded at a higher rate on the darkened than on the control plots.

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ADLER, G., *see* Hanok, M., *and others*. A comparison of instruments . . . stress decay. *1957*. No. 51555.

49119. ADOLPH, EDWARD FREDERICK, 1895– , *and others.* Reversible cessation of blood circulation in deep hypothermia. (Journal of applied physiology, Nov. 1958. v. 13, no. 3, p. 397–405, illus., tables.) 21 refs. *Other authors:* S. Klem, *and* L. B. Marrow.

In rats, arterial pressure fell sharply between 17° and 8° C., and depended on low pulse frequency, both being identical at each heart temperature. Below 8° C., heart could stop for one hour, with subsequent recovery. Anoxia, produced at 16°–10° C. lowered arterial pressure and pulse, but did not stop the heart entirely. O_2-content in non-breathing animals of 10° gradually diminished. Survival was not directly limited by circulation or O_2-delivery to the tissues.

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ADOLPH, EDWARD FREDERICK, 1895– , *see also* Lynch, H. F., *and* E. F. Adolph. Blood flow in small blood vessels . . . hypothermia. *1957.* No. 52982.

49120. *ADVANCEMENT OF SCIENCE.* Polar physiology. (Advancement of science, June 1957. v. 13, no. 53, p. 411–420.)

Contains papers (in abbreviated version) presented at the Sheffield Meeting of Section I (Physiology) of the British Association, Sept. 4, 1956. The papers as listed below are abstracted in this Bibliography under the authors' names.

EDHOLM, O. G. Polar physiology.

LEWIS, H. E., *and* J. P. MASTERTON. Sleep and wakefulness patterns in men on a polar expedition.

LOBBAN, MARY C. Studies on physiological diurnal rhythms in polar regions.

MASTERTON, J. P., *and others.* Nutrition and energy expenditure during a polar expedition.

TAYLOR, R. J. F. Some aspects of the physiology of sledge dogs.

MASSEY, P. M. O. Finger acclimatization in Grahamland.

ROGERS, A. F. The physiological programme for the Trans-Antarctic Expedition, 1955–58. ***Copy seen:*** DLC.

49121. ÄIMÄ, FRANS GUSTAF, 1875–1936. Phonetik und Lautlehre des Inarilappischen, I–II. Helsinki, 1918. 2 v.: xi, 133, 265 p. graphs, tables. (Suomalais-ugrilainen seura. Toimituksia. v. 42–43.) Refs. in text and footnotes. Text in German. ***Title tr.:*** Phonetics and phonology of Inari Lappish.

Deals with the sound system and phonetic variations found in the four dialects (southern, eastern, northern and western) spoken by the Lake Inari fishing Lapps, based on studies conducted during author's field trip in 1900–1901 and at Helsinki, 1902–1906. The descriptive, first part is followed, in pt. 2, by a discussion and tabulation of the results obtained from laboratory experiments and measurements in phonetics.

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49122. *AERO.* Das Geheimnis der Polarnavigation. (Aero, Monatszeitschrift für das gesamte Flugwesen, May 1957. Jahrg. 8, Heft 5, p. 99, 102, map.) Text in German. ***Title tr.:*** The secret of polar navigation.

Describes navigational system developed by the Scandinavian Airlines System for its polar routes. ***Copy seen:*** DLC.

49123. ÄYRÄPÄÄ, AARNE ELIAS, 1887– . Skifferspetsarna i östra Fenno-Skandien. (Suomen muinaismuistoyhdistys. Suomen museo, 1950. v. 57, p. 9–43, illus., map.) Approx. 50 refs. Text in Swedish. Summary in German. ***Title tr.:*** Slate points in eastern Fennoscandia.

Occurrences of several types of slate tools are related to post-glacial geological changes of level and to Russian and Scandinavian finds. Two groups of slate weapons found in Finland, including Finnish Lapland and eastern Finnmark, are discussed in detail: the leaf-shaped spear points and knife blades belonging to the pre-ceramic Suomusjärvi culture (5500–3000 B. C.) and the so-called daggers, variously shaped blades and asymmetrical, three-edged, barb-less arrow points attributed to the later phase of the comb-ceramic period (latter part of the third millenium B. C.). The sites of slate implement finds are indicated on map and the extensive stone age cultural exchanges in northern Finland, Sweden and Norway noted. The problem of a Finnish or Scandinavian origin of the slate industry is speculated upon.

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49124. AFANAS'EV, A. A. Bol'shaĭa zhizn' arktiki. (Ogonëk, Dec. 1957. god 35, no. 51, p. 2, illus.) Text in Russian. ***Title tr.:*** Great life of the Arctic.

Achievements of Soviet polar workers are stressed in an interview with A. A. Afanas'ev, chief of the Main Administra-

tion of the Northern Sea Route, occasioned by the 25th anniversary of its organization on Dec. 17, 1932; regular trips along the Northern Sea Route, exploration of the Arctic Basin, work of the drifting stations and polar stations, arctic aviation, etc.; photo shows camp of drifting station North Pole–6.

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AFANAS'EV, ALEKSEĬ IVANOVICH, *see* Gushchin, I. V., and A. I. Afanas'ev. Chukotskiĭ natsional'nyĭ okrug . . . *1956*. No. 51449.

49125. AFANAS'EV, V. Shkola pomogaet kolkhozam. (Sel'skoe khozĭaĭstvo Sibiri, 1958, no. 1, p. 82–83.) Text in Russian. ***Title tr.:*** The school is helping collective farms.

Describes experiments in cultivation of northern strains of potato, barley, oats, and in planting fruit trees and shrubs, as carried out over 17 years by students of Toybokhoy high school in the Suntar (62°10′ N. 147°40′ E.) District of Yakutia. During vacation, they work at a near-by collective farm. G. E. Bessonov, a teacher, is credited with stimulating this interest in agriculture.

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49126. AFANAS'EV, V. A. Sovetskoe pushnoe zverovodstvo. (Karakulevodstvo i zverovodstvo, Sept.–Oct. 1957. god 10, no. 5, p. 9–15, tables.) Text in Russian. ***Title tr.:*** Soviet fur farming.

Presents information on the present size, composition and production of this industry; its beginnings (in 1928–29) and subsequent development. Losses of young, yields, and modernization are discussed; leading specialists and farms noted. Fur farming in arctic areas, government aid in development, research, etc., are outlined. ***Copy seen:*** DLC.

49127. AFANAS'EV, V. A. Tĭulen'e mi͡aso - khoroshiĭ belkovyĭ korm dli͡a molodnia͡ka pushnykh zvereĭ. (Karakulevodstvo i zverovodstvo, July–Aug. 1957. god 10, no. 4, p. 28–32, tables.) Text in Russian. ***Title tr.:*** Seal meat, a good protein food for the young of fur animals.

Account of feeding experiments with mink and foxes. Dry and fresh seal meat was used and evaluated in comparison with horse meat, rate of growth and fur quality being used as main criteria. Seal was found to be not inferior to horse, even when dried in an appropriate way.

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49128. AGAFONOVA, V. N. Sravnitel'nai͡a o͡tsenka nekotorykh metodov lecheniia otmorozheniĭ. (Khirurgii͡a, Apr. 1958. god 34, no. 4, p. 62–67, tables.) 12 refs. Text in Russian. Summary in English. ***Title tr.:*** Comparative evaluation of some methods of treating frostbite.

A report based on 125 cases of all degrees, treated during a period of nine years. X-ray treatment proved superior to treatment with ointments. It acted quicker in relieving pain and edema and speeding demarcation, shedding of necrotic tissues and regeneration. Of the ointments tried, the so-called "embryonal" ointment acted best.

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AGARD, *see* Polar Atmosphere Symposium . . . 1956 . . . *1958*. No. 54042.

49129. AGER, BENGT H:SON. Packad snö som transportunderlag. (Norrlands skogsvårdsförbund. Tidskrift, 1956. no. 3, p. 293–384, illus. tables, graphs, diagrs.) Text in Swedish. Summary in English. ***Title tr.:*** Compacted snow as a base for traffic.

"The results of field experiments on the bearing capacity of snow processed by various methods and its variations under varying conditions and various vehicles are reported; the measurement and test methods are described and evaluated; and detailed data are tabulated. Compacted snow was measured for hardness, density in the upper 0–10 cm., and temperature; and the max. drawbar pull of vehicles at standstill as well as sled resistance were studied. The highest bearing strength was obtained by using a rotary tiller and a sliding pontoon, making the road trafficable for light-wheeled tractors 24 hr. after processing. The density and hardness of the upper snow layer increased with time after compaction if the roadbed was kept free of traffic, a fact which is attributable to moisture migration from the ground and lower snow layers. Once the road was used, its bearing strength was determined by traffic. The noted decrease in hardness of the bottom layer resulting from the moisture transport was not great enough to adversely affect the bearing strength of the road, provided the snow had been thoroughly mixed and processed. Studies of various antiskid devices in relation to drawbar-pull tests showed that the best antiskid device with an extra load of 750 kg. gave a pull about

three times greater than a conventional antiskid device without extra load."—SIPRE. ***Copy seen:*** DA.

49130. AGER, BENGT H:SON. Den snöpackade vägen; II, väderlekens betydelse. (Svenska skogsvårdsföreningen. Tidskrift, 1955. årg. 53, p. 200–230, illus., graphs.) 13 refs. Text in Swedish. Summary in English. Reprinted as Föreningen skogsarbeten och Kungl. domanstyrelsens arbetsstudieavdeling. Meddelande nr. 54, 1955. ***Title tr.:*** The snow-compacted road; II, the importance of weather.

The theory of the freezing process in roads is discussed on the basis of measurements. Temperature and radiation are of primary importance; atmospheric humidity and wind (except when drifting occurs) of secondary importance. Even a thin layer of fresh snow insulates the road from atmospheric influence. Prior to (or during) passage of a warm front usually followed by fresh snowfall, compaction should be avoided. If the fresh snow is left for 24–48 hrs., transport can begin within 24 hrs and without further treatment. ***Copy seen:*** DA.

49131. AGRANAT, GRIGORIĬ ABRAMOVICH. Sovremennyĭ Labrador. (Problemy Severa, 1958, vyp. 1, p. 244–56, map.) 12 refs. Text in Russian. ***Title tr.:*** The Labrador of today.

Outlines recent economic development of the northern Quebec-Labrador peninsula: discovery of abundant iron ore deposits and their exploitation; discovery and utilization of titanium ores; plan for a hydroelectric plant on the Hamilton River at Grand Falls; impact on the economy expected from the St. Lawrence Seaway; fisheries, hunting and trapping; vegetable growing and stock raising; growth of population. Rise of new branches of the economy and decline of old ones (fisheries and hunting) are stressed; a slow growth rate is noted in the population generally and a decrease in the native population. This paper is based chiefly on Canadian publications. ***Copy seen:*** DLC.

49132. AGRANAT, GRIGORIĬ ABRAMOVICH. Zarubezhnyĭ sever; ocherki prirody, istorii, naseleniĭa i ėkonomiki raĭonov. Moskva, Izd-vo Akademii nauk SSSR, 1957. 319 p. illus., 2 fold. plates, 5 fold. maps. 230 refs. (Akademiĭa nauk SSSR. Nauchno-populiărnaĭa seriĭa.) Text in Russian. ***Title tr.:*** The North of foreign countries; outline of the nature, history, population and economy of the regions. D. I. Shcherbakov, editor.

Deals with Alaska (p. 7–117), the Canadian North (p. 118–200), Greenland (p. 201–254), and Spitsbergen (p. 255–86), on the basis of extensive study of the literature. Cultural and industrial development and progress in acculturation of the native population and in resource development (gold, timber, natural gas, fur animals, fish, etc., in Alaska, mineral resources in Canada, coal in Spitsbergen) are stressed. Shortcomings of administration and planless exploitation of resources are noted, mostly by quotation of foreign writers and experts. Operations Ptarmigan and Skijump, transpolar flights, American drifting station on ice island T–3, the present drifting stations A and B are mentioned briefly in the chapter (p. 287–96) on non-Soviet post-war exploration in the Central Arctic. List of literature (p. 302–310) includes 73 publications in Russian and 157 in foreign, chiefly English, languages. An index of geographic names is added (p. 311–18). ***Copy seen:*** DLC.

49133. AGY, VAUGHN. Bibliography of arctic ionospheric research in the United States and Alaska since 1949. Boulder, Colo. Mar. 7, 1958. (U.S. National Bureau of Standards. NBS report. Project 8210–11–8218, report 5561.) 11 p.

Lists papers in technical journals, reports from research organizations on government contracts, and those from government laboratories. Brief descriptions of major experiments undertaken by U.S. agencies introduce the latter categories. ***Copy seen:*** DLC.

49134. AGY, VAUGHN. Polar blackout occurrence patterns. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 2, *pub.* 1957, p. 129–34, maps, graph.)

Variations in time patterns of blackout at arctic ionospheric stations are discussed. The high correlation between magnetic disturbance and blackout occurrence is noted, also several anomalous conditions in which blackout appears independent of magnetic activity. It is suggested that wider use of the cosmic noise technique during the IGY may provide a better understanding of the patterns of blackout occurrence. ***Copy seen:*** DLC.

49135. AHLBORG, FREDRIK, *and others.* Fotogrammetrisk kraftledningsprojektering. (Teknisk tidskrift, Sept. 30, 1958. årg. 88, häfte 35, p. 893-900, illus., diagrs., tables.) Text in Swedish. *Other authors:* H. Eidebo, *and* P. O. Fagerholm. ***Title tr.:*** Photogrammetric projecting of power lines.

Describes investigations in connection with planning of the fourth 380 kw. power-line connecting the hydroelectric power plants in northern Sweden with the south. Photos in scale 1:20,000 were studied stereoscopically to find the most economical route for poles, roads, and transportation according to topography, accessibility, ground conditions, value of expropriated forests and land, etc. The 500 by 75 cm. map constructed from aerial photos, was divided into 3,200 squares of various colors (11), each shade representing a cost index in steps of 5,000 kr. A string stretched between the two end points of the map and connected at one end to a spring and a meter to measure its length, represented the flexible power line. Final calculations, and selection of the most economical of nine alternate routes, were made on an electronic computer. ***Copy seen:*** DLC.

49136. AHLMANN, HANS WILHELMSSON, 1889– . Björn Helland-Hansen. (Ymer 1958. årg. 78, häfte 1, p. 59–61, port.) Text in Swedish. ***Title tr.:*** Bjørn Helland-Hansen.

Sketches the life (1877–1957) of this authority on physical oceanography, who made, among others, notable contributions to the exploration of the Norwegian Sea. ***Copy seen:*** DLC.

49137. AHLMANN, HANS WILHELMSSON, 1889– . Harald Ulrik Sverdrup. (Ymer, 1958. årg. 78, häfte 1, p. 64–66, port.) Text in Swedish. ***Title tr.:*** Harald Ulrik Sverdrup.

Notes on his life (1888–1957); his expeditions, professional activities and publications. Another obituary by Ahlmann was pub. (in English) in *Geographical review,* Apr. 1958, v. 48, no. 2, p. 84–85): a tribute to Sverdrup as authority on the polar regions; his contributions to oceanographic and meteorologic knowledge of the arctic, his energy, capacity for work, his willingness to share his knowledge.

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AHLMANN, HANS WILHELMSSON, 1889– , *see also* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

AHLMANN, HANS WILHELMSSON, 1889– , *see also* International Geographical Congress, 1952. Proceedings. *1957.* No. 51939.

AHLQVIST, AUGUST ENGELBREKT, 1826–1889, *see* Vahter, T. Ornamentik der Ob-Ugrier. *1953.* No. 55705.

49138. AHO, AARO E. A crude geologic map derived largely from air photo interpretation and aerial observation. (Canadian mining journal, Aug. 1958. v. 79, no. 8, p. 61–63, text map.)

A rudimentary lithologic and structural picture of an area, useful in planning, mapping or prospecting, may be constructed from aerial information. Stereoscopic air-photo interpretation, integration of all information and field checking are stressed. Helicopter reconnaissance is ideal for combining observation with ground checks. Results of this method are shown in the Quiet Lake area, Yukon Territory, map sheet 105 F (1 in.:4 mi.), though not entirely accurate, a useful guide to more careful examination of rocks. ***Copy seen:*** DGS.

49139. AHO, AARO E. Mineral possibilities of Yukon Territory. (Canadian mining and metallurgical bulletin, Aug. 1958. v. 51, no. 556, p. 479–86, text map.) 9 refs. *Also pub. as:* Canadian Institute of Mining and Metallurgy. Transactions, v. 61, 1958, p. 253–60.

Survey of mining and mineral possibilities of Yukon: lists chief operations and companies active in 1957, describes areas under exploration in recent years, and notes difficulties facing prospectors and explorers. Map shows 15 chief mineral areas, which are discussed, and the mineral possibilities outlined (14 areas) based on five seasons' experience. Conditions favor development of the mining industry in the area.

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49140. AIKEN, EDWIN G. Response acquisition and reversal under cold stress. Nov. 16, 1956. 10 p., illus., tables. (U.S. Army Medical Research Laboratory, *Fort Knox, Ky.* Project no. 6–95–20–001. Report no. 277.) 15 refs.

Report on psychological response tests applied to 40 normal subjects. Performance and level of task learning during cold were not significantly affected either during acquisition of the original response or during tests for response interference. However, interference was

acquired under conditions of low temperature. ***Copy seen:*** DNLM.

49141. AIMERS, DOUGLAS. To hook a halibut. (Alaska sportsman, June 1958. v. 24, no. 6, p. 22, 28–29, illus.)

Describes halibut fishing gear formerly used by Northwest Coast Indians. Hooks were made of yew lashed to cedar on which a barb of bone or iron was fastened, and baited with flesh of octopus legs. Lines were made of cedar fiber, animal sinews or intestines. ***Copy seen:*** DI.

49142. AĬNANA, LIŪDMILA. Solnt͡se vzoshlo nad tundroĭ; otkrytoe pis'mo kanadskomu zhurnalistu Dzhonu Stiū-artu. (Smena, May 1958. god 35, no. 10, p. 4, illus.) Text in Russian. ***Title tr.:*** The sun has risen over the tundra: an open letter to the Canadian journalist, John Stuart (Stewart?).

By an Eskimo girl, a student in the Dept. of Northern Peoples at the Gert͡sen Pedagogical Institute in Leningrad: she lauds the progress of acculturation and economic development of Eskimos and other northern peoples of the Soviet Union; their advantages are contrasted with poor conditions among the Canadian Eskimos. ***Copy seen:*** DLC.

AINSWORTH, J., *see* Lagow, H. E., *and others.* Rocket measurements . . . *1958.* No. 52624.

49143. *AIR FORCE.* Alaskan Air Command, top of the world guardian. (Air Force, Aug. 1958. v. 41, no. 8, p. 128–29, illus.)

Outlines missions of the AAC, which provides for the air defense of Alaska and the northwest arctic approaches to the United States, maintains a radar warning (AC & W) and communications (White Alice) system, and a "launching platform" for retaliatory attacks at Eielson Air Force Base near Fairbanks; also, AAC supports the western segment of the DEW Line. Aircraft assigned to the Command include Convair F–102's, C–123 Providers, L–20 Beavers, "J" model Scorpions, and Vertol H–21 helicopters. Its participation in establishing IGY drift station (Project Ice Skate) and in cold-weather experimentation, etc., is noted. ***Copy seen:*** DLC.

49144. *AIRCRAFT.* A better radome. (Aircraft, July 1958. v. 20, no. 7, p. 55, illus.)

Describes frameless, reinforced epoxy radome developed for early-warning installations. It has 50 ft. base diameter and 55 ft. equatorial diameter, is 40 ft. high and weighs 9,000 lbs. It can be shipped disassembled in one C–124 or C–119 aircraft, and erected by six men in 1½ days. ***Copy seen:*** DLC.

49145. *AIRCRAFT.* The DEW air lift triumph or fiasco? (Aircraft, July 1956. v. 18, no. 7, p. 76–79, +, illus.) Reprinted from April 1956 issue of *Pilot,* official publication of the Canadian Air Line Pilots Association.

Criticizes the performance of Canadian air freight carriers participating in DEW line operations; government's employment of weak companies; neglect of aircraft safety requirements; rates (80 cents/ton-mile) for the hauls, etc.; use of obsolete, privately-chartered American aircraft and failure to utilize the Pilots Association membership, etc. Refutation is offered by George Marler, Minister of Transport. ***Copy seen:*** DLC.

49146. *AIRCRAFT.* DOT buys more Bells. (Aircraft, June 1958. v. 20, no. 6, p. 66.)

Notes purchase by the Canadian Dept. of Transport of four Bell 47J helicopters to be stationed on ice-breakers in arctic service. ***Copy seen:*** DLC.

49147. *AIRCRAFT.* Frobisher, a name to note. (Aircraft, Dec. 1957. v. 19, no. 12, p. 35, 80, illus.)

Reviews development of this airfield (63°28′ N. 67°23′ W.) on Baffin Island, now operated by the Department of Transport. Scheduled improvements include lengthening of the runway, a new 6,000 ft. taxi strip, offices, power station, etc. Several commercial companies use the airport in their transpolar flights. ***Copy seen:*** DLC.

49148. *AIRCRAFT.* The ice spotters. (Aircraft, Jan. 1958. v. 20, no. 1, p. 31–32, illus.)

Notes duties of helicopters based on the ice-breakers *d'Iberville* and *C. D. Howe* on arctic supply missions: ice reconnaissance, ship-to-shore ferry, transport of sick and injured personnel, etc. The Canadian Dept. of Transport has six Bell 47's. ***Copy seen:*** DLC.

49149. *AIRCRAFT.* PSC on arctic survey. (Aircraft, July 1958. v. 20, no. 7, p. 89)

Two B–17 aircraft of the Photographic Survey Corp. are photographing 220,000 sq. mi. of the eastern portion of the

Canadian Arctic Islands. Bases to be used in 1958 are Frobisher, Foxe, Resolute, Alert, and Thule.

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49150. ***AIRCRAFT.*** Sounding the skies. (Aircraft, Sept. 1957. v. 19, no. 9, p. 38, 40, illus.)

Contains brief description of the launching facilities for IGY Aerobee-Hi and Cajun rockets at Fort Churchill, Manitoba. A steel-framed, metal-covered building, 40 x 40 x 56 ft. high, is constructed to withstand 22,100 lbs. of thrust when the rocket is fired from inside through a revolving guiding tower in the roof; pressure escape is arranged by raising the metal panels forming the lower walls of the structure. A nylon tent is fitted loosely over the tower to permit heating of the building.

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49151. ***AIRCRAFT.*** Spartan flies high. (Aircraft, Aug. 1957. v. 19, no. 8, p. 26–27, 73–74, illus.)

Describes mapping and surveying activities of Spartan Air Services Ltd.: high-altitude (30,000 ft.) mapping, initiated in the Yukon and Mackenzie Districts in 1950 and later aided by the adaptation of Shoran, mineral search and use of the airborne magnetometer, profile recording by radar altimeter, search for radio-active ore using scintillation counters, and for non-magnetic ore using electromagnetometers. The company operates 50 aircraft and 33 helicopters, including modified Mosquito 35's for the high-altitude mapping. Search for nickel and copper deposits is to be conducted in the summer of 1957 over a 5,000 sq. mi. area from Cape Smith (60°44′ N. 78°29′ W.) across the Ungava Peninsula to Wakeham Bay (61°35′ N. 71°50′ W.). ***Copy seen:*** DLC.

49152. AĬZENSHTADT, A. Poĭût nanaĭtsy i ul'chi. (Sovetskaîa muzyka, Nov. 1957. god 21, no. 11, p. 88–93, illus.) Text in Russian. ***Title tr.:*** Gold and Tungus songs.

Describes the songs, mainly Nanai (Gold) folksongs, collected during author's one-man expedition sponsored by the Khabarovsk Palace of People's Art. The music, mood, tempo, content and folkloristic elements of the 65 old and new Nanai songs are discussed and some sample scores are given. The songs and music of the culturally and linguistically related Ul'chi (Tungus) are dealt with briefly. ***Copy seen:*** DLC

49153. AKADEMIÎA NAUK SSSR. Dmitriĭ Ivanovich Shcherbakov. Vstup. stat'îa V. V. Shcherbiny; bibliografiîa sostavlena K. V. Shpis. Moskva, Izd-vo Akademii nauk SSSR, 1958. 57 p. port. (Materialy k biobibliografii uchenykh SSSR. Seriîa geologicheskikh nauk, vyp. 13.) Refs. Text in Russian. ***Title tr.:*** Dmitriĭ Ivanovich Shcherbakov. Introduction by V. V. Shcherbina; bibliography by K. V. Shpis.

Contains sketch of the life and scientific activities of this geologist, Academician and Learned Secretary of the Dept. of Geology and Geography of the Academy of Sciences; followed by lists (chronological and alphabetic) of his publications to date. His participation in arctic explorations is indicated. ***Copy seen:*** DLC.

49154. AKADEMIÎA NAUK SSSR. O sozdanii instituta geografii v Sibiri. (*Its:* Izvestiîa, ser. geograficheskaîa, Jan.–Feb. 1958, no. 1, p. 3.) Text in Russian. ***Title tr.:*** On the creation of the Institute of Geography in Siberia.

Establishment of this institute at Irkutsk was announced by the Presidium of the Academy of Sciences of the U.S.S.R. in its meeting Nov. 29, 1957. The institute is to have four sections: productive power allocation, physical geography and natural resources, problems of regional and economic planning, and study of the peoples' democracies of Asia. Its director is I. P. Gerasimov, with V. A. Krotov his deputy.

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49155. AKADEMIÎA NAUK SSSR. O sozdanii i stroitel'stve kompleksa institutov v raĭone Irkutska. (*Its:* Vestnik, Jan. 1958. god 28, no. 1, p. 120.) Text in Russian. ***Title tr.:*** Organization of a complex of institutes in Irkutsk region.

Reports on four new scientific institutions set up within the Siberian Division of the Academy of Sciences: East-Siberian Geologic Institute, and Institutes of Geochemistry, Organic Chemistry and Geography, all located at Irkutsk. Several new institutes and a Siberian Council for expeditionary exploration are planned for 1959–65. ***Copy seen:*** DLC.

49156. AKADEMIÎA NAUK SSSR. Ob organizatsii novykh institutov v filialakh Akademii nauk SSSR. (*Its:* Vestnik, Mar. 1958. god 28, no. 3, p. 106–107.) Text in Russian. ***Title tr.:*** Organization of new institutes at

Branches of the Academy of Sciences of the U.S.S.R.

Includes note on the setting up of an Institute of Chemistry and Technology of Rare Elements and Mineral Resources; it is headed by M. D. Fugzan, and is part of the Academy of Sciences U.S.S.R. Kola Branch. ***Copy seen:*** DLC.

49157. AKADEMIIÂ NAUK SSSR. Obsuzhdenie raboty Kazanskogo i Kol'skogo filialov. (*Its:* Vestnik, June 1958. god 28, no. 6, p. 103–107.) Text in Russian. ***Title tr.:*** Discussion concerning the work of the Kazan and Kola Branches.

The great industrial expansion in Tatar A.S.S.R. and Kola Peninsula, prompted evaluation of the activities of Academy of Sciences' branches responsible for scientific work in those areas; the discussion by the Council for Coordination of Scientific Activities of Academies and Branches took place on Mar. 31, 1958. The status of the Kola Branch's scientific work and its plans were reported by its chairman, A. V. Sidorenko, and by the chairman of the Murmansk National Economic Council, V. I. Nosal'; the need for close collaboration between the two organizations was stressed. ***Copy seen:*** DLC.

49158. AKADEMIIÂ NAUK SSSR. Sovershenstvovanie upravleniîa promyshlennost'iû i zadachi uchenykh. (*Its:* Vestnik, Apr. 1957. god 27, no. 4, p. 3–6.) Text in Russian. ***Title tr.:*** The improved administration of industry and the tasks of scientists.

Coordination of scientists' work with the recently announced decentralization of Soviet industry is discussed in an editorial. The scientific work of branches (filial) of the Academy of Sciences, including the Yakut Branch, is mentioned; need is stressed for the expansion of these branches and the decentralization of scientists. ***Copy seen:*** DLC.

49159. AKADEMIIÂ NAUK SSSR. Sozdanie krupnogo nauchnogo t͡sentra v Sibiri; na Obshchem sobranii Akademii nauk SSSR. (*Its:* Vestnik, Dec. 1957. god 27, no. 12, p. 8–14.) Text in Russian. ***Title tr.:*** Foundation of a big scientific center in Siberia; general meeting of the Academy of Sciences of the U.S.S.R.

Account of the meeting on Nov. 2, 1957, including summary of the discussion which followed M. A. Lavrent'ev's paper (No. 52687). Decentralization of scientific research is stressed and functions of the new center and its institutes are outlined by various speakers; directors of several new research institutes of the Siberian Division are listed. ***Copy seen:*** DLC.

49160. AKADEMIIÂ NAUK SSSR. V otdelenii geologo-geograficheskikh nauk. (*Its:* Vestnik, Mar. 1957. god 27, no. 3, p. 31–35.) Text in Russian. ***Title tr.:*** In the Department of Geologic and Geographic Sciences.

Summary of the annual report presented to the plenary meeting of the Department, Jan. 29–30, by its Academic Secretary, D. I. Shcherbakov. Work of the Institute of Permafrostology in the field of thermal melioration of soils and rocks is noted, also its regional explorations in Vorkuta, in the diamantiferous fields of Yakutia, and in the far Northeast; discovery of natural gas at the mouth of Vilyuy River is mentioned. ***Copy seen:*** DLC.

49161. AKADEMIIÂ NAUK SSSR. V otdelenii geologo-geograficheskikh nauk. (*Its:* Vestnik, May 1958. god 28, no. 5, p. 56–59.) Text in Russian. ***Title tr.:*** In the Department of Geological and Geographical Sciences.

Reports annual meeting of this department of the Academy of Sciences, opened by its chairman, (Akademik-sekretar') D. I. Shcherbakov. During the discussion, P. F. Shvet͡sov, director of the Institute of Permafrostology, stressed need for closer collaboration of his institute with the Institute of Geography; A. V. Sidorenko, chairman of the Kola Branch, outlined the fruitful collaboration of his Branch with the Murmansk National Economic Council; V. G. Bogorov reported results of the 26th expedition of the research vessel *Vitîaz'* Nov. 1957–Feb. 1958 in the central Pacific. ***Copy seen:*** DLC.

49162. AKADEMIIÂ NAUK SSSR. Zashchita dissertat͡sii, îanvar'-iîul' 1957. (*Its:* Vestnik, Dec. 1957. god 27, no. 12, p. 108–129.) Text in Russian. ***Title tr.:*** Defense of dissertations, January–July 1957.

Summarizes dissertations presented by candidates for doctorates, among them N. A. Grave, to the Institute of Permafrostology for the degree of Dr. of Geographic Sciences: Usloviîa i zakonomernosti razvitiîa mnogoletnemerzlykh gor-

nykh porod v Chukotsko-Koriâkskoĭ strane i na Kamchatke (Conditions and regularities of development of permafrost rocks in Chukchi-Koryak country and in Kamchatka), p. 113; V. V. Kuznet͡sov, to the Zoological Institute for Dr. of Biological Sciences: Biologicheskie osobennosti flory i fauny Belogo moriâ (Biological features of the White Sea flora and fauna), stressing changes of biological conditions of this sea, p. 116.

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49163. AKADEMIÎA NAUK SSSR. BOTANICHESKIĬ INSTITUT. Rastitel'nost' Kraĭnego Severa SSSR i ee osvoenie, vyp. 3. Pod obshcheĭ red. B. A. Tikhomirova. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1958. 303 p. illus., tables, maps. Over 250 refs. Text in Russian. ***Title tr.:*** Vegetation of the far North and its utilization, no. 3. B. A. Tikhomirov, chief editor. In sequence to No. 47526.

Contains five papers introduced by the editor (p. 3–4), and a Latin name index (p. 293–301) of the plants cited throughout the volume. The papers are described in this Bibliography under their authors' names, viz. (titles translated):

GORODKOV, B. N. The vegetation and soils of Vrangel Island.

GORODKOV, B. N. Analysis of the vegetation of the arctic desert zone based on investigation of Vrangel Island.

GORCHAKOVSKIĬ, P. L. Vegetation of the Sablya Range in the Sub-Polar Urals.

NORIN, B. N. On the generative and vegetative reproduction of trees in the forest-tundra.

SOKOLOVSKAÎA, A. P. The pollen of arctic plants. ***Copy seen:*** DLC.

49164. AKADEMIÎA NAUK SSSR. BOTANICHESKIĬ INSTITUT. Sbornik pamîati Afrikana Nikolaevicha Krishtofovicha. Moskva, Izd-vo Akademii nauk SSSR, 1957. 358 p. illus., tables, maps. Text in Russian. ***Title tr.:*** Collection of works in memory of Afrikan Nikolaevich Krishtofovich.

Contains 18 papers, the first one by P. I. Dorofeev, the editor, being a biography and appraisal of the deceased man's work in paleobotany, the last two dealing with arctic areas. The latter are analyzed in this Bibliography under the authors' names, viz. (titles translated):

VASIL'EV, V. N. Fossil water chestnut from southern Yakutia.

KUPRIÎANOVA, L. A. Pollen analysis of plant remnants from the stomach of the Berezovka mammoth.

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49165. AKADEMIÎA NAUK SSSR. ÎAKUTSKIĬ FILIAL, *Yakutsk.* Doklady na pîatoĭ i shestoĭ nauchnykh sessiîakh; istoriîa i filologiîa. ÎAkutsk, ÎAkutskoe knizhnoe izd-vo, 1954. 118 p. Refs. Text in Russian. ***Title tr.:*** Reports read at the fifth and sixth scientific sessions; history and philology. Z. V. Gogolev, editor.

Contains seven papers on history and linguistics presented at the fifth (June 1952) and sixth (Oct. 1953) sessions of the Yakut branch of the Academy of Sciences USSR. The papers, as listed below with titles translated, are abstracted under their authors' names, viz:

OKLADNIKOV, A. P. New archeological discoveries in eastern Siberia and the ancient history of Yakutia.

GURVICH, I. S. Evolution of fur tax levies in Yakutia.

CHEMEZOV, V. N. The first schools of Yakutia.

GOGOLEV, Z. V. From the history of the Aldan industrial district, 1923–1934.

GURVICH, I. S. Living and cultural conditions in reindeer-breeding collective farms in the Nizhne-Kolymsk District.

BELÎAVSKAÎA, B. M. The theme of friendship of the Russian and Yakut peoples in the works of V. G. Korolenko.

KHARITONOV, L. N. Onomatopeic word stems in the Yakut language.

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49166. AKADEMIÎA NAUK SSSR. ÎAKUTSKIĬ FILIAL, *Yakutsk.* Dokumenty o revoli͡utsionnykh sobytiîakh 1905–1907 gg. v ÎAkutii. ÎAkutsk, ÎAkutskoe knizhnoe izd-vo, 1956. 208 p. 85 refs. Text in Russian. ***Title tr.:*** Documents pertaining to the revolutionary events of 1905–1907 in Yakutia. Compiled by: T. P. Korzhikhina, D. A. Tebekin, O. M. Tebekina, N. P. Shamaeva, R. V. Shelekhova, and R. A. Shelkovnikova.

A collection of documents, decrees, court resolutions, letters, pamphlets and newspaper articles illustrating the political events and uprisings in Yakutia during the first Russian revolution. A chronicle of events, indexes of personal and geographic names, and a list of documents are appended. ***Copy seen:*** DLC.

49167. AKADEMIÎA NAUK SSSR. ÎAKUTSKIĬ FILIAL, *Yakutsk.* Revoli͡utsionnye sobytiîa 1905–1907 gg. v

ÎAkutii; sbornik statei. ÎAkutsk, ÎAkutskoe knizhnoe izd-vo, 1956. 134 p. Refs. Text in Russian. ***Title tr.:*** Revolutionary events of 1905–1907 in Yakutia; a collection of articles. Editors: P. P. Neustroev, P. U. Petrov, D. D. Petrov.

Seven articles dealing with the armed uprisings, peasant strikes, etc., instigated by political exiles during the 1905 revolution. They represent abridged versions of papers read at the Institute's scientific session dedicated to the 50-year anniversary of the first Russian revolution. The papers with titles translated are:

Nikolaeva, V. V. Revolutionary events of 1905–1907 in Yakutia; in lieu of an introduction.

Krotov, M. A. Yakut armed protest by political exiles; February 18-March 7, 1904.

Petrov, P. U. The Yakut political exile during the time of the first Russian revolution.

Syrovatskiĭ, A. D. About the social-democratic circle "Maĭak" (Beacon).

Zakharov, A. I. The strike of the peasant-coachmen of Chekurskiy District.

Vasil'ev, G. M. The development of the local press in connection with the 1905–1907 revolution.

Tebekin, D. A. Materials on the revolutionary events in Yakutia in 1905–1907; review of documents of the Central State Archives of Yakut A.S.S.R. (TSGAÎA ASSR). ***Copy seen:*** DLC.

49168. AKADEMIÎA NAUK SSSR. ÎAKUTSKIĬ FILIAL, *Yakutsk.* Institut îazyka, literatury i istorii. Istoriîa ÎAkutskoĭ ASSR, t. 2; ÎAkutiîa ot 1630-kh godov do 1917 g. Moskva, Izd-vo Akademii nauk SSSR, 1957. 419 p. illus., tables, maps incl. fold. Over 250 refs. Text in Russian. ***Title tr.:*** History of Yakut A.S.S.R., v. 2; Yakutia from 1630 to 1917. In sequence to No. 36584. Prepared by a group of Yakut and Russian scientists: I. S. Gurvich, A. A. Izbekova, O. V. Ionova, M. A. Krotov, M. N. Martynov, M. M. Nosov, P. U. Petrov, F. G. Safronov, N. N. Stepanov, V. N. Chemezov, G. U. Ėrgis.

Exhaustive study of the economic and social development of Yakutia after annexation by Russia, in three main periods: Russian feudalism (17th–mid-18th centuries), decline of feudalism (1760–1860), and capitalism (1861–1917). The culture, economy and social organization of the aboriginals (Yakuts, Evenki-Tungus, Eveny-Lamuts, Yukaghirs, et al.) and of Russian settlers are dealt with. Administration and taxation (îasak), development of natural resources, agrarian and economic reforms are outlined. Political exiles, the Yakuts' early resistance to colonialism, and revolutionary movements of the 19-20th centuries are discussed. Ethnic distribution (17th century) and exploration routes are mapped and selected statistics on population, agricultural yields, taxation, etc., tabulated.

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49169. AKADEMIÎA NAUK SSSR. ÎAKUTSKIĬ FILIAL, *Yakutsk.* Institut îazyka, literatury i istorii. Ocherk istorii îakutskoĭ sovetskoĭ literatury. Moskva, Izd-vo Akademii nauk SSSR, 1955. 196 p. Approx. 40 refs. Text in Russian. ***Title tr.:*** Outline of the history of Yakut Soviet literature. Ed. by Z. V. Gogolev et al.

Analysis and critical evaluation of Yakut literature in the Soviet period written by G. M. Vasil'ev, G. U. Ėrgis and N. P. Kanaev; with information (in footnotes) on the life and work of the more prominent writers and poets. Excerpts of poems are cited in Russian translation. A list of 50 Yakut books and anthologies published in Russian is appended. ***Copy seen:*** DLC.

49170. AKADEMIÎA NAUK SSSR. ÎAKUTSKIĬ FILIAL, *Yakutsk.* Institut îazyka, literatury i istorii. Za sovetskuîu vlast' v ÎAkutii; vospominaniîa. ÎAkutsk, ÎAkutskoe knizhnoe izd-vo, 1957. 268 p. ports. Text in Russian. ***Title tr.:*** For Soviet rule in Yakutia; memoirs.

Anthology of 21 articles on the years of revolution and counter-revolution in Yakutia (1917–1919) written by eye-witnesses, mostly political exiles. Authors of the articles and titles (in English translation) are:

M. K. Ammosov: Birth of the February revolution.

I. N. Barakhov: October revolution in Yakutia.

K. E. Andreevich: The Yakut organization of the Russian social-democrat party and the food supply committee (1917).

G. O. Bashirov: Revolutionary youth and secret typography.

I. P. Rednikov: For the power of the Soviets.

D. S. Zhirkova: From the revolutionary past.

A. F. Popov: On the underground work in 1918.

P. A. Slepŝov-Ofunskiĭ: 1918.

A. S. Rydzinskiĭ: Excerpts from memoirs.

D. T. Bratash: March on Yakutsk, May–June 1918.

L. L. Danish: Memoirs.

S. I. Sviderskiĭ: My recollections.

E. M. Pshennikov: The peasants from Markha in 1918.

S. M. Arzhakov: The fight for Soviet power in the former Vilyuysk district.

I. I. Bochkovskiĭ: Communication personnel of Yakutia in 1918.

S. V. Vasil'ev: In the Irkutsk prison.

ÎA. K. Svinŝov: During the days of fight against the Kolchak movement.

A. E. Kugaevskiĭ: The Krasnoyarsk uprising.

P. P. Kochnev: The revolutionary fight for Soviet power in Yakutia.

B. M. Chizhik: The overthrow of the Kolchak movement in Yakutsk.

M. V. Megezhekskiĭ: The union of young communists. ***Copy seen:*** DLC.

49171. AKADEMIÎA NAUK SSSR. INSTITUT ÉKONOMIKI. Problemy razvitiîa promyshlennosti i transporta ÎAkutskoĭ ASSR. V. F. Vasiûtin, otv. redaktor. Moskva, Izd-vo Akademii nauk SSSR, 1958. 458 p. tables, maps (4 fold.). Refs. Text in Russian. ***Title tr.:*** The development of industry and transportation of the Yakut A.S.S.R. V. F. Vasiûtin, chief editor.

A collective study of the main branches of the economy of Yakutia, based on investigations by the Yakutia Expedition of the Institute of Economics of the Academy of Sciences in 1952–1955. The 17 chapters are prepared by S. V. Slavin (1 and 2), R. S. Livshiŝ (6), V. V. Varankin (11), M. A. Vilenskiĭ (9, 13, 17), G. I. Granik (15); L. M. Dudaeva (5), P. M. Zakonnikov (8), S. V. Mikhaĭlov (14), M. ÎA. Sonin (16), G. M. Chudinov (12), A. G. Omarovskiĭ and D. A. Baranov (10), G. V. Naumov (4), I. K. Efimov (3) and K. G. Kondakov (7). They deal with: features of the economic development (p. 6–15); premises for evaluating the outlook for economic development (p. 16–29); gold mining in the south (p. 30–39); developing diamantiferous deposits in the west (p. 40–62); the mica industry (p. 63–66); iron ores and coal deposits of the Aldan (p. 67–93); Olekminsk salt deposits (p. 94–118); fuel industry (p. 119–159); electric power (p. 160–210); metallurgy (p. 211–18); forestry (p. 219–71); the building materials industry (p. 272–92); consumers goods industry (p. 293–320); fisheries (p. 321–36); basic problems of transportation development (p. 337–419); problems of population and manpower (p. 420–40); economic zoning (p. 441–58). Progress achieved during the Soviet rule, the present-day situation and future prospects are discussed with data on resources, distribution, equipment, output and planned expansion of each main branch of industry, including six diamantiferous regions in northwest Yakutia (p. 46–52), 48 coal deposits (p. 120–32 and 138–44), the system of electric power supply, 22 forestry farms (leskhozy), seven fisheries plants (rybozavody), river (p. 340–77), motor and air transportation. The agricultural situation, work of collective and state farms, need for them to keep pace with industrial development are discussed. Population data are given: 283.9 thousand in 1926, 413.2 in 1939, rate of annual growth for 1945–54: 13.4 per thousand in 1948, 24.0 in 1953; acute shortage of manpower affects all branches of industry. Cartographic material includes: the 35 administrative districts and their centers (insert between p. 12–13), coal deposits, approx. 20 north of the Arctic Circle (p. 124–25), distribution of forestry farms, five in the far North (p. 224), freight transport in 1952 on the Lena, Aldan and Vilyuy Rivers (p. 356–57), the transportation system (p. 385), and (p. 421) the population density.

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49172. AKADEMIÎA NAUK SSSR. INSTITUT ÉTNOGRAFII. Polevye issledovaniîa Instituta ėtnografii v 1945 g. (*In its:* Kratkie soobshcheniîa. 1947. vyp. 2, p. 3–4.) Text in Russian. ***Title tr.:*** Field work of the Institute of Ethnography in 1945.

Lists 13 expeditions sponsored by the Institute including the Chukotka Complex Expedition headed by G. F. Debeŝs, the Yakut anthropological-ethnographic expedition under M. G. Levin, and the expedition to Komi A.S.S.R. under N. N. Cheboksarov. Preliminary reports of these expeditions are listed as No. 3759, 9971, 33513, 49626, 52689, 56176.

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49173. AKADEMIÎA NAUK SSSR. INSTITUT GORNOGO DELA. Sovetskaîa gornaîa nauka, 1917–1957. Moskva, Gos. nauchno-tekhn. izd-vo litry po ugol'noĭ promyshl., 1957. 641 p. illus., diagrs. Refs. Text in Russian.

Title tr.: Soviet mining science, 1917–1957. N. V. Mel'nikov, editor.

Collective work, a score of papers, presenting a comprehensive account of the development of mining institutions, discovery and exploration of useful minerals, technology of prospecting and exploitation, establishment of working conditions and safety standards in mining developments during forty years of the Soviet regime. Exploration and development of the mineral resources of the Pechora basin, Kola Peninsula, Northern Ural, Yakut A.S.S.R. and the Lena and Tunguska coal-bearing basins are mentioned among others. The extensive literature lists attached to the papers include works dealing with arctic areas. ***Copy seen:*** DLC.

49174. AKADEMIÏA NAUK SSSR. INSTITUT ISTORII. O Lenskikh sobytiiakh 1912 g.; dokumenty instituta Marksizma-Leninizma pri TSK KPSS. (Akademiia nauk SSSR. Institut istorii. Istoricheskiĭ arkhiv, Jan.–Feb. 1957, no. 1, p. 46–58, tables.) Text in Russian. ***Title tr.:*** The Lena events of 1912; documents of the Institute of Marxism-Leninism of the Central Committee of the Communist party of the Soviet Union.

A series of documents (petitions, complaints, depositions and reportage) relating to the 1912 strike among the miners of the Lena gold fields, situated along its Olekma and Vitim tributaries, and the massacre of the demonstrators by government troops. ***Copy seen:*** DLC.

49175. AKADEMIÏA NAUK SSSR. INSTITUT MERZLOTOVEDENIÏA. Osnovnye poniatiia i terminy geokriologii (merzlotovedeniia). Moskva, 1956. 16 p. Text in Russian. ***Title tr.:*** Basic concepts and terms in geocryology (permafrostology).

A revised terminology of 36 concepts is presented together with definitions. The basic term "permafrostology" is replaced with "geocryology"; "naled" is recommended only for formations on the surface of an ice cover; "taryn" is suggested for ground naleds; "frost soils" or "rock" instead of "dry permafrost." "Seasonally frozen ground" is distinguished from "seasonally thawed ground," the latter term is favored for "active layer."—From SIPRE. ***Copy seen:*** DLC.

49176. AKADEMIÏA NAUK SSSR. INSTITUT MERZLOTOVEDENIÏA. Rezoliutsiia sektsii inzhenernogo merzlotovedeniia VII mezhduvedomstvennogo soveshchaniia po merzlotovedeniiu. (*Its:* Trudy, 1958. t. 14, p. 149–54.) Text in Russian. ***Title tr.:*** Resolution of the Permafrost Engineering Section of the 7th Interdepartmental Conference on Permafrostology.

Problems for future study in the fields of foundation construction, mining, road and railroad construction, hydrotechnical development, sanitary facilities, and thermophysical studies are discussed. Rigid foundations are recommended for small installations and non-rigid foundations for those occupying large areas. The need for improved methods for deep thawing of frozen ground for mining purposes, utilization of solar radiation for preparation of frozen ground for excavation, and conservation of freezing temperatures in mines is stressed. It is recommended that pipes of sanitary installations be placed at a min. depth and that thermal insulation with the best hydrophobic properties be used. Methods must be developed to determine the thermal conductivity and hydrological characteristics of frozen ground for practical calculations, taking into account the individual components of the thermal exchange between the ground and the ambient medium, together with water migration and seepage.—From SIPRE. ***Copy seen:*** DLC.

49177. ADADEMIÏA NAUK SSSR. INSTITUT MERZLOTOVEDENIÏA. Sezonnoe promerzanie gruntov i primenenie l'da dlia stroitel'nykh tseleĭ. Moskva, Izd-vo Akademii nauk SSSR, 1957. 148 p. illus., tables, diagrs. Text in Russian. ***Title tr.:*** Seasonal freezing of soils and the use of ice for construction purposes.

Contains ten papers, of which four are described in this Bibliography under their authors' names, viz. (titles tr.):

MARTYNOV, G. A., *and* S. V. SHIMANOVSKIĬ. Thermocouples for studying soil temperatures under natural conditions.

KONNOVA, O. S. Investigations on seasonally frozen ground using the methods of crystal optics.

TIUTIUNOV, I. A., *and others.* The intensity of chemical changes in the mineral components of podsolic and tundra soils.

VOĬTKOVSKIĬ, K. F. An experimental ice storeroom. ***Copy seen:*** DLC.

ADAKEMIIÂ NAUK SSSR. INSTITUT MERZLOTOVEDENIIÂ, *see also* Materialy po laboratornym issledovaniîam merzlykh gruntov, 3. Moskva. *1957.* No. 53180.

49178. ADADEMIIÂ NAUK SSSR. KOL'SKIÏ FILIAL, *Kirovsk.* Shchelochnye granity Kol'skogo poluostrova; sbornik statei. Moskva, Izd-vo Akademii nauk SSSR, 1958. 374 p. illus., plates, tables, diagrs. incl. 2 fold., cross-sections, maps incl. 6 fold. 137 refs. Text in Russian. ***Title tr.:*** Alkaline granites of the Kola Peninsula; a collection of papers.

Alkaline granites, formed by the platformic type of Paleozoic intrusions in Kola Peninsula, occupy an area of about 3,500 km.^{2} They have undergone systematic study by numerous scientists since 1928, of which the results, extensive scientific data on their geology and petrology, appear in these 17 papers. The preface by the chief editor, O. A. Vorob'eva, outlines the arrangement of the collection and the main features of alkaline granites. The collection comprises an introductory article by A. I. Morozov, and two groups of papers, the first describing individual alkaline granite intrusions; the second dealing with the geologic position, tectonics, petrographic characteristics, petrochemistry, metallogeny, and the origin of the alkaline granites. The papers are listed in this Bibliography under the authors' names, viz. (titles tr.):

MOROZOV, A. I. Distribution features of alkaline granites in the range of the Peninsula and the history of their investigation.

IVANOV, A. M. Alkaline granites of Zapadnyye Keyvy.

MOROZOV, A. I. Alkaline granites in the middle course of the Ponoy River.

IVANOV, A. M. Alkaline granites of the upper Strel'na River.

IÛDIN, B. A. Alkaline granites of the Lake Purnach district.

FIZHENKO, V. V. Alkaline granites of the Belyye tundras.

IÛDIN, B. A. The alkaline granite dike complex in the Tsaga River district.

MIRSKAIÂ, D. D. Alkaline granites of the Niz'yavr Lake district.

BATIEVA, I. D. Alkaline granites of the Kanozero-Kolvitskoye Lakes district.

PAZIÛK, L. I. Subalkaline granites of Dolomitovaya Varaka, south of the Khibiny massif.

MOROZOV, A. I., *and* A. M. SHUKEVICH. Alkaline granites in the western part of Kola Peninsula.

ELISEEV, N. A. Alkaline granites of the Gremyakha-Vyrmes massif.

ELISEEV, N. A. Alkaline granites of the Chagveuayv massif.

GINZBURG, I. V. Geological position and inner tectonics of alkaline granites of the Kola Peninsula.

MOROZOV, A. I. Comparative petrographic characteristics of alkaline granites of the Kola Peninsula.

GINZBURG, I. V. The petrochemistry of the alkaline granites.

CHUMAKOV, A. A. On the origin of the Keyvy alkaline granites.

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49179. AKADEMIIÂ NAUK SSSR. KOL'SKIÏ FILIAL, *Kirovsk.* Voprosy geologii i mineralogii Kol'skogo poluostrova, vyp. 1. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1958. 190 p. illus., 54 tables, cross-sections, diagrs., maps incl. 1 fold. 74 refs. Text in Russian. ***Title tr.:*** Problems of the geology and mineralogy of Kola Peninsula, no. 1.

Contains nine papers on recent investigations by scientists of the Geological Institute of the Academy of Sciences' Kola Branch and other scientific organizations. They deal with the petrology of the Moncha and Khibiny tundra mountains, metamorphism of mountain rocks in the northwestern part of the peninsula, and the mineralogy of pegmatite veins and useful mineral ores of Pechenga and Khibiny. All the papers are abstracted in this Bibliography under the authors' names, viz. (titles tr.):

KOZLOV, E. K. Some debatable questions on the geological structure of the Sopchuayvench massif in Moncha tundra.

IVANOVA, T. N. The Kukisvumchorr-Yukspor apatite-nepheline body.

IÛDIN, B. A. On the metamorphism of basic rocks and their contact effects in the lower and middle Iokanga River region.

PAZIÛK, L. I. Granophyric rocks and gneissic quartzite metakeratophyres from the Imandra-Vorzuga series in Kola Peninsula.

BEL'KOV, I. V. Yttrick mineralization of amazonite pegmatites in alkaline granites in Kola Peninsula.

BEL'KOV, I. V., *and* M. I. VOLKOVA. Chevkinite from pegmatite veins of the western Keyv region in Kola Peninsula.

DORFMAN, M. D. New data on the mineralogy of Yukspor in the Khibiny tundras.

GALAKHOV, A. V. Lovchorrite-bearing veins in the eastern part of the Eveslogchorr mountain in Khibiny.

GORBUNOV, G.T. Copper-nickel ores of Ortoayvi in the Pechenga region.

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49180. AKADEMIÍA NAUK SSSR. KOMI FILIAL, *Syktyvkar.* Pochvy Komi ASSR. Moskva, Izd-vo Akademii nauk SSSR, 1958. 197 p. map, tables, profiles. 160 refs. Text in Russian. ***Title tr.:*** The soils of Komi ASSR.

Results of soil investigations carried out by the Komi Branch of the Academy of Sciences of U.S.S.R. are reported. Mapping, examination of profiles was done in the field, selected samples tested in the laboratories, and publications to 1954 studied. A map of Komi soil was compiled in scale 1:1,500,000 (edited by O. A. Polynt͡seva) and published in 1954. The six chapters of this work are described under their authors' names, viz. (titles translated):

POLYNT͡SEVA, O. A. The state of knowledge of the soil cover.

POLYNT͡SEVA, O. A., *and others.* General conditions for soil formation.

POLYNT͡SEVA, O. A., *and others.* Description of soils.

CHEBYKINA, N. V. Some methods of improving soil fertility.

CHEBYKINA, N. V. Agricultural characteristics of soils.

MAKAROVA, L. A., *and others.* Regional division of soils.

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49181. AKADEMIÍA NAUK SSSR. KOMISSIÍA PO PROBLEMAM SEVERA. Problemy Severa, vyp. 1. Moskva, Izd-vo Akademii nauk SSSR, 1958. 372 p. illus., diagrs., tables, maps. Refs. Text in Russian. ***Title tr.:*** Problems of the North, no. 1.

Collection of papers dealing with questions in the fields of oceanology: four papers by P. A. Gordienko, S. D. Lappo, D. A. Drogaĭt͡sev, V. S. Antonov; geography and geology: two papers by V.N. Saks, E. K. Ustiev; geophysics: four papers by I. V. Maksimov, A. P. Nikol'skiĭ, I. S. Isaev, B. A. Savel'ev; biology: six papers by B. A. Tikhomirov, V. D. Aleksandrova, V. P. Dadykin, V. A. Tavrovskiĭ, V. M. Sdobnikov, S. M. Uspenskiĭ; economics: a paper by S. V. Slavin; the North abroad: five papers by G. A. Agranat, V. F. Puzanova, Y. O. Fortier, and others, G. M. Ignat'ev, B. A. Savel'ev; Antarctica: two papers by L. M. Nikolaeva, V. V. Klepikov; news: articles by O. N. Komova, N. A. Churkina, B. A. Savel'ev, D. A. Drogaĭt͡sev, A. P. Okladnikov and A. P. Puminov, I. A. Nekrasov. All the papers referring to the Arctic are abstracted in this bibliography under their authors' names.

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AKADEMIÍA NAUK SSSR. KOMISSIÍA PO PROBLEMAM SEVERA *see also* Mozeson, D. L. Razvitie proizvoditel'nykh sil . . . No. 53435.

AKADEMIÍA NAUK SSSR. KOMISSIÍA PO PROBLEMAM SEVERA *see also* Mozeson, D. L. Nauchnaíà sessiíà . . . na Kamchatke. *1958.* No. 53433.

AKADEMIÍA NAUK SSSR. MEZHDUVEDOMSTVENNOE SOVESHCHANIE PO MERZLOTOVEDENIÍÛ, *7th,* 1956, *see* IÀkovleva, M. A. O rabote sekt͡sii inzhenernogo merzlotovedeniíà. *1958.* No. 51888.

49182. AKADEMIÍA NAUK SSSR. MEZHDUVEDOMSTVENNYÏ KOMITET PO PROVEDENIÍÛ MEZHDUNARODNOGO GEOFIZICHESKOGO GODA. Mezhdunarodnyĭ geofizicheskiĭ god; Informat͡sionnyĭ bûlleten', no. 2. Otv. red. A. Kh. Khrgian. Moskva, Izd-vo Akademii nauk SSSR, 1957. 106 p. illus. tables. Text in Russian. ***Title tr.:*** International Geophysical Year; Information bulletin, no. 2. A. Kh. Khrgian, editor.

Contains program of scientific investigation during the International Geophysical Year, 1957–1958. (p. 3–46): World days, planned activities of the U.S.S.R. in 14 sections (as adopted by the Special Committee of the IGY at Barcelona Sept. 10–15, 1956) and stations to be occupied by each. Data on stations include coordinates and scope of observations. 275 of the stations are to participate in meteorological observations (42 in the Arctic), 36 (11) in geomagnetic, 39 (22) in auroral and night sky luminescence, 28 (8) in ionospheric observations; 14 are for solar studies; 12 (4 arctic) for cosmic radiation, 19 for longitudinal and latitudinal observations; 12 stations (3 arctic) for glaciology; 10 vessels, (among them the *Vitíaz'* and *Ob'*) and 10 stations (4 arctic) are for oceanographic, and 22 stations (6 arctic) for seismic observa-

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tions. Equipment of the stations, instruments, methods and scope of observations are noted for each section. In glaciology section, for example, "the basic problems of ice and snow investigations and research programs of the U.S.S.R. associated therewith are outlined, and data on the location of stations are tabulated. The program includes studies on snow cover, its physical and mechanical properties, and changes with time and under the action of physiographical factors. The effects of snow cover on heat exchange at and in the ground will also be investigated as well as fossil ice and permafrost, their structure and origin. Soviet glaciologists have recently developed the methodology and instruments needed for the glaciological observations. Results of these preliminary studies will be reported before the International Glaciological Conference in 1957."

Announcement of the Soviet Committee of the IGY (p. 47–50): organization of the European-Asiatic regional center of "world days" in Moscow, headed by N. V. Pushkov, to serve all Communist countries, including China and Yugoslavia, and "possibly" Finland and Iran.

Plan of scientific investigations during the IGY, (p. 51–54) with changes in the Soviet organizations and scientific institutes participating, as pub. in *Informat͡sionnyĭ b͡ulleten'*, no. 1, Aug. 1956.

Arctic Conference (p. 55–60): Account by M. F. Kurykova, of the IGY conference at Stockholm, May 22–25, 1956: the Russian representatives (eight) headed by V. V. Belousov, papers delivered, work of ten special teams set up, some changes in the program planned in the Arctic. Suggestion for Scandinavian countries to organize a transarctic flight for study of cosmic radiation is noted.

The Third Antarctic Conference, July 30–Aug. 4, 1956, is reported by G. A. Avsi͡uk (p. 61–68).

Conference of representatives of the countries of East-European region for preparation of IGY is reported by I͡U. D. Bulanzhe (p. 69–73). It was held in Moscow, Aug. 20–25, 1956. The U.S.S.R., Bulgaria, Hungary, East Germany, Poland, Rumania, Czechoslovakia, Yugoslavia, as well as China and Mongolia participated. Problems relating to 13 sections of geophysical investigations were discussed; work pledged by each country is reported (table p. 73).

Fourth Conference of the Special Committee of the International Geophysical Year, at Barcelona Sept. 1956, is reported by V. V. Belousov (p. 74–86).

Activities of the Interdepartmental Committee for Preparation and Realization of IGY at the Presidium of the Academy of Sciences of the U.S.S.R., are reported by A. D. Povzner (p. 87–94): its organization, work, and membership, which includes several arctic explorers. G. A. Avsi͡uk, E. I. Tolstikov, M. E. Ostrekin.

Preparation of the Hydrometeorological Service of the U.S.S.R. for IGY is reported by L. I. Popov (p. 95–99): 38 observatories and 12 institutes of the Main Administration of Hydrometeorological Service (GUGMS) are to organize observations of 292 hydrometeorological stations according to IGY schedules. The planned work, including that in the Arctic, is indicated.

Fedchenko Glacier in the Pamir-Alay Mts. and its investigation is reviewed by V. F. Suslov (p. 100–105).

Personnel changes in some of the Russian IGY teams are added (p. 106).

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49183. AKADEMIĬA NAUK SSSR. MEZHVEDOMSTVENNAĬA POSTOĬANNAĬA KOMISSIĬA PO ZHELEZU. Zhelezorudnai͡a baza chernoĭ metallurgii SSSR. Red. I. P. Bardin. Moskva, Izd-vo Akademii nauk SSSR, 1957. 566 p. tables, maps, cross-sections. (Zhelezorudnye mestorozhdeniĭa SSSR.) Refs. Text in Russian. ***Title tr.:*** Ore sources of the ferrous metallurgy of the U.S.S.R.

In three main parts: genesis of various iron ore deposits (p. 17–61); geologic-industrial characteristics of iron ore locations (p. 65–376); and propsects of ferrous metallurgy during the period 1956–1970 (p. 379–561). Arctic regions are included among others throughout the study; Kola Peninsula (p. 79–88), Karelian A.S.S.R. (p. 88–100), Northern Ural (p. 185–91), Nizhnyaya Tunguska (p. 270–80), and Angara-Aldan basins (p. 286–97 and 531–34). Iron ore types, their distribution, properties, accessibility, production and prospects are outlined. The extensive bibliography (p. 368–76) includes many items on arctic regions. ***Copy seen:*** DGS.

49184. AKADEMIĬA NAUK SSSR. MURMANSKAĬA BIOLOGICHESKAĬA STANT͡SIĬA, *Dal'niye Zelentsy.* Zakonomernosti skopleniĭ i migrat͡siĭ promyslovykh ryb v pribrezhnoĭ zone Murmana

i ikh svi͡az' s biologicheskimi, gidrologicheskimi i gidrokhimicheskimi protsessami. Moskva-Leningrad, Izdvo Akademii nauk SSSR, 1958. 271 p. illus. tables, maps. Text in Russian. ***Title tr.:*** Regularities in shoaling and migration of commercial fish in the Murman coastal zone, and their connection with biological, hydrological and hydrochemical processes.

A study of these problems made during 1953–1955 within a belt 30 miles wide extending from Motovskiy Zaliv on eastern Kola to Kanin Nos, the tip of Kanin Peninsula, approx. 69° N. 33°–43° E. Relation between the local conditions and those in the Barents Sea is noted, and an introductory outline of the work and of methods used is given (p. 3–4) by M. M. Kamshilov who gives also the concluding paper. The papers reporting the work are presented in two groups: abiotic and biotic factors of the medium (four papers); and biology and distribution of commercial fishes of the Murman Coast: ten papers with introductory review (p. 129–30) of the beginnings, technical advances and research in the Barents Sea fisheries, by N. V. Mironova, who also (p. 254–57) summarizes the results of the biological investigation, its significance in minimizing the environmental factors, and practical value for fisheries. All 14 papers are abstracted in this Bibliography under their authors' names, viz. (titles tr.):

KONDRATSOVA, O. F. Thermal conditions and salinity of coastal waters of the eastern Murman.

CHERNOVSKAIA, E. N. The regimen of biogenic elements in the coastal zone of the eastern Murman.

KAMSHILOV, M. M., *and others.* Coastal plankton of the Murman.

MILOSLAVSKAIA, N. M. Peculiarities of benthos distribution and possibilities of its utilization by cod fishes on the eastern Murman.

MIRONOVA, N. V. Proportional weight of coastal zone catches in Barents Sea fisheries.

GERASIMOV, V. V. Distribution of herring in 1953–1955.

POZDNIAKOV, IU. F. Some data on the biology and fishery of capelin in the Barents Sea.

CHINARINA, A. D. Age and size composition of cod and haddock shoals.

TSEEB, R. IA. The food of haddock.

ZHABREVA, A. V. The food of cod.

TSEEB, R. IA., *and* A. V. ZHABREVA. Comparison between the food of cod and haddock.

TSEEB, R. IA. Distribution of haddock in 1953–1955.

MIRONOVA, N. V. Distribution of cod.

KAMSHILOV, M. M. Some theoretical results of investigations of the Murmansk Biological Station.

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49185. AKADEMIIA NAUK SSSR. OKEANOGRAFICHESKAIA KOMISSIIA. Institut okeanologii Akademii nauk SSSR. (*Its:* Biulleten', 1958, no. 1, p. 21–23.) Text in Russian. ***Title tr.:*** Institute of Oceanology of the Academy of Sciences of the U.S.S.R.

Outlines the organization and functions of this Institute founded in 1946 and headed by V. G. Kort; its 12 divisions (otdel) and laboratories and their chiefs are listed. The Institute's work includes study (together with the Arctic Institute) of the dynamics of water and ice in the Arctic; it has five research vessels of which the *Vitiaz'* is the largest.

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49186. AKADEMIIA NAUK SSSR. OTDELENIE GEOLOGO-GEOGRAFICHESKIKH NAUK. Literatura po geologii i smezhnym distsiplinam, postupivshaia v biblioteku Otdeleniia geologo-geograficheskikh nauk AN SSSR. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Jan. 1957 – Dec. 1958, god 22–23.) Refs. Text in Russian.

Title tr.: Literature on geology and allied disciplines received by the Library of the Department of Geological and Geographical Sciences of the Academy of Sciences of the U.S.S.R.

Lists, on 4–15 pages in each of the 12 monthly issues of both years, the Library's monthly accessions of Russian and foreign literature from Oct. 1956 (in 1957, no. 1) to Sept. 1958 (in 1958, no. 12). Titles of books and of papers in scientific journals are arranged under Geology; Paleontology; Petrography, mineralogy, crystallography and geochemistry; Minerals and prospecting methods; Hydrogeology and engineering geology. Included among others pertinent to northern areas are the Transactions (Trudy) of the Scientific Research Institute of the Geology of the Arctic, beginning with v. 6, 1950; Transactions of the All-Union Magadan Scientific Research Institute (Vsesoiuznyi Magadanskii nauchno-issledovatel'skii institut, VNII–1), pub-

lished in 1955–1957, the monthly journal "Kolyma," published in Magadan by Dal'stroĭ, etc. ***Copy seen:*** DLC.

AKADEMIÏA NAUK SSSR. URAL'SKIĬ FILIAL, *see* Kokosov, N. M., *and others.* Khanty-Mansiĭskiĭ natsional'nyĭ okrug . . . *1956.* No. 52358.

49187. AKADEMIÏA NAUK SSSR. VULKANOLOGICHESKAÏA STANTSIÏA. Katalog deĭstvuïushchikh vulkanov SSSR. Moskva, Izd-vo Akademii nauk SSSR, 1957. 178 p. illus., tables, maps. (*Its:* Biïlleten', no. 25.) Refs. Text in Russian. ***Title tr.:*** Catalog of the active volcanoes of the U.S.S.R.

Lists 67 active volcanoes: 28 in Kamchatka (treated by V. I. Vlodavets and B. I. Piĭp, p. 5–95), 39 on the Kuril Islands (p. 96–178: by G. S. Gorshkov). Name, location, altitude, geomorphic and geologic characteristics are given, together with synopsis of the volcano's activity, data on eruptive matter, etc. Pertinent literature, photos, maps are included. ***Copy seen:*** DGS.

49188. AKADEMIÏA NAUK SSSR. ZOOLOGICHESKIĬ INSTITUT. Opredeliteli po faune SSSR . . . (Keys to the fauna of the U.S.S.R. . . .). See v. 8, p. 17 of *Arctic Bibliography* for earlier listings.

No. 62 (1956). NOVIKOV, G. A. Carnivorous mammals. No. 47103.

No. 65 (1957). BULYCHEVA, A. I. Marine amphipods. No. 49997.

No. 66 (1958). LOMAKINA, N. B. Cumacean crustaceans. No. 52905.

AKADEMIÏA NAUK URSR, *Kiev.* **INSTYTUT BIOKHIMII,** *see* Kuznetsova, L. N., *and others.* Vliïanie okhlazhdeniïa . . . obmen piridinovykh i tiaminovykh . . . *1956.* No. 52596.

49189. AKADEMIÏA PEDAGOGICHESKIKH NAUK RSFSR, *Moskva.* Institut natsional'nykh shkol. Iz opyta prepodavaniïa russkogo ïazyka v natsional'noĭ shkole. Pod red. N. Z. Bakeevoĭ. Moskva, Izd-vo, Akademii pedagogicheskikh nauk RSFSR, 1957. 152 p. tables (Pedagogischeskie chteniïa). Text in Russian. ***Title tr.:*** Russian language instruction in the national school. Ed. by N. Z. Bakeeva.

A collection of 12 papers dealing with problems of teaching Russian in non-Russian schools. Two papers, on northern peoples, are abstracted under their authors' names, viz (titles tr.):

GADEL'SHIN, K. A. Work with Zyryans studying Russian phonetics.

POPOVA, K. I. An experiment in vocabulary work in Russian language classes in the fifth grade of the Yakut school. ***Copy seen:*** DLC.

49190. AKATOVA, N. A. Ostrakody Onezhskogo zaliva Belogo moriï. (Akademiïa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniïu Belogo moriï, 1957. vyp. 1, p. 628–33, illus.) 9 refs. Text in Russian. ***Title tr.:*** Ostracods of the Onega Bay, White Sea.

Description of five species of these crustaceans with data on depth of find, water temperature, geographic distribution, anatomy, etc. ***Copy seen:*** DLC.

49191. AKBULATOV, SH. F., and **L. I. VÏAZOV.** Krupnopanel'noe stroitel'stvo za polïarnym krugom. (Biïlleten' stroitel'noĭ tekhniki, Nov. 1957. god 14, no. 11, p. 6–9, illus., table.) Text in Russian. ***Title tr.:*** Large panel buildings above the Arctic Circle.

Four-story apartment house developments in the Murmansk area using prefabricated reinforced concrete and heat-insulated panels necessitated the construction of a local panel manufacturing plant. The plant layout and equipment are described. The panel manufacturing is explained in detail and illustrated.

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49192. AKHANOV, SERGEĬ GRIGOR'EVICH. V druzhnoĭ sem'e severomortsev. (Sovetskiĭ moriak, Jan. 1958. god 18, no. 2, p. 22, illus.) Text in Russian. ***Title tr.:*** In the united family of the sailors of the North.

Senior member of the theater of the Soviet Northern Fleet reminisces about his work in the far North since 1938.

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49193. AKHMATOV, V. V. Geodezicheskie raboty v ėkspediïsii Severnago Ledovitago okeana lëtom 1904 g. (U.S.S.R. Gidrograficheskoe upravlenie. *Zapiski po gidrografii,* 1907. vyp. 28, p. 352–59, tables, diagrs.) Text in Russian. ***Title tr.:*** Geodetic work of Arctic Ocean Expedition in summer 1904.

Brief technical account of triangulation work done by the author in the White Sea narrows (Morzhovets Island and the Ponoy coast of Kola Peninsula) and on Matveyeva Island in the vicinity of Vaygach Island. ***Copy seen:*** DLC.

49194. AKIMOV, G. A., *and others.* Vliîanie glubokogo obshchego okhlazhdeniîa na funktsional'nye i morfologicheskie izmeneniîa v tsentral'noĭ nervnoĭ sisteme posle vyklûcheniîa serdtsa iz krovoobrashcheniîa. (Bûlleten' èksperimental'noĭ biologii i meditsiny, June 1957. t. 43, god 22, p. 99–103, illus., table) 3 refs. Text in Russian. Summary in English. *Other authors:* V. I. Burakovskiĭ *and* E. V. Gubler. ***Title tr:*** Effect of deep general hypothermia upon functional and morphological changes of the central nervous system after exclusion of cardiac circulation.

Exclusion of the heart from circulation in hypothermic dogs for periods up to 19 min. caused only reversible changes in the neural cells. No functional lesions were noted on the second day after operation. In normothermic animals, cardiac circulatory exclusion for seven minutes caused pronounced functional and morphological changes.

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49195. AKIMOVA, K. G. K voprosu o stratigraficheskom raschlenenii lavovoĭ svity formatsii sibirskikh trappov. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 61-77, cross-section.) Text in Russian. ***Title tr.:*** On the question of stratigraphic separation of lavatic series in the Siberian trap formation.

Presents results of a field investigation in the Kotuy-Kotuykan River interfluve (approx. 66°33′–67°20′ N. 98°–100° E.). The studied cross-sections are described and diagrammed. Dynamics of trap formation development are discussed; petrographic description is given of effusive rocks. Siberian trap formation has four series, not two or three as hitherto believed. ***Copy seen:*** DLC.

49196. ALASKA. AGRICULTURAL EXPERIMENT STATION, *Palmer.* Fruits for Alaska. College, Jan. 1958. 3 p. (Alaska. University. Extension Service. Circular 420 rev.)

Lists varieties most successful during experimental testing and observation.

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49197. ALASKA. AGRICULTURAL EXPERIMENT STATION, *Palmer.* Vegetable varieties for Alaska. College, Jan. 1958. 6 p. (Alaska. University. Extension Service. Circular 450 rev.)

Recommends varieties tested successfully at Matanuska and Fairbanks experimental farms. Revision of No. 38469.

Copy seen: DA.

ALASKA. DEPT. OF HEALTH, *see Alaska's health.* Ninth . . . report . . . Alaska Department of Health, 1954–1956 . . . *1957.* No. 49219.

49198. ALASKA. EMPLOYMENT SECURITY COMMISSION. Financing Alaska's employment security program. Juneau, Oct. 1958. 3 v., tables, graphs, maps. Refs.

Disbursements to unemployed during 1952–1958 have consistently exceeded funds provided for this purpose under the Alaska Employment Security Act. Data are presented as basis for working out changes in the Act. Anticipated disbursements (benefit costs) and income required for the 1958–65 period are considered on specified economic and legislative assumptions, and alternate recommendations are made. Alaska has special problems due to the high seasonality of industry, and other exceptional factors in its economy. Insured unemployment, averaging 12%, and the resultant benefit cost rates, almost 4%, are approx. three times the national average. Earnings in insured employment average about two-thirds higher than the United States generally. The report is in three parts: Projected costs of unemployment insurance in the 49th state (36 p.) by E. W. Maxwell; Analysis of the Alaska economy and its future outlook by G. W. Rogers (see No. 54371); and a statistical supplement of 54 pages.

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49199. ALASKA. GOVERNOR. Annual report 1957. Washington, D.C., U.S. Govt. Print. Off., 1958. 122 p.

Reviews work of federal and territorial government departments for the fiscal year ending June 30, 1957. Statistics, comparisons with previous years, and future plans are included. The Territorial Government was in sound financial shape; employment had increased slightly over 1956; and oil discoveries, growth of the pulp industry, and increase in timber sales brightened economic prospects. Earlier reports were listed as No. 38475, 43544, etc. ***Copy seen:*** DLC.

49200. ALASKA. RESOURCE DEVELOPMENT BOARD. Alaska passenger traffic survey 1956, 1957. Juneau, July 1957, Aug. 1958. 2 no.: 14, 16 p.

Compilation of annual traffic figures (cf. No. 43541) based on information supplied by steamship lines, scheduled airlines, Alaska Dept. of Police and Canadian Dept. of Citizenship and Immigration (Alaska Highway). Data on airline, highway, and steamship travel are graphed, tabulated and discussed. Airlines carried 59.8% of the total traffic in 1956, 58.2% in 1957; highways 32.7 and 33.8%; and steamships 7.5 and 7.9%. Alaskan transportation reached an all-time high in 1956, and increased in 1957 (7.1%) to 314,698. Continuing a trend started in 1954, departures exceeded arrivals by 6,571 persons in 1956; 8,556 in 1957. ***Copy seen:*** DLC.

49201. ALASKA. RESOURCE DEVELOPMENT BOARD. Biennial report, 1955–57. Juneau, 1957. 74 p. maps, graphs, tables.

Summarizes the Board's activities and its assistance to timber, power, transportation, petroleum, mining, fisheries and land development. The three "growth" industries of timber, tourism and petroleum are emphasized, and the impact of Federal expenditures and employment on the Alaskan economy is discussed. Studies and reports of the Board and its future plans are noted. Brief summaries are included of the biennial reports of the Depts. of Mines, Fisheries, Agriculture, Lands, and Aviation, and the Office of Highway Engineer. For earlier reports of the Board see No. 38473.

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49202. ALASKA. RESOURCE DEVELOPMENT BOARD. Estimate of Alaska population, July 1, 1955, to June 30, 1956; July 1, 1956, to June 30, 1957. Report no. 5, 6. Juneau, 1957, 1958. 2 v., graphs, tables.

Contains monthly estimates, July 1955–Dec. 1957, of civilian immigration, emigration and excess of births over deaths; annual U.S. Census Bureau population estimates, 1939–1957; and monthly estimates from Jan. 1, 1950 to July 1, 1957, of military, and to Jan. 1, 1958, of civilian population totals. Fiscal year 1956 had an increase of 3,201 civilians and a decrease of 5,000 military: net loss of 1,799 persons. Fiscal year 1957 had an increase of 6,596 civilians and of 2,000 military: total increase of 8,596 people. Earlier reports are listed as No. 38485 and 43542.

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49203. ALASKA. RESOURCE DEVELOPMENT BOARD. Financial data regarding the incorporated towns and cities of Alaska, 1956, 1957. Juneau, Aug. 1957, Oct. 1958. 2 v. graphs, tables.

Presents results of fourth and fifth financial surveys of 31 municipalities: total assessed valuation of real and personal property, 1935–1957; assessed valuations and tax rates, 1956–1957; bonded indebtedness; and statistics of Alaska school districts for 1957 (valuation, tax, enrollment, cost per student). Property valuation for 1956 was $287,226,767, an increase of $28,972,297 (11.2%) over 1955; for 1957: $294,041,104, increase of 2.4% over 1956, with rate of increase continuing to decline. Anchorage, Fairbanks, Ketchikan, and Juneau accounted for 76% of total property value both years. Previous reports, No. 38486 and 43543. ***Copy seen:*** CaMAI.

ALASKA. RESOURCE DEVELOPMENT BOARD, *see also* J. B. Ward & Assoc. The Ward index of consumer prices . . . *1957–58*. No. 52108.

49204. ALASKA. UNIVERSITY. Scientific activities of the University of Alaska. College, Alaska. Dec. 1958. 66 p. table. Prepared by Graduate Council Research Committee.

Summary of scientific activities, except for teaching: projects in agriculture, anthropology, biology, earth sciences, engineering, mathematics, paleontology, physics, philosophy of science, social sciences, wildlife management; collections and publications, facilities and services are noted. Nearly all projects deal with Alaska. ***Copy seen:*** DWB.

49205. ALASKA. UNIVERSITY. EXTENSION SERVICE. Alaska mushrooms. College, Alaska, Aug. 1952. 8 p. illus. Mimeographed. (*Its:* Bulletin no. F–46.)

Descriptions, illus. and use of wild mushrooms, distinguishing edible from poisonous kinds. ***Copy seen:*** DA.

49206. ALASKA. UNIVERSITY. EXTENSION SERVICE. Condensation control for Alaska's farms and homes. College, Alaska, June 1957. 19 p. diagrs., tables. (*Its:* Bulletin no. 800.) Revised by C. I. Branton.

Moisture condensation within the walls of buildings causes deterioration of structural materials and peeling exterior paint. The problem has become more serious as new construction methods result in warmer and more moist air within the buildings. This aggravates

the problem by building up an increased vapor pressure gradient, particularly during cold weather. Methods of control are outlined: they include installation of a vapor barrier near the inner wall, insulation to keep the inner wall and vapor barrier above the dew point temperature, and ventilation to prevent excess moisture accumulation in the air.

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49207. ALASKA. UNIVERSITY. EXTENSION SERVICE. Planning and managing greenhouses in Alaska. College, Alaska, 1958. 23 p., illus., tables. (*Its:* Bulletin 804.)

Criteria of site selection, the light, heat, water and ventilation requirements, and size are considered. Soil, fertilizers and manure, tilling, raising of seedlings, transplanting, pests and diseases, etc., are discussed. Main greenhouse crops for local conditions (tomatoes, cucumbers, beans, corn, melons, etc.) and their raising are described. Plan and materials are given for a greenhouse 14 x 11 x 13 ft. For construction details, see No. 39761. ***Copy seen:*** CaMAI.

49208. ALASKA. UNIVERSITY. EXTENSION SERVICE. Southeastern Alaska gardens. College, Alaska, May 1953. 7 p., illus. Mimeographed. (*Its:* Circular no. 451) 20 refs.

Practical guide for garden development, based on V. J. Boucher's 18 years' experience at Ketchikan. Soil water, soil reconstruction, fertilizers, injurious pests, plant diseases, suitable varieties, etc., are discussed. ***Copy seen:*** DA.

49209. ALASKA NATIONAL BANK OF FAIRBANKS. The new State of Alaska. Fairbanks, Commercial Ptg. Co., 1958? 40 p. illus., tables, graphs, diagrs.

Contains summarized information on Alaska's geography, economy, trades, resources, transportation, population, employment, educational facilities, etc.

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49210. ALASKAN SCIENCE CONFERENCE. 5th, *Anchorage, Alaska*, Sept. 7–10, 1954. Science in Alaska, 1954; proceedings. Fairbanks, Alaska, American Association for the Advancement of Science, Alaska Division, Nov. 1957. 118 p. diagrs., map.

Lists papers presented at the Conference with authors' abstracts of approx. 100–500 words in length. A few of the papers (*) are published in full in the proceedings, and abstracted in this Bibliography under the author's name.

Agriculture and forestry.

*ANDERSEN, H. E. Clearcutting as a silvicultural system in Southeastern Alaska.

Bell, R. E. Translation of research results into public policy.

Brooks, A. M. Major problems of the private timber operator in Southeastern Alaska.

Burt, J. E., *Jr.* Fire control in Alaska's interior.

Fieldhouse, T. Timber management on Alaska's public domain.

Greely, A. W. Applying the working circle concept in managing the Tongass National Forest.

*GREGORY, R. A. Soil temperature changes associated with clearcutting.

Lutz, H. J. Ecological effects of forest fires in interior Alaska.

Martin, P. Can plant growth be predicted?

Michaelson, N. E. Physical properties and certain morphological features of a potential agricultural soil in the upper Cook Inlet region.

Quintus, R. The Rosa Creek forest management area.

Robinson, R. R. What is the future of Alaska's interior forests?

Sandor, J. A. A report on the U.S. Forest Service-Ketchikan Pulp Company timber inventory project.

Strash, V. Socialized agriculture in the USSR, progress or failure?

Engineering.

Anderson, A. A. Winter operating conditions on the Alaskan Railroad.

Froman, C. A. Septic tanks with subsurface disposal fields constructed at Fairbanks, Alaska.

*GHIGLIONE, A. F. Subarctic highway construction and maintenance.

Hoskins, J. R. Shaped charge blasting.

Johnson, A. Water-power investigations in Alaska by the Geological Survey.

Loftus, T. A. Cold water thawing.

Munger, E. The compound composition of Portland cement concrete.

Noyes, J. R. Transportation in Alaska and the far Northwest.

Sheppard, K. C. The effect of local concrete products on the Alaskan economy.

Wilson, W. S. Rubber deterioration by ozone.

*YORK, G. A. Jet navigation series Northern Hemisphere polar charts.

Biological sciences.

Benninghoff, W. S. Recent contributions to Quaternary vegetation history in Alaska.

Chatelain, E. F. Economic and hunting data on the Nelchina caribou herd.

Elkins, W. A., *and* U. C. Nelson. Wildlife introductions and transplants in Alaska.

Elsner, R. W. Physiological effects of prolonged cold exposure in four subjects.

*GJAEREVOLL, O. Some species new to the flora of Alaska.

Hock, R. J. The annual cycle of Alaskan ground squirrels.

Irving, L., *and* J. Krog. Skin temperature and the conservation of heat.

Kelly, M. W. Observations afield on Alaskan wolves.

Krog, H., *and others.* Influence of environmental temperature on acclimatized and nonacclimatized rats.

Lensink, C. J. The home range of marten and its significance in management.

Libby, W. L. Beaver affidavits as a management tool.

Mayer, W. V. Relationships of temperature to hibernation in the arctic ground squirrel.

Mohr, J. L. Marine crustaceans of the Barrow area.

Olson, S. T. Gull-waterfowl relationships on the waterfowl breeding grounds in Alaska.

Parker, R. R. Two proposed methods of estimating animal population.

Sutherland, G. B., *and* D. H. Campbell. Plasma protein changes as a result of cold adaptation.

Sumner, L. The critical importance of Alaska wild land ecology.

Biological sciences—Fisheries.

Carlson, C. J., *and* J. A. Dassow. Keeping frozen Alaska shrimp tender.

Collins, G. B. New methods for study of fishery problems.

Dassow, J. A. Preliminary studies in the utilization of fresh water resources of Alaska.

Fukuhara, F. The 1954 Japanese high seas mother ship type salmon fishery.

Macy, P. Factors influencing fresh water survival and distribution of Pacific salmon, genus *Oncorhynchus.*

Schallert, W. Concerning the climatic variation in the northern North Pacific.

Smith, K. A. Fishery exploration and development in Alaska.

Biological sciences—Symposium.

SCOTT, R. F. Resource planning in northern Alaska, a problem in biological, anthropological, economic, and social interrelationships.

Physical sciences—Geology.

Barnes, F. F. Alaskan coal investigations by the U.S. Geological Survey.

Cederstrom, D. J. Storage of Ship Creek water underground in the Anchorage area, Alaska.

Cobb, E. H. The Geological Survey's index of publications on Alaskan geology.

Dunkle, W. E. History and economic geology of copper deposits in the Copper River area, Alaska.

Geist, O. W., *and* T. L. Péwé. Quantitative measurements of the 1937 advance of the Black Rapids Glacier, Alaska.

Hoare, J. M., *and* W. L. Coonrad. Preliminary report on geologic investigations in the lower Kuskokwim region, Alaska.

*KACHADOORIAN, R. Engineering geology of a segment of the Denali highway.

Keller, A. S. Regional geology and petroleum potential of northeastern Alaska.

Kelloway, G. A. Pleistocene structures in the British Isles.

Mangus, M. D. Geologic reconnaissance of the Kongakut River area, northeastern Alaska.

Miller, D. J. Cataclysmic flood waves in Lituya Bay, Alaska.

Miller, D. J. Geology and petroleum possibilities of the Gulf of Alaska Tertiary Province.

Péwé, T. L. Engineering geology program of the U.S. Geological Survey in Alaska.

Sainsbury, C. L. Geochemical investigations in Southeastern Alaska.

Stejer, F. A. Pyrite deposits at Horseshoe Bay, Latouche Island.

Tibbitts, G. C. Jet drilling in Fairbanks.

Trainer, F. W. Eolian deposits of the Matanuska valley, Alaska.

Physical sciences—Geophysics and meteorology.

*BAKKEN, S. The meteorological aspects of superrefractive layers in Alaska.

*BANKS, H. C. Observed weather in the Arctic Ocean.

Bowles, K. VHF radio echoes from the aurora.

Cain, J. C., *and* A. B. Cain. The determination of the total amount of atmospheric ozone over College, Alaska, by a Dobson ozone spectrophotometer.

Garlington, A. R., *Jr.* Pressure pattern techniques in polar navigation.

Heusser, C. J., *and* E. R. LaChapelle. The Juneau Ice Field Research Project, 1954.

Gautier, T. N., *and* C. J. Sargent. Prediction of the likelihood of interference at frequencies of 30 to 42 megacycles.

*HENRY, W. K. Yukon River floods.

Little, C. G. High latitude ionospheric observations using extraterrestrial radio waves.

Longacre, A. M. Analysis of the temperature field in the stratosphere.

McQuain, R. H. Ice breakup: Bering Sea, 1954.

Leonard, R. S. Short range echoes from the aurora.

Meek, J. H. The auroral zone as located by magnetic disturbances.

Mitchell, J. M., *Jr.* Variations of the Northern Hemisphere zonal westerlies index.

Mukherjee, N. R. Entropries of fusion of metals.

Nelson, J. H. The Alaskan geomagnetic program for the International Geophysical Year.

Stanley, G. M., *and* T. N. Davis. Determination of ground conductivity at low frequencies in Alaska.

Sugiura, M. Local-time variations of sudden commencements of magnetic storms.

Weber, C. P. The relationship between surface pressure patterns and the development of significant snow in the Anchorage area.

Medicine and public health.

*ALTER, A. J. Appearance of intestinal wastes in surface water supplies at Ketchikan, Alaska.

*CHAMBERS, L. A. Some properties of the community air supply in Anchorage, Alaska.

Eklund, C. M., *and* C. L. Larson. Outbreak of type 3 poliomyelitis on St. Paul Island, Alaska.

Irving, L. Adaptation to arctic life.

Leftwich, C. I., *and* D. W. MacFarlane. An epidemic of infectious hepatitis in a native village on Kodiak Island, Alaska.

Pauls, F. A possible case of rabies.

Phillips, F. J., M. P. Starr, *and* R. B. Wilkins. Treatment of the unhospit tuberculosis patient in Alaska.

Schumacher, H. C. A mental health program with particular reference to Alaska.

Scott, E. M. Study of anemia in Alaskan Eskimos.

Weiss, E. S. Survey of illness in Anchorage, Alaska.

Zeberl, A. J. Public health education in Alaska.

Social sciences—Anthropology.

Allen, R. The potlach and social equilibrium.

Bank, T. P. Archeology at Unalaska, Aleutians.

*GIDDINGS, J. L. The tenuous Beaufort Sea archeology.

Ransom, J. E. Aleut linguistics and anthropology.

Social sciences.

Carle, W. C. Building a high school course in Alaskan economics and industry.

Collins, G. L. Progress of the recreation movement in Alaska.

Craig, E. H. Assistance to families through the Alaska native service.

Dafoe, D. M. Problems of the outlying schools of Alaska.

Fohn-Hansen, L. The family life program of the extension service.

Good, L. V. Anchorage community college in adult education.

Harmon, H. A. The extent of assistance to Alaskan families by the Department of public Welfare.

*HOCK, R. J., *and* M. S. WILSON. High school biology in Alaska; present aspects.

Johnson, M. C. Medical science and cultural patterns.

McCarrey, J. L. Juvenile delinquency; or is it parental delinquency?

Matsen, W. B. A territorial library system; a tool for the future.

Matthews, T. C. The role of research in the development of Alaska.

Mick, A. H. Function of a land grant college in a frontier society.

Novatney, D. New high school course of study in homemaking.

Novatney, D. Teachers' supply and supervision of outlying schools in Alaska with comparison to those in Australia.

Page, W. B. Progress in environmental sanitation in Alaska.

Patty, E. N. Research pays dividends.

Prawl, M. L. The social characteristics of patients served by Alaska's health program.

Rhode, L. A community faces its problems.

Tilly, G. S. The university course in marriage and family life.

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ALASKAN SCIENCE CONFERENCE, 8th, *Anchorage,* Sept. 10–13, 1957, *see:*

Andreasen, G. E., *and others.* Aeromagnetic study . . . *1957.* No. 49303.

Beal, M. A. Sea-level . . . Barrow. *1957.* No. 49590.

Hanna, G. D. Recollections of early oil exploration . . . *1957.* No. 51544.

Hastings, A. D., *and* S. J. Falkowski. Climatic analogs of Fort Greely . . . Churchill . . . *1957.* No. 51619.

Hubley, R. C. IGY . . . McCall Glacier . . . *1957.* No. 51839.

Karlstrom, T. N. V. Alaskan evidence . . . post-Illinoian pre-Wisconsin glaciation. *1957.* No. 52190.

Lachenbruch, A. H. Periodic heat flow . . . *1957.* No. 52610.

Miller, R. D., *and* E. Dobrovolny. Origin . . . Pt. Campbell-Pt. Woronzof area . . . "blue clay" . . . Anchorage. *1957.* No. 53304.

Miller, R. D., *and* E. Dobrovolny. Pleistocene . . . Anchorage . . . *1957.* No. 53305.

Péwé, T. L. Preliminary . . . 1957 advance of Muldrow Glacier. *1957.* No. 53978.

Plafker, G., *and* D. J. Miller. Recent . . . glaciation . . . Malaspina district and adjoining bays . . . *1957.* No. 54018.

Robinson, F. M. Oil and gas . . . *1957.* No. 54344.

Schalk, M. Relation of Arctic storms to shore-line changes . . . *1957.* No. 54596.

Zietz, I., *and others.* Aeromagnetic reconnaissance . . . Cook Inlet . . . *1957.* No. 56219.

ALASKAN SCIENCE CONFERENCE, 9th, *College, Alaska,* Sept. 3–5, 1958, *see:*

Chapman, R. M. Formation . . . Bergh Lake . . . *1958.* No. 50165.

Chapman, R. M. Geochemical exploration . . . Kantishna . . . *1958.* No. 50166.

Green, L. H., *and* K. C. McTaggart. Structural studies . . . Mayo . . . *1958.* No. 51344.

Gryc, G., *and others.* Geology of northeastern Alaska. *1958.* No. 51410.

Heusser, C. J. Late Pleistocene environments . . . *1958.* No. 51709.

Hummel, C. L. Geology . . . Nome gold fields, Alaska. *1958.* No. 51847.

Isto, R. E. Alaskan geographic names. *1958.* No. 51974.

Lathram, E. H., *and others.* Progress . . . geologic mapping . . . *1958.* No. 52673.

Shacklette, H. T. Biogeochemical sampling . . . *1958.* No. 54721.

Williams, J. R., *and* O. J. Ferrians. Late Wisconsin and recent . . . Matanuska Glacier . . . *1958.* No. 56057.

Zietz, I., *and others.* Regional geologic interpretation . . . *1958.* No. 56220.

49211. ***ALASKA'S HEALTH.*** Aleutian and northern villages included in sanitation program. (Alaska's health, Aug. 1958. v. 15, p. 1, 2, illus.)

Four localities in each of these two areas were represented in the fifth Village Sanitation-Aide Training Course, held May 18–June 13. Sponsors of the course, number and origin of students, curriculum and teachers, etc., are discussed. ***Copy seen:*** DNLM.

49212. ***ALASKA'S HEALTH.*** Ear, nose and throat special demonstration project initiated. (Alaska's health, Aug. 1957. v. 14, p. 1–2, illus.)

Account of the ENT (Ear, Nose and Throat) Demonstration Project begun on July 1 and scheduled to last two years. It is sponsored by the U.S. Children's Bureau and the work is to be carried out by an Alaska Dept. of Health team in six Yukon and Kuskokwim River villages. Details of the work are discussed.

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49213. ***ALASKA'S HEALTH.*** Ft. Yukon residents organize project and sponsor eye clinic. (Alaska's health, Oct. 1958. v. 15, p. 1, 2, illus.)

Contains information on the number of adults and children with defective vision, origins of project, financing, proceedings, results, etc.

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49214. ***ALASKA'S HEALTH.*** Health and health-related 1957 legislation is summarized below. (Alaska's health, June 1957. v. 14, p. 7–8.)

Review of Territorial laws of 1957 affecting: mental health; the responsibilities of the Alaska Dept. of Health (licensing of hospitals, collection of water-supply and power data, radiation protection, etc.); responsibilities of local and territorial joint agencies; related boards

and agencies; vital statistics; administration; finances, etc.

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49215. ***ALASKA'S HEALTH.*** Influenza diagnostic program is initiated in ADH Laboratory. (Alaska's health, Feb. 1958. v. 15, p. 1.)

Outline of procedures in diagnosing Asian-type flu among the private patients. Throat washings as well as blood specimens are tested. Alaska Dept. of Health cooperation with the U.S. Public Health Service and with the World Health Organization is also discussed.

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49216. ***ALASKA'S HEALTH.*** New and modern Fairbanks Health Center is officially opened. (Alaska's health, June 1957. v. 14, p. 1–2, 8, illus.)

Opening of the Center (Mar. 24) and its building are described; its activities include child clinics, obstetrical visits, school health, and clinics for orthopedics; work on otolaryngology, chest and venereal diseases, mental health, chronic diseases, etc. ***Copy seen:*** DLC.

49217. ***ALASKA'S HEALTH.*** New health centers built and others renovated during year. (Alaska's health, Aug. 1958. v. 15, p. 2, illus.)

Report on five new and two enlarged and renovated centers, the latter on Kodiak and at Yakutat. The centers are described, their sponsors and aids, finances, activities, etc.

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49218. ***ALASKA'S HEALTH.*** New Kake Health Center opened. (Alaska's health, Feb. 1958. v. 15, p. 4.)

Describes the building constructed (with fifty percent aid from the federal Hill-Burton medical facilities program) at this village on Kupreanof Island, Southeast Alaska. The Center's facilities, activities and personnel are also noted.

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49219. ***ALASKA'S HEALTH.*** Ninth biennial report of the Alaska Department of Health, 1954–1956; a summary of significant health gains made and needs unmet. (Alaska's health, Jan. 1957. v. 14, p. 1–8, illus., map.)

Includes information regarding legislation for health services; administration and organization; preventive medical services (anti-polio, and other vaccinations); nurse education; TB diagnosis and combat; maternal and child welfare; crippled children care; hospitals, sanitoria, nursing homes, etc.; sanitation and engineering; construction; vital statistics; health education, etc.

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49220. ***ALASKA'S HEALTH.*** Public health nurse pays spring visit north of Arctic Circle. (Alaska's health, Aug. 1957. v. 14, p. 6–7, illus.)

Describes visit to Chalkyitsik, a village near Fort Yukon, and the process of immunizing its populace against typhoid. Home calls to tuberculosis patients, indoctrination in preventing intestinal diseases, etc., are also described.

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49221. ***ALASKA'S HEALTH.*** Southeast Alaska speech and hearing program is extended to additional communities in 1958. (Alaska's health, June 1958. v. 15, p. 5, illus.)

Contains information on the origins of the program; areas of current extension; supporting organizations, activities in various areas, summer program, instruction among teachers, adult therapy.

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49222. ***ALASKA'S HEALTH.*** Study causes of death of Alaska infants. (Alaska's health, Apr. 1957. v. 14, p. 1–2)

Study based on 1634 death certificates of infants up to one year old. Among whites, mortality was found to be not higher than in the continental U.S., but among the native children it was excessive, respiratory and other infective diseases being the main cause of death after the first week of life. A breakdown of mortality according to age of the infants is also presented.

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49223. ***ALASKA'S HEALTH.*** Vaccination against rabies recommended for dogs, also cats, by Health and Agricultural Depts. (Alaska's health, June 1958. v. 15, p. 1, 4, illus.)

Information is presented on occurrence of rabies in Alaskan wild and domestic animals; vaccination for animals and man; rabies in foxes; cases in 1958; veterinary aid, etc. ***Copy seen:*** DLC.

49224. ALBERS, CLAUS, *and others.* Blutgase in Hypothermie; ein Beitrag zur Frage der Hypoxietheorie des Kältetodes. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 266, Heft 4, p. 373–93, illus. tables.) 51 refs. Text in German. *Other authors:* W.

Brendel, A. Hardewig, *and* W. Usinger. ***Title tr.:*** Blood gases in hypothermia; contribution to the problem of the theory of hypoxia in death from cold.

A study of dogs made hypothermic to about 20° C. Arterial and venous O_2-saturation, arteriovenous O_2-difference, O_2-tension and capacity were recorded, as well as CO_2-content, tension and elimination. Alkali reserve and pH were also determined. Additional hypoxia had no effect upon lethal temperature or upon circulation. The results indicate that there is no basis for assuming hypoxia to be the cause of death from cold. ***Copy seen:*** DLC.

49225. ALBERS, CLAUS, *and others.* Der intrapulmonale Gasaustausch in tiefer Hypothermie. (Pflügers Archiv für die gesamte Physiologie, Dec. 1957. Bd. 266, Heft 1, p. 48–49.) Text in German. *Other authors:* A. Hardewig, W. Brendel, *and* W. Usinger. ***Title tr.:*** Intrapulmonary gas exchange in deep hypothermia.

Summary of investigation on alveolar-arterial differences in O_2-tension in hypothermic dogs. A short-circuiting of circulation in the lungs with a concomittant exclusion of pulmonary ventilation is offered as most likely explanation of conditions. ***Copy seen:*** DLC.

49226. ALBERS, CLAUS, *and others.* Der intrapulmonale Gasaustausch in tiefer Hypothermie. (Pflügers Archiv für die gesatme Physiologie, 1958. Bd. 266, Heft 4, p. 394–407, illus. tables.) 21 refs. Text in German. *Other authors:* W. Brendel, A. Hardewig, *and* W. Usinger. ***Title tr.:*** Intrapulmonary gas exchange in deep hypothermia.

Account of experiments on dogs made hypothermic to 25° C. with narcosis and artificial respiration applied. Conditions both with hypoxia and hyperoxia were studied with respect to their effect upon alveolar-arterial pressure difference. Blockade of the lower lung was also applied to ascertain this difference. The results suggest formation of a "functional atelectasis" in hypothermia. ***Copy seen:*** DLC.

ALBERS, CLAUS, *see also* Brendel, W., *and others.* Der Kreislauf in Hypothermie . . . *1958.* No. 49907.

ALBERS, CLAUS, *see also* Brendel, W., *and others.* Kreislaufregulation . . . *1957.* No. 49908.

49227. ALBERTA-NORTHWEST TERRITORIES BOUNDARY COMMISSION. Report of the commissioners appointed to direct the survey and demarcation of the boundary between the Province of Alberta and the Northwest Territories. Ottawa, 1956. 2 v.: 62 p. illus., col. map, tables; and 21 maps in atlas vol.

Reports on methods, procedures and problems of the 310-mi. survey at 60° N. A general description is given (p. 39–49) of the topography, forest cover, minerals, game and fur, derived from surveyor's report on each sector. The atlas volume contains an index map and map sheets, at scale 1:63,360, showing the boundary established. Each sheet covers a sector of 30′ along 60° N. from 110°00′ W. to 120°00′ W. Also included on each sheet are profiles giving elevations of boundary monuments at vertical scale of 1 in.: 400 ft. ***Copy seen:*** DLC.

49228. ALCOCK, FREDERICK JAMES, 1888– . General activities of the National Museum of Canada. (Canada. National Museum. Annual report for the fiscal year 1955–56, *pub.* 1957. Bulletin, no. 147, p. 1–21.) Refs.

Reviews field and office work, 1955–1956, of the Museum, its Depts. of Archeology, Ethnology, Zoology, and the National Herbarium, listing publications and zoological and botanical accessions. Work noted in the North, includes mammals studies especially caribou, small mammals collecting in Newfoundland-Labrador by Austin W. Cameron and W. John Smith; biological survey near Eureka on Ellesmere and on Axel Heiberg Island by S. D. MacDonald; archeological excavations of nine cultural complexes by R. S. MacNeish's party to the Firth River area, in Yukon Territory, possibly providing a link between the Eastern Woodlands culture and that of northeast Asia; excavations of Dorset culture on Southampton Island by H. B. Collins, W. E. Taylor and others during a joint expedition with the Smithsonian Institution; ethnographic studies in the Fort Simpson area by J. H. MacNeish and in the Belcher Islands by G.-R. Lefebvre; and Claude-Dumont Desgoffe; preparation of a glossary of the principal sub-dialects east of Hudson Bay by G.-R. Lefebvre. ***Copy seen:*** DGS.

49229. ALCOCK, FREDERICK JAMES, 1888– . The romance of northern exploration. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 76–83, ports.)

Notes discoveries in northern Canada by Samuel Hearne, Alexander Mackenzie, Philip Turnor and Peter Fidler, David Thompson, Sir John Franklin, John Richardson, George Back, A. R. C. Selwyn, Joseph B. Tyrrell, A. P. Low, and others. Impetus came from desire to find a Northwest Passage, the fur trade, and Geological Survey investigations.

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49230. ALDANSKIĬ, VIKTOR FEDOROVICH, 1918– . Neozhidannaîa vstrecha; v Oĭmîakone. (Svet nad Baĭkalom, May–June 1958, no. 3, p. 68–69, port.) Text in Russian. ***Title tr.:*** Surprise encounter; in Oymyakon.

Two poems by this Yakut writer and teacher, translated by A. Mosunov and M. Zamakhovskaîa, and introduced by a biographical sketch. ***Copy seen:*** DLC.

49231. ALDRICH, JOHN MERTON, 1866–1934, *and* **P. S. DARLINGTON.** The dipterous family Helomyzidae. (American Entomological Society. Transactions, 1908. v. 34, no. 1, p. 67–100, plates 3–4.)

Contains keys and descriptions of two new genera and 44 species (none new), with critical notes and data on distribution; two are from the North: *Leria fraterna* (Ungava Bay; type locality Sitka) and *L. tristis* (Commander Islands).

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49232. ALDRICH, JOHN WARREN, 1906– , *and* **A. J. DUVALL.** Distribution and migration of races of the mourning dove. (Condor, Mar.–Apr. 1958. v. 60, no. 2, p. 108–128, 3 illus., table.) 42 refs.

Contains data on *Zenaidura macroura*, a widespread species breeding in the nonboreal regions of the North and Middle America and from the West Indies south to Panama. Its breeding habitats include most ecological types except marshes and heavily wooded areas. Five geographic races are recognized, two of which breed on the North American mainland; *Z. macroura marginella* is recorded in Mackenzie District (Great Slave Lake) and in Alaska (Fort Yukon); *Z. m. carolinensis* is registered in Newfoundland.

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49233. ALEKSANDROV, O. V. Oksigemometriîa pri gipotermii. (Éksperimental'naîa khirurgiîa, May–June 1957. god 2, no. 3, p. 51–55, illus. table.) Text in Russian. Summary in English. ***Title tr.:*** Oxyhemometry in hypothermia.

Account of conditions in 36 patients subjected to hypothermia. Cooling did not affect O_2-saturation of blood in an appreciable degree. Oxyhemoglobin dropped 2–3 percent, in congenital heart cases the drop reached 4–6 percent. During cooling, increased muscular tonus, shivering, or clonus were at times observed. Surgical aspects are also noted.

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49234. ALEKSANDROV, V. A. Narodnye vosstaniîa v vostochnoi Sibiri vo vtoroĭ polovine XVII v. (Istoricheskie zapiski, 1957. t. 59, p. 255–309.) Approx. 60 refs. Text in Russian. ***Title tr.:*** People's uprisings in eastern Siberia in the second half of the 17th century.

Discusses the causes and effects of the Siberian uprisings starting with the 1630–1640 revolts at Mangazeya, Yakutsk, Narym, et al., and culminating in the mutinies of the 1690's in Nerchinsk and Yakutsk which spread to the garrisons and settlements on the Lena, Angara, Yenisey Rivers. The economic conditions and aspirations to self-administration are outlined. Resentment against the despotic rule of petty officials and feudal oppression by the gentry in collusion with the Russian military personnel, is shown on the part of resettled peasants, runaway serfs, indentured trappers and tribute-paying (îasachnyĭ) natives, including Tungus and Yakuts. Their fight for rights is traced. The class-struggle aspect of these uprisings and their importance for the following centralized power policy are stressed.

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49235. ALEKSANDROV, V. B. O polikraze iz al'bititov. (Akademiîa nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh élementov. Trudy, 1957, vyp. 1, p. 70–76, illus., tables.) 2 refs. Text in Russian. ***Title tr.:*** On polycrase from albitites.

Description of polycrase from metasomatic albites, genetically bound with syenite-pegmatites, found in the northern Karelian A.S.S.R. Properties of polycrase crystals are described, reactions to heat treatment graphed, Debye crystallograms presented, and chemical analyses evaluated. Separation of polycrase and cyrtolite from albites through albitization processes is discussed.

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49236. ALEKSANDROVA, VERA DANILOVNA. Nekotorye zakonomernosti

razmeshcheniia rastitel'nogo pokrova v arkticheskoĭ tundre. (Problemy Severa, 1958, vyp. 1, p. 173–87, illus., maps.) 60 refs. Text in Russian. ***Title tr.:*** Some regularities in distribution of plant cover in the arctic tundra.

A study of conditions on Novaya Zemlya, with an introductory outline of earlier works on plant zones in the tundra, and data on these islands' climate; character of the flora and its age; soils and substrates, plant associations and their distribution (zones); latitude and altitude factors in this zonation.

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49237. ALEKSANDROVA, VERA DANILOVNA. Opyt opredeleniia nadzemnoĭ i podzemnoĭ massy rastitel'nosti v arkticheskoĭ tundre. (Botanicheskiĭ zhurnal, Dec. 1958. t. 43, no. 12, p. 1748–61, 3 illus., 5 tables.) 9 refs. Text in Russian. ***Title tr.:*** An attempt to estimate the over- and underground mass of arctic-tundra plants.

Contains information and tabulated data on the organic mass of two tundra phytocoenoses common near the polar station at Cape Shalaurov (73°12′ N. 143°35′ E.) in the Lyakhovskiye Islands. Samples down to a depth of 35 cm. were studied. Both living and dead plant material is determined and physical condition, stage of plant decomposition, kind of soil, horizon, etc. explained.

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49238. ALEKSANDROWICZ, J. *and* **B. PERKOWSKE.** Hémo-myélo-splénogrammes et courbes E.C.G. du hérisson en période du sommeil hivernal et pendant la réfrigération controlée. (Sang, biologie et pathologie, 1956. année 27. no. 5, p. 491–95, illus. table.) Text in French. ***Title tr.:*** Hemo-myelo-splenograms and ECG curves in the hedgehog during hibernation and controlled cooling.

Hematological conditions during hibernation when compared to those in the summer or during hypothermia, showed an increase in the number of granulocytes in the bone marrow and of erythroblasts and megacaryocytes in the spleen. ECG during hibernation and hypothermia showed common traits of reduction in rate of heartbeat and dilation of the QRS complex. ***Copy seen:*** DNLM.

ALEKSEENKO, E. A., *see* Gantskaia, O. A. Sessii . . . issledovaniĭ 1957 g. *1958.* No. 51080.

49239. ALEKSEEV, A. Brat'ia Shmalevy, issledovateli Kraĭnego Severa. (Na severe dal'nem, 1957, kniga 7, p. 185–93.) 13 refs. Text in Russian. ***Title tr.:*** The brothers Shmalev, explorers of the far North.

Sketches the life of two army officers, Timofeĭ Ivanovich Shmalev, 1736–1789, and Vasiliĭ Ivanovich Shmalev, 1737–1799, who served in Yakutia, Chukotka, Kamchatka and the Okhotsk Sea region and collected materials on these areas. The work of Timofeĭ is valuable, as he helped prepare or supply several expeditions (Krenitsyn's, Billings' and Sarychev's); he compiled at least 19 papers on problems of the Far East; one paper was published in 1774, the rest survived with G. F. Müller's materials or in other archives. ***Copy seen:*** DLC.

49240. ALEKSEEV, A. P. *and* **B. V. ISTOSHIN.** Skhema postoiannykh techeniĭ Norvezhskogo i Grenlandskogo morei. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy, 1956. vyp. 9, p. 62–68, maps.) 4 refs. Text in Russian. ***Title tr.:*** A scheme of constant currents of the Norway and Greenland Seas.

Authors take issue with the scheme of currents outlined by Helland-Hansen and Nansen in 1909 (No. 6923). Based on research of the Polar Institute of Sea Fisheries and Oceanography during the last ten years, they claim that the Atlantic Current in this area has the character of more or less separate branches and not of a continuous stream; that in the center of Norwegian Sea run several anticyclonic currents and that near Jan Mayen the Atlantic waters advance from south and southeast. The merits of their scheme are discussed.

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ALEKSEEV, B., *see* Efremov, I. A. Rasskazy. *1950.* No. 50699.

49241. ALEKSEEV G. Promysel na Taĭmyre. (Okhota i okhotnich'e khoziaĭstvo. Apr. 1957, no. 4, p. 18–19.) Text in Russian. ***Title tr.:*** The hunting industry on Taymyr.

With polar bear and sable hunting prohibited, arctic fox remains the principal game animal in the Taymyr District. Its seasonal migrations of 500–2000 km. and its 3–4 year abundance cycle are noted; two types of traps and their use are briefly described. Fur

farming experiments in the district are as yet inconclusive; the kolkhozes most successful in hunting are listed.

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49242. ALEKSEEV, I. A. Zavaly drevesiny na taezhnykh rekakh Sibiri. (Priroda, May 1957, no. 5, p. 116.) Text in Russian. ***Title tr.:*** The obstruction of rivers of the Siberian taiga by decaying wood.

The so-called "zavaly" or obstructions are formed in rivers of the northern taiga by the trees carried down by spring floods; they are a nuisance to navigation and a danger to the wooden bridges.

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ALEKSEEV, IŪRIĬ KONSTANTINOVICH, *see* Bolotnikov, N. IA. Avtomaty v stranel'dov. *1957.* No. 49824.

ALEKSEEV, IŪRIĬ KONSTANTINOVICH, *see* Kanaki, V. G. Ėkspeditsii . . . 1957 godu. *1958.* No. 52155.

49243. ALEKSEEV, M. N. K geomorfologii i stratigrafii pleĭstotsena basseĭna nizhnego techeniia r. Vilūĭ. (Akademiia nauk SSSR. Komissiia po izucheniiū chetvertichnogo perioda. Bū̆lleten', 1957. no. 21, p. 87–96, cross sections.) 7 refs. Text in Russian. ***Title tr.:*** On the geomorphology and stratigraphy of the Pleistocene in the lower course of the Vilyuy River.

Presents material on some morphologic and paleontologic features of the middle and lower course of the Vilyuy with its tributaries, the Markha, Tyung, Tyukyan, Tongo and others. Development of local relief, and processes of erosion, accumulation, solifluction and permafrost are discussed. Six river terraces in the valley of the Vilyuy are distinguished and their position, extent and composition are outlined. In the cross-sections of the terraces, fossil mammal remains were found: *Elapas trogontherri, E. wüsti,* and *Rhinoceros mercki.* Pleistocene stratigraphy is discussed and faunal characteristics are outlined.

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49244. ALEKSEEV, NIKOLAĬ NIKOLAEVICH. O reĭse ledoreza "Fedor Litke" v Okhotskom more zimoĭ 1931–32 g. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia moreĭ SSSR, 1935. vyp. 22, p. 36–40.) Text in Russian. Summary in German. ***Title tr.:*** On the voyage of the ice-breaker *Fedor Litke* on the Okhotsk Sea in the winter 1931–32.

Report of the vessel's hydrographer includes route, ice conditions and kinds of ice encountered, drift of the ice-bound vessel, water temperatures and salinity, weather. ***Copy seen:*** DLC.

49245. ALEKSEEV, P., *and others.* Cherez Chorrgor. (Fizkul'tura i sport, Mar. 1958. god 28, no. 3, p. 20–21, illus.) Text in Russian. *Other authors:* I. Raspopov, *and* O. Raspopov. ***Title tr.:*** Across the Chorrgor pass.

Describes the first winter crossing of the Chorrgor high mountain pass, by a ski-party of seven Leningrad University students. With one overnight stop at the foot of this pass, they successfully crossed the Khibiny Mts. in central Kola Peninsula from Kirovsk to Imandra, by way of the Kukisvumchorr and Chorrgor passes. They continued, later, to Murmansk via Monchegorsk, Volch'i tundras and the Medvezh'i lakes system.

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49246. ALEKSEEVA, L. Prazdnik mog byt' eshche luchshe. (Klub, Jan. 1957. god 6, no. 1, p. 20–21, illus.) Text in Russian. ***Title tr.:*** The festival could have been better.

Describes the first youth festival of the Komi Republic and participation of the youth organizations of Ukhta, Vorkuta and Pechora in musical, theatrical, pictorial and athletic events. Lack of participation by rural communities is criticized. ***Copy seen:*** DLC.

49247. ALESKEROVA, Z. T. *and others.* Stratigrafiia mezozoĭskikh i tretichnykh otlozheniĭ Zapadno-sibirskoĭ nizmennosti. (Sovetskaia geologiia, 1957. Sbornik 55, p. 145–72, tables, cross-section, fold. map.) 37 refs. Text in Russian. *Other authors:* P. F. Li, T. I. Osyko, N. N. Rostovtsev, *and* M. A. Tolstikhina. ***Title tr.:*** The stratigraphy of Mesozoic and Tertiary deposits of the West Siberian lowland.

Presents a new stratigraphic division for this region, developed in 1955 on the basis of profiles from deep drillings. The various series, subseries and facies, their location and main characteristics are given. The northern part of this area extends into subarctic and arctic regions. ***Copy seen:*** DLC.

49248. ALEXANDER, CHARLES PAUL, 1889– . New limnophiline crane-flies from the United States and

Canada; Tipulidae, Diptera. (New York Entomological Society. Journal, June 1916. v. 24, no. 2, p. 118–25, plate 8.)

Six new limnophiline and one related species are described, with keys, critical notes and data on distribution. *Limnophila terrae-novae* n. sp., native to Newfoundland, is included. ***Copy seen:*** DLC.

49249. ALEXANDER, CHARLES PAUL, 1889– . Undescribed species of western nearctic Tipulidae (Diptera), I. (Great Basin naturalist, Dec. 29, 1943. v. 4, no. 3–4, p. 89–100.)

Contains descriptions of seven new species, among them *Limnophila* (*Prionolabis*) *vancouverensis* n. sp. occurring in Juneau and Ketchikan, Alaska.

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49250. ALEXANDER, ROBERT S. Standing-wave components in arterial pulses of hypothermic dogs. (Circulation research, Sept. 1958. v. 6, no. 5, p. 580–86, illus.) 12 refs.

Account of experiments with dogs made hypothermic until a marked prolongation of systole ensued. During the latter, undulations of pressure in the aortic arch were detected. These undulations were found to occur simultaneously with, but in opposite phase to, oscillations in the femoral artery. These observations lend additional support to the standing-wave theory.

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ALIMOV, V. D., *see* Grinko, E. P., *and* V. D. Alimov. Nekotorye voprosy o tipe sudna . . . *1958.* No. 51381.

49251. ALISOV, BORIS PAVLOVICH 1892– . Klimat SSSR. Moskva. Izdvo Moskovskogo Universiteta, 1956. 127 p. maps, graphs, 10 refs. Text in Russian. ***Title tr.:*** Climate of the U.S.S.R. Textbook, approved by the Ministry of Higher Education U.S.S.R. for colleges.

Describes dependency of climatic conditions on latitude, atmospheric circulation, and topographic features. Characteristics are given briefly of seasonal weather conditions in the Barents and Kara Seas (p. 31–38), Laptev and East Siberian Seas (p. 39–40), Chukotka (p. 40–41), Kola Peninsula and Karelia (p. 43–48), Arkhangel'sk and Komi (p. 48–51), Ural (p. 73–75), northern and central parts of West-Siberian uplands (p. 75–79), Yakutia and Trans-Baykal (p. 90–94), and Kamchatka and the Kuril Islands (p. 100–101). ***Copy seen:*** DLC.

ALISOV, BORIS PAVLOVICH, 1892– , *see also* Flohn, Hermann. Zur Frage der Einteilung der Klimazonen. *1957.* No. 50933.

49252. ALLAN, DOUGLAS ALEXANDER, 1896– , *and* **D. L. LINTON.** Robert Neal Rudmose Brown. (Scottish geographical magazine, Sept. 1957. v. 73, no. 2, p. 123–24.)

Two obituaries of this British geographer (1879–1957), stressing his contribution to polar exploration and geography. ***Copy seen:*** DGS.

ALLEGRA, G., *see* Gentile, M., *and others.* Definizione dell'ECG caratteristico . . . *1956.* No. 51124.

49253. ALLEN, ERNEST K. Prehistoric man in the Americas. (Alaska sportsman, May 1958. v. 24, no. 5, p. 16–17, +, illus.)

Notes excavations in the Yukon valley of hunting implements similar to those discovered in Siberia, and discusses migration of people from Asia via Bering Strait during the closing phase of the last glacial period and penetration into the continent via the Yukon and Mackenzie River valleys. ***Copy seen:*** DLC.

49254. ALLEN, FREDERICK MADISON, 1879– . Ligation and refrigeration of intestine. (Surgery, 1938. v. 3, p. 893–98, table.) 3 refs.

Account of experiments on different laboratory animals, with short intestinal loops cooled to near-freezing temperatures for as long as 16 hrs. At the end of such treatment the intestine showed a rosy pink color and firm tone; microscopically edema and some infiltration was noted. No obstruction nor paralysis took place and resistance to infection was not lowered. However, ligation of the whole intestine was always fatal.

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49255. ALLEN, GEORGE H., *and* **W. ARON.** Food of salmon fishes of the western North Pacific Ocean. Washington, D.C., Jan. 1958. 11 p. illus., tables, map. (U.S. Fish and Wildlife Service. Special scientific report, fisheries no. 237.), 6 refs.

Study of stomach contents of the sockeye, chum and pink salmon from the areas east and west of southern Kamchatka. The fish were caught by Japanese

gill-net fishing craft. There was little difference in the food of the same species in the same area, but there were marked differences between the species.

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49256. ALLEN, N. P. The brittle fracture of iron and steel. (Teknisk ukeblad, May 9, 1957. årg. 104, nr. 19, p. 375–83, illus., diagrs., tables, graphs.) 12 refs.

Brittle and ductile modes of fracture are outlined. Influence of composition and structure upon the temperature at transition from ductile to brittle behavior is discussed and experimental work reviewed: influence of oxygen, carbon, manganese, cooling and ageing procedures are dealt with in turn. Several notched bar test procedures are reviewed. Dr. Robertson's test for studying the conditions of crack propagation (applying a temperature gradient from −50° C. to +20° C. side-to-side on a sample strip welded to a tensile machine and subjected to stress) is appraised.

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49257. ALLEN, N. P. Recent European work on the mechanical properties of metals at low temperatures. (U.S. National Bureau of Standards. Circular, May 7, 1952. no. 520, p. 1–35, illus., diagrs., graphs, tables.) 29 refs.

Reviews work since 1940. Elasticity and plasticity are dealt with, and the development of brittleness at low temperatures is discussed in relation to brittle fracture in mild steel, the behavior of heat-treated alloy steels and the reliability of austenitic steels to −200° C. The properties at low temperatures of pure alloys of iron made at the British National Physical Laboratory are described; it is shown that some alloying additions exert influences on the rupture strength that are independent of their influence on the resistance to plastic deformation.

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ALLEN, ROSEMARY A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

49258. ALLGÉN, CARL ALGON JÖNSSON, 1886– . Jan Mayen, a lonely, desolate, arctic island. (Svensk geografisk årsbok, 1957. årg. 33, p. 162–66, map.)

Contains general geographical information on Jan Mayen (70°50′–71°10′ N. 07°57′–09°03′ W.), discovered by the Dutch in 1614 and belonging to Norway since 1929. A Norwegian meteorological station was set up there in 1921; the present station, on the north coast, was ready for use in 1949. Some 20 plants growing on the island are listed.

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49259. ALLGÉN, CARL ALGON JÖNSSON, 1886– . On a small collection of freeliving marine nematodes from Greenland and some other arctic regions; with reviews and analyses of the compositions of all hitherto known arctic nematode faunas. København, C. A. Reitzel, 1957. 42 p. illus. (Meddelelser om Grønland, bd. 159, no. 3, illus., tables.) 16 refs.

After a short historical review of research on arctic free-living nematodes, the author describes 29 species (11 new) belonging to 25 genera (2 new). The species originate from Greenland (5), Iceland (1), Labrador (12), Spitsbergen (8), the Aleutians (4); two are from unidentified localities, Hackluyts Headed (1), Giskö (1), and one is of unknown origin. Tabular lists follow of nematodes hitherto recorded from several arctic areas, Greenland, Iceland, Jan Mayen, Murman coast, White Sea, Novaya Zemlya, Kara Sea, New Siberian Islands, Bering Sea, Newfoundland.

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49260. ALLGÉN, CARL ALGON JÖNSSON, 1886– . Vergleich zwischen den marinen Nematodenfaunen Norwegens und der Tropen, I–II. (Norske videnskabers selskab, Trondheim. Forhandlinger, 1956. bd. 29, no. 9, 10, p. 36–40, 41–46, 8 tables.) 29 refs. Text in German. ***Title tr.:*** A comparison between the marine nematode fauna of Norway and the Tropics, I–II.

Based in part on material from the North Norwegian coast. Some 40 nematodes or about 10% of the known tropical species (409) occur in Norwegian waters where they form 12.12% of all Norwegian nematodes. These 40 species occur in tropical America (19), Africa (21), South Asia (10) and Australia (19).

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ALMANAKH ENISEĬ, *see* Vysotskiĭ, A. Al'manakh "Eniseĭ." *1956.* No. 55900.

ALMAZOVA, ANTONINA VASIL'EVNA, *see* Sunik, O. P. Soveshchanie po fizykam . . . *1953.* No. 55236.

ALMEIDA, TAVARES de, *see* International Commission NW Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

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49261. ALTER, AMOS J. Appearance of intestinal wastes in surface water supplies at Ketchikan, Alaska. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 81–84.)

Account of physical and bacteriological examination of Ketchikan water supplies during a period of one year. It was established that these supplies are "seriously contaminated at certain short periods." Application of U.S. Public Health Drinking Water Standards without consideration of special local requirements, is considered erroneous.

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49262. ALTER, AMOS J. A guide to arctic water works thermology. (Consulting engineer, Apr. 1957. v. 9, no. 4, p. 84–88, illus., diagrs.)

Comments on 21 critical points in an arctic water works system, emphasizing importance of heat conservation over hydraulic and structural design features. Water source, treatment plant, storage and distribution are dealt with. Changes in the thermal regime of permafrost areas, as caused by movement of water or by heat loss from structures and water pipes, are noted. Artificial heating of the water, protection of wells and pumping equipment, foundation design and construction techniques, also choice of pipe material are discussed. Construction of a casing head for a well drilled in permafrost and of a domestic takeoff for a recirculating system are illustrated, the latter being the most critical point in the system. This service connection device, called a "pitorifice", is a modification of the fitting used to connect radiators to a single-pipe recirculating type system, and is used in the Fairbanks, Alaska, water system. ***Copy seen:*** DLC.

49263. ALTER, AMOS J. Health and sanitation problems in the Arctic. (Biology Colloquium, 18th, 1957. p. 110–18.) 39 refs.

Contains information on the climate of Alaska, its population (1950), native, white and transient; development of public health institutions; environmental factors, especially low temperature, and their role in health and sanitation. Infectious diseases and their epidemiology are outlined, also oral, nasal and enteric discharges, and venereal diseases. Diet and nutrition, sanitation, water supply, housing, food control, education, etc., are also considered. ***Copy seen:*** DGS.

49264. ALTER, AMOS J. Water supply in Finland. (American Water Works Association. Journal, Nov. 1951. v. 43, no. 11, p. 897–903, illus. maps, tables.) Ref.

Physiography of Finland (60°–70° N. subarctic climate) is outlined briefly and population distribution indicated. Data of 1949 on 60 major community water supplies (including Rovaniemi and Ivalo) are tabulated: population, water source, treatment, etc. The communities supplied from ground water and those supplied from surface water are about equal in number. The ground water, river pollution, and treatment practices are described, with details of a typical plant diagrammed. Cast-iron, steel, wood-stave and asbestos-cement pipes are the most commonly used in distribution systems; minimum cover on distribution lines is 7½ ft. ***Copy seen:*** DLC.

49265. ALTMAN, ROBERT M., *and* **C. N. SMITH.** Investigations of repellents for protection against mosquitoes in Alaska, 1953. (Journal of economic entomology, Feb. 1955. v. 48, no. 1, p. 67–72, 7 tables.) 3 refs.

Contains results of field tests in June and July 1953 against a mixed population of *Aedes communis, A. punctor, A. excrucians, A. fitchii, A. stimulans, Culiseta impatiens,* and *C. alskaensis.* Tests were made with 15 individual repellents and 12 repellent mixtures for application to the skin, and with 44 repellents and six mixtures for the clothing. The most effective repellents and mixtures for each category are reported. ***Copy seen:*** DA.

49266. ALTUKHOV, K. A. Navaga Belogo moriâ. (Akademiâ nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniû Belogo moriâ, 1957. vyp. 1, p. 126–39, illus. tables.) 9 refs. Text in Russian. ***Title tr.:*** The navaga of the White Sea.

Contains information on the pre- and post-Revolutionary fisheries of this codlike species (*Eleginus navaga*); biology of the two White Sea races, including reproduction and growth; ecology, food, distribution, etc.; stock, prospect of development of its fishery.

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49267. ALTUKHOV, K. A. Nerestilishcha i usloviâ neresta sel'di v Kandalakshskom zalive. (Voprosy ikhtiologii, 1957. vyp. 9, p. 68–77, illus., table, map.) 13 refs. Text in Russian. ***Title***

tr.: Spawning grounds and spawning conditions of herring in Kandalaksha Bay.

Based on actual collection of herring spawn and laboratory observations on its development under local conditions. Areas, time and depth of spawning, and plants on which spawn is deposited were thus ascertained. Physical conditions during and following spawning were also studied. ***Copy seen:*** DLC.

49268. AMALITSKIĬ, V. M., *and* **B. A. ZABELIN.** Lesovoznye dorogi so sbornym zhelezobetonnym pokrytiem. (Mekhanizatsiia trudoëmkikh i tiazhelykh rabot, Feb. 1957. god 11, no. 2, p. 29–31, illus., diagr.) Text in Russian. ***Title tr.:*** Logging roads with assembled reinforced concrete surface.

Construction of heavy automobile roads with prefabricated perforated plates (2.5 x 1.0 x 0.16 m.) is described. Frost-resistant concrete of high quality (Portland no. 300 or higher) is used in this construction. One km. of road is surfaced with 800 plates made of 232 m^3 of concrete and 30.6 tons of steel. The topography of the road is hilly with occasional marshes and soft ground. The construction is carried out with heavy road building equipment (bulldozers, excavators, scrapers, rollers, etc.) in four cycles: clearing the forest and covering marshes with logs and tree branches; preparation of ground; construction of bridges and cuts; and final leveling of the road and surfacing it with the concrete plates. ***Copy seen:*** DLC.

49269. AMANTEA, L., *and* **G. MOSTARDA.** Osservazioni sulla termometria dei vari organi nella perfrigerazione lenta e rapida. (Giornale italiano di chirurgia, May 1957. v. 13, no. 5, p. 437–49, illus.) 36 refs. Text in Italian. ***Title tr.:*** Thermometric observations on various organs during slow and rapid cooling.

Account of observations on rats. During slow cooling, uniform temperature curves were exhibited by the organs examined, suggesting a good adaptation of the organism to this type of cooling. Thermographic differences between the brain and the rectosigmoid suggest a poorer response to rapid cooling.

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49270. AMÉEN, LOUIS, 1862–1926. Tärna. (Svenska turistföreningen. Årsskrift, 1926. p. 229–48, illus. Text in Swedish. ***Title tr.:*** Tärna.

Describes trip to this Lappish settlement near 66° N. in the headwater region of the Ume River in Sweden, to locate the site for a tourist center. The route and terrain, village and its environs, existing and planned tourist accomodations, also the route over the upland to Mo i Rana, Norway, are described.

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49271. *AMERICAN ALPINE JOURNAL.* Climbs and expeditions, Staunings Alps, East Greenland. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 125.)

Notes expedition sent by Österreichischer Alpenverein, led by Hans Gsellmann, July 21–Aug. 9, 1957, and landed by plane in Alpefjord (72°22′ N. 25°15′W.). From base camp near Sefström Glacier, 14 ascents were made, many of them first ascents. A French party of six near Cape Farewell made six first ascents above the Torsukatak Fjord (60°50′ N. 48°05′ W.) and two above Kangikitsok Fjord during July–Aug. 1957. ***Copy seen:*** DGS.

49272. AMERICAN ANTHROPOLOGICAL ASSOCIATION. Biographical documents of the life of Franz Boas. (American Anthropological Association. Bulletin, Feb. 1956. v. 4, no. 1, p. 33.)

Note on the Boas collection, 10,000–40,000 letters deposited at the American Philosophical Society in Philadelphia.

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49273. AMERICAN ANTHROPOLOGICAL ASSOCIATION. News of foundations, councils, and societies. (American Anthropological Association. Bulletin, Feb. 1957. v. 5, no. 1, p. 17–19.)

Discusses the files (over 100) of data on indigenous peoples assembled by the Human Relations Area Files (HRAF) and located at each of 16 member universities. A publication program (handbooks with annotated bibliographies on different areas and ethnic groups) is outlined. The files cover among others several northern peoples, viz: Chukchis, Koryaks, Yakuts, Samoyeds, Kamchadals, Gilyaks, Zyryans, Aleuts and Copper Eskimos.

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49274. *AMERICAN AVIATION.* Frobisher: over - the - top refueling stop. (American aviation, April 7, 1958. v. 21, no. 23, p. 42, illus.)

Notes facilities (7,000-ft. runway, instrument landing system, etc.) at this airport on Baffin Island, planned for

future accommodations of 500 landings monthly. ***Copy seen:*** DLC.

49275. ***AMERICAN FUR BREEDER.*** Motorized sled is winter workhorse. (American fur breeder, Nov. 1956. v. 29, no. 11, p. 66, 74, illus.)

Describes sled powered by an 8.25 hp. air-cooled engine and capable of towing loads up to 1,000 lb. at 5–25 mi./hr. The type K–12 toboggan is driven by an endless, cleated track pressed into the snow; two steering skis on the undersurface provide a 12-ft. turning radius.
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49276. AMERICAN GEOGRAPHICAL SOCIETY. Geographic study of mountain glaciation in the Northern Hemisphere. New York, 1958. 10 pt. in 9 v. maps, tables. (U.S. Army. Quartermaster Research and Engineering Command, Contract DA 19–129–QM–409) Refs. Mimeo. Chapters are paged separately; number of pages in each part is estimated *infra*.

Basic work, comprising information assembled and summarized from published and other sources on the location, distribution, characteristics, behavior, and significance of existing mountain glaciers; on classification and terminology, with discussion of the glaciers region by region; prepared under direction of William O. Field. In 10 parts, viz:

1. *General aspects.* (67 p., table. Refs.)

Glacier ice covers (1957) about 10% of the earth's land surface, an estimated 5,780,748 sq. mi., of which about 15% is in the Northern Hemisphere. The mountain or alpine glaciers, many of them small, are sensitive indicators of climatic changes; in a highly unstable state, they have a significant influence on man's existence. Their distribution, general characteristics and variations are described, with numerous references to arctic glaciers. The science of glaciology "study of the physical properties of glaciers" is only 125 years old; its development is traced, from early studies in the Alps, to recent detailed, analytical work, spurred by the International Geophysical Year. Glaciers are of two types, with distinctive physical properties and climatological causes: icecaps (examples cited in Spitsbergen, Greenland, and Canada), and ice streams (Spitsbergen, Greenland, Sweden, and Alaska). Glaciological terms (11 p.) are listed chiefly from the ADTIC glossary (No. 42957).

2A. *Alaska and adjoining parts of Canada.* (2 v.: 169, 106 p. 15 maps, tables. Refs.)

Summarizes information (through 1956) on distribution, characteristics and behavior of glaciers of the Coast, St. Elias, Chugach, Kenai, Talkeetna and Wrangell Mts., the Alaska Range, Aleutian Range and Kodiak Island, Aleutian Islands, Brooks Range, Kilbuck Mts. (Tikchik section, southwest Alaska), and Seward Peninsula. These regions and their glaciers are treated in turn, the glaciers are also tabulated with name (if unnamed, with geographic coordinates), drainage identification, orientation, length (mi.), area (sq. mi.), elevation of terminus, and map reference. Extensive literature references include maps and aerial photographs.

2B. *Western Canada and arctic Canada.* (108 p., 6 maps incl. 1 fold., 4 tables. Refs.)

Deals with glaciers of the Coast Mts., Cascades, interior ranges, and the Rocky Mts. in the West; in the North: Labrador, Baffin and Bylot Islands, Yukon, Northwest Territories, Queen Elizabeth Islands. Glaciers of the Torngat Mts. of northern Labrador are the southernmost in eastern North America, and the only glaciers on the continent east of the Rocky Mts.; distribution, characteristics (small, receding), and access routes are discussed. Chap. 4, prepared by W. B. O. Field and John H. Mercer (35 p.) outlines the distribution (in seven subdivisions) and characteristics of the numerous glaciers and the three icecaps which have had special study, on Baffin and Bylot Islands. Two large icecaps: Barnes, 70° N., Penny, 67° N., and small Grinnell Icecap, 62°30′ N., are treated in some detail. Area of glaciers on Baffin (most of them retreating) is estimated at 14,100 to 15,930 sq. mi. Literature references include maps and air photos. In Yukon and Northwest Territories glaciers exist in higher parts of the Selwyn and Ogilvie (little studied), and Mackenzie Mts., the Yukon Plateau, and the Kluane Range; each of these is described briefly. In the Queen Elizabeth Islands, the extensive glaciers cover an area estimated at 41,315 to 43,740 sq. mi., mostly on Ellesmere. The surface of the ice reflects the underlying topography; nunataks or ice-free mountains rise above the ice fields on Ellesmere; the Grant, Grinnell, Sverdrup, and Lincoln Land glaciers are

treated in turn. Two ice fields: "Krueger" and "Schei," are noted on Axel Heiberg Island. The extensive ice-covered area in eastern Devon Island is described, also smaller icecaps on other (Coburg, Meighen, Melville, North Kent) islands. Sources (27) are listed, stressing works of Dr. A. Taylor (No. 48347).

3. *United States, Mexico, and northern Andes.* (65 p., 2 text maps, 7 tables. Refs.)

4. *North Atlantic islands.* (100 p. 11 maps incl. 5 fold., tables. Refs.)

Contains brief general description of environment (geology, climate, vegetation), and detailed information on the glaciers of Greenland, Jan Mayen, Iceland, and Spitsbergen, prepared by Camilla McCauley, John H. Mercer, Jane van Summern, and Charles C. Morrison. Greenland (51 p.) is treated primarily for the alpine glaciers fringing the margin of the icecap, reaching sea level; descriptive data are summarized in tables and detailed descriptions are given for glaciers or glacier groups of the north, east, southeast, southwest, and northwest coasts. Characteristics of these glaciers, including their long- and short-term variations, their significance in military operations and in weather conditions, the effects of icebergs, difficulties of approach, and air traffic are discussed; also equipment recommended, and the importance of Greenland's glaciers to the world as a whole. Sources, including maps, are appraised and listed. Jan Mayen glaciers (10 p.) are similarly treated: restricted to Beerenberg, the extinct volcano in the northern part, 18 glaciers, all receding. Importance of Jan Mayen as a weather station, great difficulty of transport, and sources of information, are discussed. Iceland glaciers are described (27 p.). Vestspitsbergen and Nordaustlandet are dealt with (12 p.); 43 glaciers are shown on a map, scale 1:2,000,000; importance of the area to military planning, to scientific research, and the economic worthlessness of the glaciers are noted. Sources discussed include map sheets in progress at Norsk Polarinstitutt.

5. *Europe and Africa.* (70 p., 3, incl. 1 fold. maps, tables.)

Includes Scandinavian glaciers (12 p.) most of them plateau icecaps, though valley glaciers and cirque glaciers occur. Seven areas are treated in turn: Finnmark, Frostisen, Blåmannsisen, Sulitjelma, Abisko, Kebnekaise, and Sarektjåkko; those of Kebnekaise have been most studied. Scandinavian glaciers have been retreating generally since about 1750; some pauses or readvances have been noted; in the 1930's the retreat accelerated, slowed after 1940, and since 1949 some glaciers have begun to readvance. These glaciers are of economic importance as they supply water for hydro-electric power development. Sources of information are listed (literature and maps) and appraised: a general study of the area is lacking, but certain aspects and individual glaciers have been treated in detail.

6. *Western, arctic, and eastern Asia.* (53 p., 5 maps (incl. 3 fold.), tables. Refs.)

Includes glaciers of the Ural Mts., northeast Asia, and the Soviet arctic islands. In the Northern Ural, 16 small cirque or hanging glaciers are known on Mts. Narodnaya, Sablya, etc. Glaciers of the Verkhoyansk, Cherskiy, Koryak, Anadyr Ranges, and on Kamchatka Peninsula, are sketched. The ice-covered area in Siberia is estimated at 200 sq. mi.; all Siberian glaciers are said to be shrinking. Extensive glaciers and icecaps on Franz Josef Land, Novaya Zemlya, and Severnaya Zemlya are outlined, with mention of those on Viktoriya, Ushakov and De Long. Franz Joseph Land, an area of about 6,000 sq. mi., is 90% covered by glaciers, with tongues descending to sea level. Novaya Zemlya is 31%, or 11,000 sq. mi., ice-covered; glacier tongues reach the sea on both coasts. Severnaya Zemlya, an area of 6,400 sq. mi., is 42% ice-covered; icebergs of considerable size have been seen off the coasts. Glaciers on these islands are said to be receding.

7A–B. *Central Asian mountain system.* (134 p. maps, tables. Refs.)

8. *Environment and cartography.* (28 p. 3 tables. Refs.)

Vegetation and glacial geology are discussed by Calvin J. Heusser: the relation between glaciers and nearby vegetation in the zones of accumulation and wastage; the general geology of glaciers in these zones. Condition of the glacier as reflected in the state of the ice front is noted, as is the presence of an outwash zone. Historical aspects of glacial activity are considered, the effects of earthquakes, moraine cover, tidal action, and presence of ice-front lakes and rivers, the accepted effects of temperature and precipitation. Evidence of recent glacier fluctuation is indicated by vegetation

changes, especially by the radiocarbon ages of ice-overriden trees discovered in the outwash of several glaciers. Phenomena of the arctic area are cited in the course of the discussion. In *Cartography in the service of glaciology* (16 p.) Wm. A. Briesemeister discusses standards and reviews development of glacier cartography. Glacier location maps (22) drawn for this study showing major glaciers and ice fields north of the Equator on comparable scales, are described and evaluated. Scale, size, contour interval, colors, details, etc., are tabulated. These maps reproduced in a limited number comprise a portfolio not distributed with the study. Maps of the atlas which accompanies the study (pt. 10 infra) are also listed.

9. *Glaciers and human activities.* (78 p., table. Refs.)

Significant ways in which glacier phenomena affect man are considered by Charles C. Morrison (25 p.): ice avalanches, outbreaks from ice-dammed and moraine-dammed lakes, glacier variations, role of glaciers in hydrologic problems, outwash plains in relation to occupance and other activities. Further, glacier effects are considered with specific reference to Alaska in: transportation, mining, refrigeration, recreation and wildlife. Laws applying to glaciers are noted. *Some aspects of glacier travel with particular reference to military operations* by E. R. La Chapelle (27 p. tables) deals with problems of travel and bivouacking in temperate and subarctic zones. Indoctrination and training, utilization of experienced climbers, effects of marching and altitude, morale are considered. Clothing, footgear, shelter, sleeping bags, climbing ropes, ice axe, crampons, skis, etc. are discussed. The terrain: zones of accumulation and ablation, moraines, crevasses and ice falls are characterized as travel areas. Surface conditions, routes, and trail-marking, transport of supplies (sledges, pack animals, aerial supply), concealment of troop movement are discussed. Appended is tabulation of U.S. Government issue equipment. In a final chapter (25 p.) E. R. La Chapelle deals also with avalanches, their nature, occurrence, efforts to cope with them, rescue operations.

10. *Atlas of mountain glaciers in the Northern Hemisphere.* Prepared by W. B. O. Field and associates. Natick, Mass., June 1958. (6 p., 48 maps incl. 11 fold., table.)

Includes ten maps, at various scales, of Alaskan glaciers, nine of glaciers in the Canadian Arctic; nine maps of Greenland glaciers; one of Spitsbergen; one of Scandinavia and Jan Mayen; and four of arctic U.S.S.R. Large known glaciers are differentiated from small glaciers reported but not reliably mapped; detailed insets are included, sources indicated. Besides the glaciers, maps show airports, settlements, elevations, routes, etc.

Appendix lists contents of the complete study. ***Set seen:*** DGS.

49277. AMERICAN GEOGRAPHICAL SOCIETY. Preliminary reports of the Antarctic and Northern Hemisphere glaciology programs. New York, July 1958. Various pagings, text maps, diagrs., tables. (IGY Glaciological Report Series, no. 1.) Issued by IGY World Data Center A-Glaciology.

Includes seven reports from five arctic projects, each described in this Bibliography under the author's name, viz:

HEUSSER, C. J. Lemon Creek Glacier, Juneau Ice Field Research Project.

FIELD, W. O. Observations of glacier behavior in southern Alaska, 1957.

ARCTIC INSTITUTE OF NORTH AMERICA. Glaciology program for McCall Glacier, Brooks Range, Alaska.

SATER, J. L. Surface motion studies of the McCall Glacier, June to October 1957.

KEELER, C. M. Ablation studies: lower McCall Glacier, June 23 to September 1, 1957.

UNTERSTEINER, N., *and* F. I. BADGELEY. Preliminary results of thermal budget studies on arctic pack ice during summer and autumn 1957.

LEBLANC, R. G. Scientific activities of the Terrestrial Sciences Laboratory of the Geophysics Research Directorate on Fletcher's Ice Island, T–3.

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AMERICAN GEOGRAPHICAL SOCIETY, *New York, see also* Gould, L.M. The polar regions . . . *1958.* No. 51314.

AMERICAN GEOLOGICAL INSTITUTE, *see* Howell, J. V., *and* A. I. Levorsen. Directory of geological material . . . *1957.* No. 51830.

49278. AMERICAN GEOPHYSICAL UNION. Annotated bibliography on hydrology 1951–1954, and sedimentation

1950–1954. Washington, D.C. U.S. Govt. Print. Off., 1956. Compiled by Ray K. Linsley; edited by Waldo E. Smith. Supplement to No. 27775.

Lists, with brief annotations, approx. 2200 articles of significant technical value in these fields, several pertinent to arctic studies and accessible through the place-subject index. ***Copy seen:*** DGS.

49279. AMERICAN METEOROLOGICAL SOCIETY. Richard Carleton Hubley. (American Meteorological Society. Bulletin, Nov. 1957. v. 38, no. 9, p. 553, port.)

Obituary of this American micrometeorologist and glaciologist (1926–1957) who died on McCall Glacier in the Brooks Range, Northern Alaska, while head of a four-man IGY wintering party. Tribute to Dr. Hubley also in *Arctic*, 1957, v. 10, no. 3, p. 186.

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49280. AMERICAN PHYSIOLOGICAL SOCIETY. Symposium on metabolic aspects of adaptation of warm-blooded animals to cold environment. (Federation proceedings, Dec. 1958. v. 17, no. 4, p. 1044–73, illus., tables.) 33 refs.

Text of papers read at the Symposium held at Philadelphia on April 15, 1958, with an introduction by Loren D. Carlson on the meaning and kinds of adaptation, the program of the symposium etc.; the ensuing discussion is appended (p. 1066–1073). The individual papers of the participants are abstracted under the authors' names, viz: J. S. Hart, P. F. Scholander, Charles P. Lyman, Van R. Potter, Dwight J. Ingle.

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AMMOSOV, M. K., *see* Akademiîa nauk SSSR. ĪAkutskiĭ filial. Za sovetskuû vlast' . . . *1957*. No. 49170.

49281. AMURSKIĬ G. I. Noveĭshie tektonicheskie dvizheniîa v raĭone urochishcha "Shcheki" na r. Podkamennoĭ Tunguske. (Akademiîa nauk SSSR. Izvestiîa, seriîa geograficheskaîa, Sept.–Oct. 1958, no. 5, p. 47–49, plate, text map.) Text in Russian. ***Title tr.:*** Recent tectonic movements in the region of the "Shcheki" sector of the Podkamennaya Tunguska River.

The morphology of this river valley and development of local relief are outlined. Three morphologic structures are distinguished: the northwest belonging to the Siberian platform, and part of the Tungusska syncline, is covered with Ordovician and Silurian rocks; the middle zone extending northwest-southeast is characterized by fractures and monoclinal folds; the southwestern part is the forefront of the Yenisey Ridge. Differences in the tectonic structure and rock composition are significant for the shape of the valley. This is especially evident in the section upstream from Chernyy Ostrov, in the so-called Shcheki sector (approx. 61°45′ N. 91°30′ E.). Here the wide and rectilinear valley suddenly becomes narrow and canyon-like. In this area recent tectonic movements with present active uplift are noted. The Podkamennaya Tunguska has cut deep into its valley; and the occurrence of deep side valleys supports this uplift concept. The morphology of the region is graphically presented (sketch map), and recent dissections of the Podkamennaya Tunguska are shown (plate).

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49282. ANAND, B. K., *and others.* Effect of hypothermia on the acetylcholine and glutathione content of brain and heart of dogs. (Indian journal of medical research, Jan. 1958. v. 36, no. 1, p. 21–25, tables.) 18 refs. *Other authors:* C. L. Malhotra, B. Singh, P. G. Pundlik, and G. S. Chhina.

In animals made hypothermic to an average of about 24° C., acetylcholine and glutathione decreased in the heart, hypothalamus, and frontal lobe, and increased in content in the temporal lobe. The significance of these observations is discussed and their potential practical value indicated.

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49283. ANAN'EV, EVGENIĬ. V taezhnom more. (Sibirskie ogni, Sept. 1958. god 37, no. 9, p. 105–112.) Text in Russian. ***Title tr.:*** In the taiga vastness.

Describes the lumber industry and forest reserves of the taiga region of Omskaya Oblast' (mainly the Khanty-Mansiyskiy national district), the output of Tûmen'les combine taking out timber (approx. 4.5 billion $m.^3$) in the lower Ob' and Irtysh area, etc. Two-thirds of the Tûmen'les production originates in the southern part of the area, though 96% of the region's timber reserves (mainly cedar and pine) are in the north, as yet little exploited. The resulting deforestation of the south, waste of raw material due to paucity of processing plants, etc., are criticized. Planned development of the north is discussed: 20

logging concerns with an output up to six million m.³ timber a year, wood-processing mills at Narykary, Berezovo, Uvat, etc., road and railroad construction, etc. ***Copy seen:*** DLC.

ANCELLIN, JACQUES, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

49284. ANCHORAGE, *ALASKA.* CHAMBER OF COMMERCE. A study of Alaska's 1957 oil discovery; its strategic value for the nation and land use in developing an oil field within a moose range. Anchorage, Alaska, Oct. 1957. 41 p., illus., tables, diagrs., 3 maps, incl. 2 fold.

The importance of development of oil reserves in Alaska, particularly in the Kenai Peninsula, and its possible impact on the Kenai Moose Range are discussed. Alaska's first commercially producing oil well was discovered on July 23, 1957, on the Peninsula about 40 miles southwest of Anchorage. It is estimated to have a 900-barrel-a-day production capability. An assay of crude from this well is included. Evidence is adduced to show that the oil well development would serve to improve the moose range and aid conservation. Proposed land use for the development is sketched. Maps of the area are also included.

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49285. ANDERSEN, EINAR, 1905– , *and others.* Geodetic tables, international ellipsoid. København, Bianco Luno, 1956. 190 p., tables. (Denmark. Geodaetisk institut. Skrifter, raekke 3, bd. 24.) 7 refs. *Other authors:* T. Krarup, *and* B. Svejgaard.

Presents tabulated data on $W=(1-e^2 \sin^2\Phi)^{\frac{1}{2}}$, where e is the first eccentricity and Φ the geographic latitude, the reciprocal of the transversal curvature, the reciprocal of the meridional curvature, the theoretical gravity, difference in seconds of arc between reduced and geographic latitude, difference in seconds of arc between Gaussian and geographic latitude, and the function $\zeta''/2MN$, in seconds of arc/(100 km)², where $\zeta''=648000''/\pi$ and M and N, the auxiliary quantities. All data are computed from 0°00′ to 89°60′ latitude in steps of 1′ by means of IBM equipment. The computing procedure is described.

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49286. ANDERSEN, EINAR, 1905– . Jordskaelvene og det geofysiske år. (Naturens verden, May 1957. årg. 11, p. 26–32, map, diagrs., illus.) Text in Danish. ***Title tr.:*** Earthquakes and the geophysical year.

Discusses the nature of earthquakes, the shock waves, and their investigation. Longitudinal and transverse, or primary and secondary waves, their seismographic registration, and determination of their point of origin are explained. In addition to the two permanent seismograph stations at Ivigtut and Scoresbysund in Greenland, a temporary station is planned for Nord on the North Greenland coast during the IGY, equipped with instruments for registering distant earthquakes, and a short-period Willmore seismograph capable of registering distant earthquakes, and a short-period Willmore seismograph capable of registering local earthquakes in the polar region. This is the world's northernmost station.

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49287. ANDERSEN, HAROLD ERNEST, 1916– . Clearcutting as a silviculture system in Southeastern Alaska. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 1–4.) 10 refs.

Presents the case for clearcutting in preference to selective cutting as the best method in this area, and the best form of silviculture. Character of the present forest is described: mostly overmature decadent climax, consisting of three-fourths western hemlock, one-fifth Sitka spruce, and the remainder western red cedar, Alaska yellow cedar and mountain hemlock. Effects of clearcutting on the soil, moisture, microclimate, and forest reproduction and growth are reported, based on research being carried on at the Alaska Forest Research Center, at Hollis. Optimum size and shape of clearcut area may be obtained from this study.

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49288. ANDERSEN, HAROLD ERNEST, 1916– , *and* **G. A. JAMES.** Watershed management and research on salmon streams of Southeast Alaska. (Journal of forestry, Jan. 1957. v. 55, no. 1, p. 14–17, illus.) 7 refs.

Describes Alaska Forest Research Center's study of the effects of logging on four salmon streams. Watersheds of two of the streams are being logged, and the others left uncut as controls. Comparisons are being made of stream flow, tem-

perature, bed and channel change, turbidity and sedimentation. Preliminary results show no appreciable change in stream flow pattern and no significant difference in sediment concentration. The purpose of the study is to ensure maximum use of the region's timber resources without creating conditions harmful to the salmon.

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ANDERSEN, K. LANGE, *see* Scholander, P. F., *and others.* Critical temperature in Lapps. *1957.* No. 54620.

ANDERSEN, K. LANGE, *see* Scholander, P. F., *and others.* Metabolic acclimation to cold in man. *1957.* No. 54621.

ANDERSEN, K. LANGE, *see* Scholander, P. F., *and others.* Metabolic acclimation to cold in man. *1958.* No. 54622.

ANDERSON, ANTON A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

49289. ANDERSON, DON L. A model for determining sea ice properties. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 148–52, 5 graphs.) 5 refs.

Laboratory study of the configuration and amount of each constituent of sea ice, using data from previous investigations, and constructing a sea-ice model whose thermal conductivity, strength, freezing characteristics, and other physical and chemical properties may be used in investigating natural sea ice.

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ANDERSON, DON L., *see also* Weeks, W. F., *and* D. L. Anderson. An experimental study of strength of young sea ice. *1958.* No. 55963.

ANDERSON, DON L., *see also* Weeks, W. F., *and* D. L. Anderson. Sea ice thrust structures. *1958.* No. 55965.

49290. ANDERSON, ROBERT T. Acculturation and indigenous economy as factors in Lapp culture change. (Alaska. University. Anthropological papers, Dec. 1958. v. 7, no. 1, p. 1–22.) 21 refs.

Discusses the key economic and sociocultural factors of modern Lapp civilization: full-scale reindeer breeding and acculturation. Individualistic traits inherent in pre-pastoral Lapp society are traced and the communalistic nature of the original Lapp *sit* is considered over-emphasized. Increasing individualism based on reindeer ownership and Scandinavian influence combined with the innate cooperative spirit of the Lapps has resulted in the present-day reindeer economy operating on a semi-communal basis. Thus the evolution of Lapp society has consisted in a fusing of sociocultural precepts of cooperation and separatism and not in "a substitution of individualism for communalism."

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49291. ANDERSON, ROBERT T. Dating reindeer pastoralism in Lapland. (Ethnohistory, Fall 1958. v. 5, no. 4, p. 361–91.) 27 refs.

Differentiates between reindeer breeding and full-scale pastoralism, suggesting the 9th century A. D. as the time when reindeer domestication probably began. Originally subordinated to hunting and fishing, full-scale reindeer-herding developed in the 17th or, possibly, 16th century. Contemporary source materials describing the relative importance of reindeer and reindeer produce in Lapp economy are cited, also taxation lists showing the comparative value of reindeer skins.

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49292. ANDERSON, RUTH BROOKS. ADH Film Library's modest beginning in 1943 grows to 445 films in 15 years. (Alaska's health, Oct. 1958. v. 15, p. 3, 4, illus.)

Reviews the beginnings of the Alaska Dept of Health's film library, its early difficulties, staff and equipment, kinds of present films, storage, borrowers and circulation of films, audience, etc. Also reported in the same journal Oct. 1957, v. 14, p. 5. ***Copy seen:*** DNLM.

49293. ANDERSON, WILLIAM R., *and* **C. F. BLAIR,** ***Jr.*** We made history in the *Nautilus.* (Saturday Evening Post, 1958. v. 231, no. 13, p. 19–20, 82; no. 14, p. 40–41, 82; no. 15, p. 28–29, 99, illus., 2 text maps.)

Popular account of voyage of first atomic submarine, over the North Pole, from the Pacific to the Atlantic, July 22-Aug. 12, 1958. First attempt failed because of shallow water and thick ice; on the second, depths below and ice thickness above were recorded by sonar. Problems of navigating submarines with conventional equipment near the Pole, where a magnetic compass is useless, and a gyrocompass faulty, are magnified by unknown ocean currents, and inability to see the sun. At the Pole, water temperature was 32.4° F., sea depth

13, 410 ft., pressure ridge of ice extended down 25 ft. Color and surface of the Chukchi Sea ice is described (dirty, highly ridged and hummocked) and compared with the white, relatively flat floes seen on the Atlantic side in 1957.

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49294. ANDERSSON, B. Cold defense reactions elicited by electrical stimulation within the septal area of the brain in goats. (Acta physiologica scandinavica, 1957. v. 41, fasc. 1, p. 90–100, illus.) 16 refs.

Electrical stimulation within this area produced shivering, peripheral vasoconstriction and occasionally piloerection. Prolonged stimulation at room temperature raised the rectal temperature and shivering disappeared. Exposure to heat inhibited polypneic panting; exposure to cold (4° C.), stimulated shivering.

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49295. ANDERSSON, GUNNAR, 1865–1928. Louis Améen, 1862–1926. (Svenska turistföreningen. Årsskrift 1926, p. iv–vii, illus.) Text in Swedish.

Obituary of one of the organizers of the Svenska Turistförening in 1885.

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49296. ANDERSSON, HUGO. Några svenska och nordnorska cecidiefynd. (Opuscula entomologica, 1958. bd. 23, häfte 1–2, p. 37–45, 3 illus.) 7 refs. Text in Swedish. Summary in German. ***Title tr.:*** Some Swedish and north Norwegian galls.

Contains a systematic annotated list of about 1 hundred galls with data on distribution in Sweden (including the northern provinces) and northern Norway, with plant hosts. Descriptions are given of a few hitherto unknown forms. Five species are new to Sweden. Three galls are caused by nematodes.

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49297. ANDERSSON, OLOF. Utbredningen av *Schizophyllum commune* Fr. och *Trogia crispa* (Pers.) Fr. i Fennoskandia s. str. (Friesia, 1945. bd. 3, hefte 2, p. 129–42, 2 text maps.) 25 refs. Text in Swedish. Summary in English. ***Title tr.:*** The distribution of *Schizophyllum commune* Fr. and *Trogia crispa* (Pers.) Fr. in Fennoscandia s. str.

Includes data on distribution of *Trogia crispa*, a macromycete living on eight species of trees and shrubs in leafy forests and reaching in Norway to Finnmark and in Sweden to Västerbotten.

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49298. ANDIK, ISTVÁN. A környezeti hőmérséklet hatása normális, pajzsmirigynélküli és thyroxintoxicosisos patkány táplálékfelvételére és táplálékválogatására. (Kísérletes orvostudomány, Oct.–Dec. 1957. evfolyam 9, füzet 5–6, p. 618–21, illus., table.) 4 refs. Text in Hungarian. Summary in German. ***Title tr.:*** The effect of ambient temperature on the food intake and selection in normal, thyroidectomized and thyrotoxicotic rats.

Normal animals when exposed to cold, increased their food intake within 24 hrs., covering the caloric requirement with starch food. Rats treated daily with 150–200 gamma thyroxin did not raise their caloric intake in cold environment, and even lowered it. Thyroidectomized animals increased their food intake in the cold, like normal controls.

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49299. ANDIK, ISTVAN *and* **S. DONHOFFER.** Die Wirkung des Thyroxins und der Thyreoidektomie, sowie niedriger Umgebungstemperaturen auf die Nahrungsaufnahme und Nahrungswahl der Ratte. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 264, Heft 6, p. 585–92, illus. tables.) 12 refs. Text in German. ***Title tr.:*** The effect of thyroxin, of thyroidectomy and of low ambient temperature upon food consumption and choice in the rat.

Thyroxin caused a rise, thyroidectomy a fall in food consumption, the animals choosing a starchy diet in preference to those rich in fat or protein. Cold environment had the same effect as thyroxin administration. This effect is also noted in thyroidectomized rats, hence not due to thyroid activity.

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49300. ANDJUS, RADOSLAV K. La résistance du rat apparemment mort aux températures corporelles inférieures à zéro et la surfusion; application des ultrasons et de différents modes de diathermie dans la réanimation. (Journal de physiologie, Mar. 1958. t. 50, no. 2, p. 111–12.) 6 refs. Text in French. ***Title tr.:*** Resistance of apparently dead rats to subzero body temperatures and to super-cooling; application of ultrasounds and different kinds of diathermy in their revival.

Newborn rats cooled to −6° C. could be revived after a prolonged suspension of heartbeat and breathing. Cooling below −7° C. causes freezing and only incomplete reanimation is possible. Methods used in rewarming are described.

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49301. ANDO, HISATSUGU, *and others.* The first record of *Gollania* in North America. (Bryologist, Dec. 1957. v. 60, no. 4, p. 326–35, illus., map.) 12 refs. *Other authors:* H. Persson, *and* E. M. Sherrard.

Account of *Gollania densepinnata* Dix, a moss hitherto known only from China and found in 1951 in the Mt. McKinley region by Miss Sherrard. Details of ecology and taxonomy are given. A revision of the genus in eastern Asia and the distribution of its species are also discussed. ***Copy seen:*** DSI.

49302. ANDREASEN, GORDON E., *and others.* Aeromagnetic map of the Copper River basin, Alaska. Washington, D.C., 1958. Map sheet, 42 x 43 in. (U.S. Geological Survey. Geophysical investigations. Map GP 156.) *Other authors:* W. J. Dempsey, J. R. Henderson, *and* F. P. Gilbert.

Map (scale 1:125,000; contour interval 20 and 100 gammas) covers the area 61°45′–63° N. 145°–147°30′ W.; including parts of Richardson and Glenn Highways and the towns of Glennallen, Gulkana, and Copper Center; based on survey flown in 1954 and 1955 at barometric elevation of 4,000 ft. except over higher local topography. Brief explanation of symbols, note on compilation, and index map are included.

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49303. ANDREASEN, GORDON E., *and others.* Aeromagnetic study of the Copper River basin, Alaska. (Geological Society of America. Bulletin, Dec 1957. v. 68, no. 12, pt. 2, p. 1905.) *Other authors:* I. Zietz *and* A. Grantz.

Abstracts a paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957, reporting results of an aeromagnetic survey of area approx. 6,000 sq. mi. (61°45′–63°00′ N. 145°00′–147°22′ W.). A large area of low amplitude magnetic anomalies extends north from the Chugach Mts. to about 62°30′ N., possibly outlining a structural basin of Tertiary age superimposed upon a Jurassic-Cretaceous trough. Magnetic data suggest that lower Jurassic volcanic rocks underlie sedimentary rocks in the southwestern part of the area, and that the Wrangell lavas of Tertiary and Quaternary age are present at shallow depths beneath the basin in the vicinity of Mt. Drum.

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ANDREASEN, GORDON E., *see also* Zietz, I., *and others.* Aeromagnetic reconnaissance . . . Cook Inlet . . . *1957.* No. 56219.

ANDREASEN, GORDON E., *see also* Zietz, I., *and others.* Regional geologic interpretation . . . *1958.* No. 56220.

49304. ANDREEV, D. Kak my dobyvaem belku. (Okhota i okhotnich'e khozi͡aĭstvo, Jan. 1958. god 4, no. 1, p. 9–10.) Text in Russian. ***Title tr.:*** How we catch squirrel.

Describes squirrel hunting in the Evenki National District by a five-man team of the collective farm "Krasnaya zvezda." Author caught 1,600 in the 1956–57 hunting season. ***Copy seen:*** DLC.

49305. ANDREEV, I. I. Averint͡sev Sergeĭ Vasil'evich, 1875–1957. (Moskovskoe obshchestvo ispytateleĭ prirody. Bi͡ulleten', n. ser., otd. biol., Sept.–Oct. 1958. t. 63, no. 5, p. 151–52.) Text in Russian. ***Title tr.:*** Sergeĭ Vasil'evich Averint͡sev, 1875–1957.

Obituary with appreciation of the scientific activities of this zoologist; his study of the Barents and White Sea fishery, especially herrings; his work on morphology and systematics of Infusoria and the marine shells; travels in the arctic seas are noted. ***Copy seen:*** DLC.

49306. ANDREEV, VLADIMIR NIKOLAEVICH, 1889– . Botanicheskie nabli͡udeni͡a v severnoĭ Finli͡andii. (Botanicheskiĭ zhurnal, Aug. 1958. t. 43, no. 8, p. 1219–28, 6 illus.) 23 refs. Text in Russian. ***Title tr.:*** Botanical observations in northern Finland.

A view of the vegetation in Finnish Lapland based on a trip in Oct. 1957 to study the reindeer industry. Successive forest zones are described and association with lichens noted. The reindeer industry (about 160,000 head) is based on summer pasture in the mountain tundra, swamps and certain forests. Winter pasture is based on Iceland moss, covering about 60–70% of the pastures.

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49307. ANDREEV, VLADIMIR NIKOLAEVICH, 1889– . Primenenie aėrometodov dlîa geobotanicheskogo kartirovaniîa i inventarizat͡sii kormovykh ploshchadeĭ. (Botanicheskiĭ zhurnal, Nov.–Dec. 1952. t. 37, no. 6, p. 843–47.) Text in Russian. ***Title tr.:*** Application of aerial methods to geobotanical mapping and pasture inventory.

Deals with methods of mapping reindeer pastures in the far North. Three are distinguished, chiefly on the basis of map scale: for small-scale maps (1:200,000) with the pasture unit about 1000–1500 hectares in area, visual observations are made from aircraft. For larger geobotanical maps (1:100,000) observational data are plotted on a previously prepared base map; 70–100 pasture units of 500–800 hectares can be so plotted in an hour. Air photographs are used for maps at scale 1:25,000 to 1:60,000; and on such, two specialist-observers can plot 200–300 pasture units in an hour. The air-visual and air-photo methods supplement each other. Their advantages and limitations, evaluation from aircraft of pasture types and their value, planes used and the organization of such work are discussed. ***Copy seen:*** DLC.

49308. ANDREEVA, EKATERINA VLADIMIROVNA. A. I. Voeĭkov, osnovatel' russkoĭ klimatologii. Leningrad, Gidrometeorologicheskoe izd-vo, 1949. 55 p. port. Text in Russian. ***Title tr.:*** A. I. Voeĭkov, the founder of Russian climatology.

Popular biography of this outstanding Russian meteorologist, climatologist, geographer and traveler, Aleksandr Ivanovich Voeĭkov, 1842–1916, with comment on his main publications. His studies of snow cover in relation to climate are noted (p. 37–38), also (p. 48–51) his views on the influence of human activity upon the environment, including that in the North. ***Copy seen:*** DLC.

49309. ANDREEVA, EKATERINA VLADIMIROVNA. ÎU. M. Shokal'skiĭ okeanograf, meteorolog, geograf. 2-e izd. Leningrad, Gidrometeorologicheskoe izdvo, 1956. 53 p. illus., ports. Text in Russian. ***Title tr.:*** ÎU. M. Shokal'skiĭ; oceanographer, meteorologist, geographer. Second edition.

Popular biography of an outstanding Russian scientist and explorer, ÎUliĭ Mikhaĭlovich Shokal'skiĭ, 1856–1940, a new edition (cf. No. 27797) to mark the centenary of his birth. Shokal'skiĭ's contributions to development of the Northern Sea Route are noted, p. 27–30. ***Copy seen:*** DLC.

49310. ANDREEVA, O. N. Stratigrafiîa ordovikskikh otlozheniĭ r. Leny i r. Ilima. (Leningrad. Vsesoîuznyĭ geologicheskiĭ institut. Materialy, novaîa seriîa, 1955. vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 107–128, illus., cross-sections.) 12 refs. Text in Russian. ***Title tr.:*** Stratigraphy of Ordovician deposits of the Lena and Ilim Rivers.

Outlines the stratigraphy of Lower, Middle and Upper Ordovician deposits in the upper and middle Lena and in the valley of lower Ilim based on author's new study of the cross-sections and on faunal investigation by a team of paleontologists. The various series formations and horizons are indicated and their distribution, thickness and faunal characteristics outlined. The investigated cross-sections are presented and characteristic fossils pictured. Brachiopod fossils of the region are reported (p. 124–27) and compared with the North American, Canadian, Greenland and Scandinavian. ***Copy seen:*** DLC.

ANDREEVICH, K. E., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Za sovetskuîu vlast' . . . *1957*. No. 49170.

49311. ANDREWS, ALBERT LeROY, 1878– . Notes on North American *Sphagnum*, 10; review. (Bryologist, Dec. 1958. v. 61, no. 4, p. 269–76.) 20 refs.

Thirteen species are discussed with notes on nomenclature, taxonomy, geographic distribution, morphology, etc. Several of the forms dealt with are arctic in distribution. ***Copy seen:*** DA.

49312. ANDREWS, J. E. Controlled low temperature tests of sprouted seeds as a measure of cold hardiness of winter wheat varieties. (Canadian journal of plant science, Jan. 1958. v. 38, no. 1, p. 1–7, illus., tables.) 11 refs.

Account of tests on cold hardiness of sprouted wheat seeds (20 varieties). The results were in close agreement with similar tests on young plants and with field observations. The method permits testing of many varieties in a limited space. ***Copy seen:*** DA.

49313. ANDRIÎASHEV, ANATOLIÎ PAVLOVICH. Geograficheskoe rasprostranenie morskikh promyslovykh ryb Beringova morîa i svîazannye s ėtim

voprosy. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa moreĭ SSSR, 1935. vyp. 22, p. 135–45.) 46 refs. Text in Russian. Summary in English. ***Title tr.:*** Geographic distribution of marine food fishes in the Bering Sea and related problems.

An outline of geographical distribution and ecology of these fishes based on field work done in 1932–33. Fishes common to both the east and west coast of the Bering Sea and those peculiar to each of them are listed. The northern limits of both groups, circumpolar forms, faunistic areas and barriers, etc., are also discussed.

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49314. ANDRIĬASHEV, ANATOLIĬ PAVLOVICH. K poznaniĭu ikhtiofauny Beringova i Chukotskogo moreĭ. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa moreĭ SSSR, 1937. vyp. 25, p. 292–355, illus., tables.) 63 refs. Text in Russian. Summary in English. ***Title tr.:*** Contribution to knowledge of the ichthyofauna of the Bering and Chukchi Seas.

A study of fishes caught on the trawlers *Dal'nevostochnik* and *Krasnoarmeets* during the1932 and 1933 expeditions of the State Hydrological Institute and the Pacific Institute of Fisheries, and of other collections. Altogether 108 species are described, including 12 new species or subspecies and a genus. Synonyms and earlier records, taxonomic position and related forms, location, ground, temperature, etc., morphology and anatomy, development and size, frequency and geographic distribution, food, economic value, size distribution in various geographic regions, etc., are discussed.

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49315. ANDRIĬASHEV, ANATOLIĬ PAVLOVICH. Nekotorye voprosy amfiboreal'nogo rasprostraneniĭa s zamechaniĭami o vozmozhnom proiskhozhdenii navagi i malopozvonkovoĭ sel'di. (Akademiĭa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniĭu Belogo moriĭa, 1957. vyp. 1, p. 117–25, tables.) 40 refs. Text in Russian. ***Title tr.:*** Some problems of amphiboreal distribution with notes on the possible origin of the navaga and the oligo-vertebrate herring.

A zoogeographic analysis, leading author to the conclusion that these two species of fish are of North Pacific origin. Distribution of fish parasites as well as of diverse fish families, are used in support of this hypothesis. ***Copy seen:*** DLC.

49316. ANDRIĬASHEV, ANATOLIĬ PAVLOVICH. Novyĭ dliĭa fauny SSSR vid ryb semeĭstva treskovykh, *Arctogadus glacialis* Peters, s dreĭfuĭushcheĭ stantsii "Severnyĭ poliŭs-6." (Zoologicheskiĭ zhurnal, Nov. 1957. t. 36, vyp. 11, p. 1747–49.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** A gadid species, *Arctogadus glacialis* Peters, new to the fauna of the U.S.S.R. from the drifting station North Pole-6.

Description of a Greenland species of cod caught 250 miles NNW. of Wrangel Island (71° N. 180° E.) in 1956. Morphometry, size, color, comparative data, etc. are considered. ***Copy seen:*** DLC.

49317. ANDRIĬASHEV, ANATOLIĬ PAVLOVICH. Ocherk zoogeografii i proiskhozhdeniĭa fauny ryb Beringova moriĭa i sopredel'nykh vod. Pod red. K. M. Derĭugina. Leningrad, 1939. 187 p. illus. tables, maps. About 300 refs. Text in Russian. Summary in English. ***Title tr.:*** An outline of the zoogeography and origin of the fish fauna of the Bering Sea and adjacent waters. Dissertation, Leningrad University.

Earlier studies on the fish fauna of the Bering Sea are reviewed, and an outline given of the hydrology and ecology of this and the Chukchi Sea. The main problems are treated in detail (p. 33–150), viz.: the species composition and general character of the piscifauna of these seas; its geographical distribution; regional faunal characteristics; comparisons with other northern faunas; origin of the faunal components of the Bering and adjacent waters. The last chapter deals with the zoogeographical division of the area under review. ***Copy seen:*** DLC.

49318. ANFINNSEN, MARTIN T. Litt om forskyvninger i fuglefaunaen. (Naturen 1958. årg. 82, nr. 6, p. 336–44, illus.) Text in Norwegian. ***Title tr.:*** Note on changes of habitat in birdlife.

Faunal species tend to move northward in recent years, with the generally milder climate of high northern latitudes, and the competition from influx of more southerly species or increased human occupation of areas formerly frequented. The auk, puffin, cormorant and others are no longer seen in southern Norway. Other species however, nest farther southward than previously: the red-billed or arctic tern and the three-toed gull,

commonly considered native to northern Norway are now observed on the southwest coast. Banded three-toed gulls from Iceland, Utsira (southwest Norway), and Vesterålen in the Lofotens, have been seen at Godthåb, Greenland.

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49319. ANGELAKOS, EVANGELOS T., 1929– , *and* **A. H. HEGNAUER.** Antifibrillatory activity of certain antihistaminics on spontaneous ventricular fibrillation under hypothermia. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 4.)

List and brief discussion of antihistaminics effective (and not effective) against ventricular fibrillation in dogs made hypothermic to 27° C. The compounds were applied when this temperature was reached and in some cases prior to cooling. ***Copy seen:*** DNLM.

49320. ANGELAKOS, EVANGELOS T., 1929– . Distribution of terminal temperatures in hypothermic dogs. (Society for Experimental biology and medicine. Proceedings, Jan. 1958. v. 97, no. 1, p. 107–108, illus.) 4 refs.

A statistical analysis of 110 cases of experimental hypothermia in dogs, induced in a standard manner. There was no evidence that animals terminating in any of the three modes of death were derived from different populations. This suggests that the different terminal events in hypothermia are determined by the terminal temperature and not vice versa. ***Copy seen:*** DLC.

49321. ANGELAKOS, EVANGELOS T., 1929– , *and others.* Ouabain on the hypothermic dog heart. (American heart journal, Sept. 1958. v. 56, no. 3, p. 458–62, tables.) 15 refs. *Other authors:* J. C. Torres *and* R. Driscoll.

Ventricular fibrillation was not more frequent in hypothermic dogs digitalized with ouabain, nor did this drug significantly alter the incidence of fibrillation in experimental ventriculotomy under hypothermia. But hypothermia had a protective effect against arrhythmias produced by toxic doses of ouabain.

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49322. ANGELAKOS, EVANGELOS T., 1929– , *and others.* Sensitivity of the hypothermic myocardium to calcium. (Circulation research, Mar. 1957. v. 5, no. 2, p. 196–201, illus., tables.) 9 refs. *Other authors:* S. Deutsch *and* L. Williams.

An increasing sensitivity of the heart to Ca was observed in dogs as their temperature was lowered to 25° C. When rendered hypercalcemic prior to cooling they also succumbed to ventricular fibrillation at a relatively high heart temperature (22–27° C.) while hypocalcemia caused asystole at a lower temperature (14–18° C.). Calcium sensitivity was not pH-dependent at low or normal temperature. ***Copy seen:*** DNLM.

49323. ANGELAKOS, EVANGELOS T., 1929– , *and others.* Ventricular excitability and refractoriness in the hypothermic dog. (American journal of physiology, June 1957. v. 189, no. 3, p. 591–95, illus., table.) 12 refs. *Other authors:* E. G. Laforet *and* A. H. Hegnauer.

Records of ventricular excitability in dogs under progressive hypothermia showed a great extension of ventricular refractory periods. Rate of recovery of diastolic excitability and the response latency were also correspondingly prolonged. It is suggested that the increased susceptibility of the hypothermic myocardium to ventricular fibrillation is related to the changed rate of recovery of excitability. ***Copy seen:*** DLC.

ANGELAKOS, EVANGELOS T., 1929– , *see also* Torres, J. C., *and others.* Effect . . . heart rate . . . fibrillation in hypothermia. *1958.* No. 55493.

49324. ANGELIS, W. de, *and others.* Action du stress sur l'activité de l'arginase hépatique chez le rat. (Société de Biologie, *Paris.* Comptes rendus, 1956. t. 150, no. 8–9, p. 1655–57, table.) 7 refs. Text in French. *Other authors:* W. H. Vignolo, *and* J. C. Barsantini. ***Title tr.:*** Effect of stress upon the activity of liver arginase in the rat.

Of several means of stress tried (formol, hypertonic salt injections, etc.) only exposure to cold for five days caused a significant increase in activity of liver arginase. Adrenalectomy abolished this increase, suggesting an activating role of the latter upon liver arginase.

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49325. ANGENHEISTER, G. Der gegenwärtige Stand der paläomagnetischen Forschung. (Geologische Rundschau, 1957. Bd. 46, Heft 1, p. 87–99, text maps, table.) 15 refs. Text in German. Summary in English, p. 257. ***Title tr.:*** The present position of paleomagnetic research.

Discusses the reason for natural permanent magnetization of rocks and difficulties of interpretation of paleomagnetic measurements. Method is described of attempted reconstruction of magnetic poles in the geological past from present-day measurements; it implies assumptions incapable of direct proof. Apparent positions of magnetic north pole during the Mesozoic and Paleozoic are given in table. Such data may change considerably in the future.—From English summary. ***Copy seen:*** DGS.

49326. ANGERE, JOHANNES. Jukagirisch-deutsches Wörterbuch, zusammengestellt auf Grund der Texte von W. Jochelson. Stockholm, Almqvist & Wiksell, 1957. 271 p. 28 refs. Text in German. ***Title tr.:*** Yukaghir-German dictionary; compiled on the basis of materials of V. Jochelson.

A dictionary based on Yukaghir lexical material collected by V. I. Jochelson (No. 8146 and 29883) and on a list of about 200 words from the now extinct Yukaghir dialects Chuvan and Omok, compiled by F. F. Matiushkin and published as appendix to F. F. Vrangel's *Puteshestvie . . . 1820–1826* (No. 19001). Translations are given in German, or, occasionally, in English. An introductory analysis of Yukaghir morphology and syntax and an index of German words contained in the dictionary are included. ***Copy seen:*** DLC.

49327. ANGERE, JOHANNES. Die uralo-jukagirische Frage; ein Beitrag zum Problem der sprachlichen Urverwandtschaft. Stockholm, Almqvist & Wiksell, 1956. 243 p. 179 refs. Text in German. ***Title tr.:*** The Uralian-Yukaghir question; a contribution to the problem of linguistic affinity. Ph. D. dissertation to Uppsala University.

Comparative morphological, syntactic and lexical study of the Finno-Ugric - Samoyed - Yukaghir languages and their relationship to Indo-European and Paleo-Asiatic (Chukchi and Koryak) languages. Yukaghir is classed, like the Ural-Altaic group, among agglutinative languages, but no definite conclusion is reached as to whether the linguistic affinities are due to a common ancestral language or to an ancient absorbtion of loanwords and alien grammatical structures. Earlier studies are reviewed and the importance of further ethnographic and archeological investigations to support linguistic research is stressed. The paper is favorably reviewed by G. Vasilevich (in *Sovetskaia ėtnografiia*, 1958, no. 1, p. 180–83) who suggests a comparison of Yukaghir with Tungus languages, Evenki in particular. ***Copy seen:*** DLC.

49328. ANGERE, JOHANNES. Das Verhältnis der tschuktschischen Sprachgruppe zu dem uralischen Sprachstamme. (Uppsala. Universitet. Årsskrift, 1951, no. 9. Språkvetenskapliga sällskapet i Uppsala. Förhandlingar, Jan. 1949–Dec. 1951, p. 109–150, tables.) 44 refs. Text in German. ***Title tr.:*** The relation of the Chukchi language group to the Uralian linguistic stock.

Morphology, word-formation, etymology and phonetics are compared in Chukchi, Koryak, Kamchadal, Yukaghir, Ural-Altaic and Finno-Ugric languages. A common ancestral stock is suggested, and hypothesis of Yukaghir being a link between the Chukchi and Uralian languages is speculated upon. ***Copy seen:*** DLC.

49329. ANGERMAN, HÅVARD. Undersøkelser av aldersfordelingen blant norske fiskere. (Fiskets gang, Sept. 2, 1954. årg. 40, nr. 35, p. 427.) Text in Norwegian. ***Title tr.:*** Investigations of age distribution among Norwegian fishermen.

Comparison of the 1930 and 1948 census of Norwegian fishermen shows marked decrease in number of men 15–25 and 25–35 years old; many more were over 35. Further data were collected during the winter-herring, spring-cod, and Lofoten fishing seasons of 1952, with 50,000 men participating. Reasons for changes in age classes are not disclosed. ***Copy seen:*** DLC.

ANGLIN, M. *see* Privitera, C. A., *and others.* Effects of freezing . . . oxydative phosphorylation of mitochondria. *1957.* No. 54145.

ANGLIN, M. *see* Privitera, C. A., *and others.* Oxydative phosphorylation . . . freezing . . . *1958.* No. 54146.

49330. ANIKEEV, N. P. *and others.* Mezhvedomstvennoe stratigraficheskoe soveshchanie po razrabotke unifitsirovannykh stratigraficheskikh skhem dlia Severo-Vostoka SSSR. (Sovetskaia geologiia. Sbornik, 1957. no. 62, p. 182–88.) Text in Russian. *Other authors:* S. F. Biskė, V. N. Vereshchagin, A. V. Zimkin, *and* N. I. Larin. ***Title tr.:*** Interdepartmental stratigraphic conference to work

out a unified stratigraphic scheme for the Soviet Northeast.

Contains report on a conference at Magadan, May 10–21, 1957, to review results of 25 years' geological work and bring about better coordination of further exploration and mapping; also to bring some uniformity into the stratigraphy of the region from the Lena River to the Chukotsk Peninsula, and from the arctic coast to the Sea of Okhotsk. The institutions (25) represented at the conference are noted; of the 250 delegates, 75 represented Yakut A.S.S.R., the Far East, Kamchatka and Sakhalin; 104 reports were presented and discussed in plenary and sectional sessions. A uniform stratigraphic scheme over the entire Northeast was adopted only for the Lower Carboniferous, Permian and Triassic; and in the central part of Kolyma massif, for the Silurian and Devonian systems. Temporary working schemes were adopted for the other systems as various sections of the region are not yet sufficiently explored.
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49331. ANISIMOV, ARKADIĬ FEDOROVICH. K voprosu ob animatizme i antropomorfizme. (Akademiîa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniîa, 1949. vyp. 8, p. 19–24.) 7 refs. Text in Russian. ***Title tr.:*** The problem of animatism and anthropomorphism.

Refutes the theory that the endowment of animals with human attributes was based on religious or mystic beliefs and suggests that primitive man identified himself with nature and therefore assumed that men and animals had identical senses. This assumption is illustrated by examples taken from the hunting practices and animal observations of the Evenki (Tungus). This paper is based on author's monograph on the religion and cosmogony of the Evenki.
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49332. ANISIMOV, ARKADIĬ FEDOROVICH. Religiîa ėvenkov v istoriko-geneticheskom izuchenii i problemy proiskhozhdeniîa pervobytnykh verovaniĭ. Moskva, Izd-vo Akademii nauk SSSR, 1958. 235 p. illus. incl. fold. Approx. 120 refs. Text in Russian. ***Title tr.:*** An historical genetic study of the religion of the Evenki and the problem of the origin of primitive creeds.

Exhaustive study of the origin, development and present-day survivals of Evenki (Tungus) cults and rites, based on author's investigations in the Podkamennaya Tunguska River region during 1929–31 and in 1937. Hunting rites and animal spirits, totemism, beliefs in multiple souls (body, mirror or shadow, fate souls) and in afterlife are treated in turn. Cosmogony and mythology, animism and zoomorphism, ancestor worship and anthropomorphism are discussed. Bear cults, worship of supreme spirits, shamanism and shaman worship, etc. are dealt with. ***Copy seen:*** DLC.

ANISIMOV, ARKADIĬ FEDOROVICH, *see also* Friedrich, A. Das Bewusstsein . . . des Lebens. *1955.* No. 50992.

49333. ANISIMOV, V. S. Nemnogo o svoem navyke. (Okhota i okhotnich'e khozîaĭstvo, Jan. 1958. god 4, no. 1, p. 9, port.) Text in Russian. ***Title tr.:*** A little about my experience.

Brief outline of methods of catching sable in the Evenki National District, by a hunter of the Lenin collective farm: importance of dogs, feeding and trapping fur animals in winter, setting traps, etc. Author's annual catch is worth to 9,000 rubles. ***Copy seen:*** DLC.

ANKERIA, JUKO. *See* Angere, Johannes.

49334. ANNENKOVA, NADEZHDA PAVLOVNA, 1887–1950. K faune Polychaeta morîa Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1932. vyp. 15, p. 133–39, illus., table.) 8 refs. Text in Russian. Summary in German. ***Title tr.:*** The polychaete fauna of the Laptev Sea.

Description of 11 species from collections of A. M. Popov, with a Yakut Expedition party 1927. Nine of them were previously recorded from the Siberian arctic coast. A new species, *Nainereis jacutica,* n. sp. is described in detail. Location of finds, distribution, etc., are noted. ***Copy seen:*** DLC.

49335. ANRICK, CARL JULIUS, 1895– . Bygge och bo i Kebnekaise. (Svenska turistföreningen. Årsskrift, 1925. p. 273–86, illus., maps.) Text in Swedish. ***Title tr.:*** Construction and accommodations in Kebnekaise.

Tourist accommodations in the Kebnekaise mountain region of northern Sweden were improved in 1924–25 with enlargement of the main station near Ladtjojokk and construction of a hut near the summit of Kebnekaise, 1930 m. above sea level. Transport of the con-

struction materials by reindeer and by manual labor up the last 300 m. is noted. Terrain is described. A map based on aerial photography is compared to the 1870 map edition. ***Copy seen:*** DGS.

49336. ANRICK, CARL JULIUS, 1895– . Kungligt besök i Nord-Lappland. (Svenska turistföreningen. Årsskrift, 1925. p. 345–46.) Text in Swedish. ***Title tr.:*** A royal visit to north Lapland.

Notes tour in 1924, of Netherlands party, through Sweden to Abisko, where they made trips into the surrounding mountains, and on via Kiruna to Porjus, Jukkasjärvi, Harsprånget, Luleluspen, Saltoluokta, and Stora Sjöfallet.

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49337. ANTIPOV, G. I. Poiskovye priznaki zhelezorudnykh mestorozhdeniĭ v Angaro-Ilimskom raĭone. (Razvedka i okhrana nedr, July 1958. god 24, no. 7, p. 1–4.) 6 refs. Text in Russian. ***Title tr.:*** Indications of iron ore locations in the Angara-Ilim River region.

Urges better prospecting in this region (approx. 57°–59° N. 101°–103° E.) of Krasnoyarskiy Kray, with more attention, for better results, to lithologic-stratigraphic, structural-tectonic, mineralogic and morphologic investigations. Recently a few iron ore locations are indicated, only two of economic potential.

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ANTONOV, A., *see* Kommunisticheskaîa partiîa Sovetskogo Soîuza. Murmanskiĭ oblastnoĭ komitet. Murmanskaîa oblast' . . . *1957*. No. 52377.

49338. ANTONOV, V. S. Klimaticheskoe raĭonirovanie vodosbornogo basseĭna arkticheskikh moreĭ. (Problemy Arktiki, sbornik stateĭ, 1957, vyp. 2, p. 97–105, tables, maps.) 8 refs. Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Climatic zoning of the area draining into the arctic seas.

Outlines the basic climatic and hydrological features of Asiatic U.S.S.R. draining into Kara, Laptevykh, East Siberian and Chuckchi Seas. Taking into account the relation of the mean annual amount of precipitation (P) to the algebraic difference of maximal (summer) and minimal (winter) monthly temperature (A_1), the author uses formula: $K=\frac{P}{A_1}$, where K is degree of the oceanic character ("okeanichnost'") of the climate. Computing K for 600 points, the whole area is divided into seven climatic regions: West Siberia, Yenisey, Taymyr-Khatanga, Lena, Yana, Kolyma-Indigirka and Chukotka. Data on water discharge of the main Siberian rivers are given and discussed. Paper is based on observations of meteorological stations in Siberia and Chukotka in 1930–50.

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49339. ANTONOV, V. S. Osnovnye prichiny kolebaniĭ obshcheĭ ledovitosti arkticheskikh moreĭ. (Problemy Arktiki, sbornik stateĭ, 1957, vyp. 1, p. 41–50, table, maps.) 5 refs. Text in Russian. Translated into English as U.S. Hydrographic Office translation 65. ***Title tr.:*** The principal causes of fluctuations in ice conditions of the arctic seas.

Considers the relative effects of river runoff (nearly constant), ocean currents, atmospheric circulation (strongest effect), and other, minor, factors on ice density and distribution. The main counteracting force to the general drift of ice toward the Atlantic is the inertia of the ice and water masses. V. ÎÛ. Vize's correlation coefficients for the stability of ice anomalies are recalculated for the navigation season (July–Sept.) for the Kara, Laptev, East Siberian, and Chukchi Seas; a close connection between ice density fluctuations and atmospheric effects is demonstrated.

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49340. ANTONOV, V. S. Rol' materikovogo stoka v rezhime techeniĭ Severnogo Ledovitogo okeana. (Problemy Severa, 1958, vyp. 1, p. 52–64, tables, maps.) 10 refs. Text in Russian. ***Title tr.:*** Role of continental runoff in the currents of the Arctic Ocean.

Information and data are presented on the waters, sea and fresh, entering the Arctic Ocean; land areas draining into this Ocean, including those in North America; runoff from these areas; their effect on the surface currents and ice conditions. Runoff analysis of specific river basins (Yenisey, Lena, Ob, Mackenzie, Yukon, Kolyma) is included. Freshwater was found to add 1.7% to the total of the Arctic Ocean or 2.1% to its central and eastern region.

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49341. ANTROPOV, PETR ÎAKOVLEVICH, 1905– . Osnovnye itogi geologi-

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cheskikh issledovaniĭ v SSSR za 40 let sovetskoĭ vlasti. (Sovetskaia geologiia, 1957. no. 60, p. 3–25.) Text in Russian. ***Title tr.:*** Main results of the geological investigations in the U.S.S.R. during 40 years of the Soviet regime.

Geological investigations and mapping, exploration and development of mineral resources, and the status of geological science generally in the U.S.S.R. are reviewed. Future objectives are outlined with mention in general terms of resources in the Soviet Arctic, and comparison with other countries' main minerals and their reserves.

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ANTROPOV, PETR IAKOVLEVICH, 1905– , *see also* Ivanov, B. V. Konferentsiia . . . *1958*. No. 51999.

ANTROPOV, PETR IAKOVLEVICH, 1905– , *see also: Sovetskiĭ soiuz*. Kogda vidiat skvoz' zemliu. *1957*. No. 55076.

49342. ANTROPOVA, V. V. Voprosy voennoĭ organizatsii i voennogo dela u narodov kraĭnego severo-vostoka Sibiri. (Akademiia nauk SSSR. Institut ėtnografii. Trudy, 1957. nov. ser. t. 35, Sibirskiĭ ėtnograficheskiĭ sbornik, pt. 2, p. 99–245, illus.) Approx. 100 refs. Text in Russian. ***Title tr.:*** Problems of military organization and military science of the peoples of the far northeast of Siberia.

An historical-ethnographic study dealing mainly with the Chukchis, Koryaks, Kamchadals and Yukaghirs. The exploration of the region and the distribution of the native population in the 17th-20th centuries are summarized. The social and economic conditions, slavery, blood-feud, family and clan organization, matriarchate, primitive production associations (artels), property rights, religious beliefs, etc., are reviewed. The military organization is discussed with consideration of problems of trade and barter, intra-tribal conflicts, etc. Offensive and defensive strategy is explained and account given of the fortification of villages and camps, enslavement and killing of prisoners, women and children, peace treaties, military training, etc. The weapons (bow and arrow, spear, knife, sling, bolo), armor (leather, wood and bone-plate), helmets, shields and arm guards are described and compared (p. 217) with those of Alaska and the Bering Sea islands (cf. No. 3332).

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49343. ANTSYSHKIN, S. P. Vsemerno uluchshat' okhranu lesov ot pozharov. (Lesnoe khoziaĭstvo, Apr. 1958. god 11, no. 4, p. 5–8.) Text in Russian. ***Title tr.:*** Forest fire prevention must be improved by all means.

Various measures for large-area forest protection are discussed. Forest fires have increased during last five years, and northern areas of Krasnoyarskiy Kray and Yakutia, where new cutting sites are being opened and where prospecting, mining, and construction are going on, have been affected. Fires in the Yakutsk region have increased tenfold. Efficient prevention measures and fighting methods are discussed in detail. Airplanes and helicopters with specially trained crews and chemical extinguishers, attached to fire control centers are used most effectively for remote fires in the large forests.

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49344. AOKI, KIYOSHI. Analysis of the freezing process of living organisms, 13; on the spikes appearing irregularly on the freezing curve of a twig piece of tree. (Teion kagaku, 1957. v. 15, ser. B., p. 1–16, illus., table.) 2 refs. Text in Japanese. Summary in English.

Report of investigation into the nature of secondary spikes in cooling graphs of pieces of poplar or mulberry twigs. The results indicate that the appearance of these spikes depends on the low water content of the xylem in the twigs examined. This small amount of supposedly supercooled water suddenly freezes, giving rise to a momentary temperature increase and spike.

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AOKI, KIYOSHI, *see also* Asahina, É., *and* K. Aoki. A method . . . caterpillar survive . . . super-low temperature. *1958*. No. 49404.

AOKI, KIYOSHI, *see also* Asahina, É., *and* K. Aoki. Survival . . . insects . . . liquid oxygen . . . *1958*. No. 49407.

49345. APEL'TSIN, F. R. Perspektivy zolotonosnosti mezo-kaĭnozoĭskikh vulkanogennykh obrazovaniĭ na Severo-Vostoke SSSR. (Sovetskaia geologiia, Oct. 1958. god 1, no. 10, p. 3–12, fold map.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** Gold prospects of Meso-Cenozoic volcanic formations in northeastern U.S.S.R.

The upper Kolyma-Indigirka River region represents the main gold belt of

the Northeast. It corresponds to the widespread Yana-Kolyma intergeoanticline filled with small intrusions, of which six formations were distinguished by the author in earlier publications. Further examination of these magmatogenic formations has been made, especially their subvolcanic bodies in marginal troughs in the upper Kolyma and Indigirka basins and in the districts of the Sea of Okhotsk coastal arch. The magmatogenic rocks are compared with similar rocks of the United States, Japan and other countries; hope is expressed for new gold discoveries. ***Copy seen:*** DLC.

49346. APOLLONIO, SPENCER. Notes from the north polar region. (Auk, Oct. 1958. v. 75, no. 4, p. 468.)

Birds observed on Fletcher's ice island: an eastern white-crowned sparrow, *Zonotrichia l. leucophrys*, seen after the first of July 1957; ivory gull *Pagophila eburnea*, May–Aug.; great black-backed gull, *Larus marinus*, at the end of May; one kittiwake, *Rissa*, was seen overhead about the same date.

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49347. APPELL, LAURA W. R. With paddle and notebook in the Northwest Territories. (Appalachia, June 1958. v. 32, no. 1, p. 37–44, map.)

Contains account of ethnological survey, summer 1957, by author and husband, of some Athapaskan Indian tribes along the Mackenzie River. The trip by 17-foot canoe, and by barge, equipment, supplies, camping procedures, etc. are also noted. ***Copy seen:*** DGS.

49348. APPLEWHITE, K. H., *and others.* Residual effectiveness of DDT sprays against mosquitoes breeding in Alaska. (Journal of economic entomology, June 1953. v. 46, no. 3, p. 516–17, table.) 2 refs. *Other authors:* H. L. Keegan *and* R. A. Hedeen.

"Larval mosquito collections made at Eielson Air Force Base, Alaska, in May, 1951, indicated that mosquito breeding at that base was still adversely affected by DDT applied in previous years . . . Larval count made on 19–20 May, 1951, showed a reduction of 94.4 percent on a 100-sq.-mi. plot which had received 0.3 lb. of DDT per acre, applied in three doses of 0.1 lb. each, in 1949. A smaller 25-sq.-mi. plot which received a total of 1 lb. of DDT per acre as a result of ten applications of 0.1 lb. each applied in 1948, 1949 and 1950 showed a reduction of 99.9 percent." ***Copy seen:*** DA.

49349. APUKHTIN, N. I. Novye dannye o rasprostranenii morskikh transgressiĭ v pozdne- i posleledníkovoe vremîa v Severnoĭ Karelii. (Leningrad. Vsesoîuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Materialy, nov. seriîa, Chetvertichnaîa geologiîa i geomorfologiîa, 1956. vyp. 1, p. 44–51, text maps.) 14 refs. Text in Russian. ***Title tr.:*** New data on distribution of marine transgressions in late- and post-glacial times in northern Karelia.

Presents the results of investigations north of 65° N. Orography of the region reached by marine transgressions is described. Marine deposits are characterized and their diatoms and other fauna identified. Five stratigraphic stages of marine transgressed basins are determined; their distribution is given and mapped. ***Copy seen:*** DLC.

ARAI, KENICHI, *see* Saito, T., *and* K. Arai. Slow freezing of carp muscle . . . *1957.* No. 54508.

ARAI, KENICHI, *see* Saito, T., *and* K. Arai. Slow freezing of carp muscle and inosinic acid . . . *1958.* No. 54509.

49350. ARANOVICH, B. Promyslovoe sudovozhdenie. (*In:* Na promyslakh v Barenîsovom more, 1956, p. 83–89.) Text in Russian. ***Title tr.:*** Navigating fishing vessels.

Discusses methods of locating fish shoals and of keeping them once located. Various courses of navigation in relation to size and movement of shoal, navigation over different bottoms and according to quantities of fishes caught, taking heed of other vessels, etc., are considered.

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49351. *ARCTIC.* Geographical names in the Canadian North. (Arctic, 1957, 1958. v. 10, no. 1, p. 61–62; no. 2, p. 123–28; v. 11, no. 1, p. 64–66; no. 2, p. 127–32; no. 3, p. 193–94; no. 4, p. 257.)

Lists names and changes adopted for official use in the Northwest and Yukon Territories by the Canadian Board on Geographical Names. Names are grouped according to the maps on which they appear with approx. latitude and longitude of the geographic feature.

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49352. *ARCTIC.* New polar ship. (Arctic, 1957. v. 10, no. 3, p. 188–89, illus.)

Notes delivery, J. Lauritzen Lines, Copenhagen, Oct. 9, 1957, of the polar expeditionary ship *Thala Dan:* 36-passenger vessel, 1,950 tons deadweight; or a cargo vessel with 12 passengers, 2,150 tons deadweight; the space allotted passengers or cargo to be shifted as needed. The 7-cylinder turbo-charge diesel main engine develops 2,200 i.hp. at 300 rpm. Special features for navigating in ice and navigational aids are mentioned. The ship can be steered and directed from a crow's nest built into the foremast and reached from inside the mast.

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49353. ***ARCTIC.*** Richard Carleton Hubley, 1926–1957. (Arctic, 1957. v. 10, no. 3, p. 187.)

Notes death on Oct. 29, 1957, of this American glaciologist while leading IGY glaciological program on McCall Glacier, Brooks Range, Alaska.

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49354. ***ARCTIC CIRCULAR.*** The Council of the Northwest Territories. (Arctic circular, 1957. v. 10, no. 1, p. 9–10.)

Two or more sessions are held yearly, one in the Northwest Territories, the others in Ottawa; those since 1951 are listed with locations and dates. The session of June 3–17, 1957, at Frobisher Bay, was the first held in the District of Franklin and first in the Eastern Arctic. The four members elected by residents of Mackenzie District and five new government appointees are listed.

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49355. ***ARCTIC CIRCULAR.*** An electric storm over the North Pole. (Arctic circular, Aug. 1958. v. 11, no. 1, p. 13.)

Describes storm reported in the polar basin, July 26, 1957, by the Russian drifting station North Pole–6. In 75 minutes, 13 mm. of rain fell.

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49356. ***ARCTIC CIRCULAR.*** Inuvik. (Arctic circular, 1958. v. 11, no. 2, p. 29–30.)

Notes official proclamation, July 18, 1958, of Inuvik as name of the town built to replace Aklavik as a center for the Mackenzie delta district. Inuvik (second syllable accented) is an Eskimo word meaning "The Place of Man."

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49357. ***ARCTIC CIRCULAR.*** Location of Cape Stallworthy and Cape Thomas Hubbard (Arctic circular, 1957. *pub.* Jan. 1958. v. 10, no. 2, p. 28–29.)

Two capes have been distinguished on Axel Heiberg north coast, and the westerly identified by R. Thorsteinsson 1957, as that named Thomas Hubbard by R. E. Peary in June 1906.

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49358. ***ARCTIC CIRCULAR.*** A manuscript diary written on Mr. Warburton Pike's visit to Back River in 1890. (Arctic circular, 1957. *pub.* Feb.–Mar. 1958. v. 10, no. 1, p. 32–50; no. 2, p. 51–69, text map.)

Contains diary of James Mackinlay, a Hudson's Bay Co. factor who made a journey from Gt. Slave Lake to Back River in the Barren Grounds of Keewatin with Warburton Pike in summer 1890. Mackinlay's "Journal of Fish River Exploring Party" May 7–Aug. 23 agrees with Pike's account (No. 13527) but gives more details particularly on wildlife. ***Copy seen:*** CaMAI.

49359. ***ARCTIC CIRCULAR.*** Mineral exploration in southern Baffin Island, 1957. (Arctic circular, 1957. *pub.* Jan. 1958. v. 10, no. 2, p. 29–30.)

Ultra-Shawkey Mines Ltd. staked 500 claims in 1956 in southern Baffin Island areas showing iron mineralization. Preliminary exploration was carried out in 1957. Five main orebodies were outlined in Chorkbak Inlet area east of Cape Dorset, containing a total of some 356 million tons of iron-bearing material. Sulfide zones were also observed.

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49360. ***ARCTIC CIRCULAR.*** Monument to Otto Sverdrup. (Arctic circular, 1957. *pub.* Jan. 1958. v. 10, no. 2, p. 27–28.) Also reported in the *Geographical journal,* Dec. 1957, v. 123, pt. 4, p. 558.

Memorial to this Norwegian explorer and discoverer of the northeastern Queen Elizabeth Islands (Sverdrup Islands) was unveiled at Steinkjer, Norway, July 21, 1957. Supt. H. A. Larsen, R.C.M.P., represented the Canadian Govt. Part of his address is given, noting operations by R.C.M.P. in the Sverdrup Islands, recent migration of Eskimos to areas explored by Sverdrup.

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49361. ***ARCTIC CIRCULAR.*** Move of the Ennadai Eskimo to the Henik Lake area. (Arctic circular, 1957. v. 10, no. 1, p. 13–14.)

Reports airlift (six flights in 24 hrs.) of 55 adults and children in May 1957 from Ennadai Lake (60°45′–61°15′N. 101°–102°W.) 125 mi. northeast to Oftedal Lake in the Henik Lake area where game is more plentiful. The Eskimos were supplied with new tents, fish-nets, ammunition, and food for a month. ***Copy seen:*** CaMAI.

49362. *ARCTIC CIRCULAR.* Protection for the blue goose nesting grounds in Baffin Island. (Arctic circular, 1957. v. 10, no. 1, p. 14–16, text map.)

Two sanctuaries were established in 1957 on the southwest coast of Baffin (approx. 65°N. 72°–75°W.) to protect nesting grounds of blue, snow, and Canada geese also American brant. The smaller Bowman Bay Game Sanctuary (500 sq. mi.) provides complete protection for the most important breeding area. It is within the larger Dewey Soper Bird Sanctuary (3,150 sq. mi.) which provides more limited protection: hunting, molestation of birds, eggs and nests is forbidden, but persons may enter the area, prospecting and exploitation of mineral deposits may be authorized; aircraft are restricted.

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49363. ARCTIC INSTITUTE OF NORTH AMERICA. Glaciology program for McCall Glacier, Brooks Range, Alaska. (*In:* American Geographical Society. Preliminary reports of the Antarctic and Northern Hemisphere glaciology programs, 1958. p. XII 1–3.)

Includes brief description of the glacier and station, list of personnel (5); progress reports in micrometeorology, climatology and special measurements, snow study, movement of glacier (near completion); and mapping. ***Copy seen:*** DN–HO.

ARCTIC INSTITUTE OF NORTH AMERICA, *see also* Stanka, V. Institutions of the U.S.S.R. . . . *1958.* No. 55109.

49364. ARCTIC SEA ICE CONFERENCE, *Easton, Md.,* Feb. 24–27, 1958. Proceedings of the Conference conducted by the Division of Earth Sciences and supported by the Office of Naval Research. Washington, D.C., National Academy of Sciences - National Research Council, Dec. 1958. 271 p. illus., maps, diagrs., tables. (N.R.C. publication 598) refs.

Contains prefatory statement by the editor, Wm. R. Thurston, on the organization and scope of this first conference on arctic sea ice, followed by text and discussion of the 28 papers presented in seven sections. The papers (which were also issued in preliminary form to participants in the Conference) are abstracted in this Bibliography under their authors' names.

Distribution and character of sea ice.

NUSSER, F. Distribution and character of sea ice in the European Arctic.

KIRILLOV, A. A. Classification of arctic ice and its distribution in the Soviet sector of the Arctic.

AVSÎUK, G. A. Modern glaciation of the Soviet Arctic.

SWITHINBANK, C. W. M. An ice atlas of the North American Arctic.

HELA, I. The Baltic Sea as an object of ice studies.

Sea ice observing and reporting techniques.

KUSUNOKI, K. The present situation of sea ice observations in Japan.

LAKTIONOV, A. K. Ice observation methods.

RODHE, B. Sea ice observing and reporting technique in the Baltic.

FRENCH, H. V. Aerial ice observing and reporting.

TELEKI, G. The utilization of aerial photographs in sea ice forecasts.

Physics and mechanics of sea ice.

UNTERSTEINER, N., *and* F. I. BADGLEY. Preliminary results of thermal budget studies on arctic pack ice during summer and autumn.

WEEKS, W. F. The structure of sea ice: a progress report.

PESCHANSKIĬ, I. S. Physical and mechanical properties of arctic ice and methods of research.

ASSUR, A. Composition of sea ice and its tensile strength.

TABATA, T. Studies on visco-elastic properties of sea ice.

ANDERSON, D. L. A model for determining sea ice properties.

Sea ice formation, growth and disintegration.

KOLESNIKOV, A. G. On the growth rate of sea ice.

SIMPSON, L. S. Estimation of sea ice formation and growth.

TABATA, T. On the formation and growth of sea ice, especially on the Okhotsk Sea.

ÎAKOVLEV, G. N. Solar radiation as the chief component of the heat balance of the arctic ice.

Drift and deformation of sea ice.

BROWNE, I. M., *and* A. P. CRARY. The movement of ice in the Arctic Ocean.

GORDIENKO, P. A. Arctic ice drift.

FUKUTOMI, T. A theory on the steady drift of sea ice due to wind on the frozen sea.

Sea ice prediction techniques.

PALOSUO, E. Methods used in the ice service in the Baltic.

WITTMAN, W. I. Continuity aids in short range ice forecasting.

Sea ice operations.

GERSON, D. J. A technique for time-lapse photography of sea ice.

TAIT, A. J. The operational concept for a sea ice reconnaissance and forecasting program conducted during arctic operations.

THOMAS, C. W. The economics of surface transportation in sea ice.

A brief account of the conference, by L. O. Quam, was published in the U.S. Office of Naval Research, Research reviews, May 1958; p. 17–19.

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49365. ARCTICA. Essays presented to Åke Campbell. Uppsala, 1956. v, 296 p. illus., maps. (Studia ethnographica upsaliensia, v. 11.) Refs.

A symposium of 21 papers on ethnographic, anthropologic and cultural topics; 13, dealing with arctic regions, are abstracted under their authors' names, viz.:

VILKUNA, K. The "radno" of Lapland.

NESHEIM, A. An ancient type of sledge in Ullsfjord, northern Norway.

ESKEROD, A. Early nordic-arctic boats.

NICKUL, K. Changes in a Lappish community, a reflection of political events and state attitude.

WHITAKER, I. Declining transhumance as an index of culture-change.

RUONG, I. Types of settlement and types of husbandry among the Lapps in northern Sweden.

VALONEN, N. Ptarmigan trapping in the village of Nuorgam in Utsjoki.

LAGERCRANTZ, S. Some Eurasian release systems.

GJESSING, G. Mountain-saames (Mountain-Lapps) fishing at the seacoast in the 17th and 18th centuries.

GRUNDSTROM, H. Sarakkagröt-nornegröt-barselgröt-lystenbit. Some parallels.

STRÖMBÄCK, D. The realm of the dead on the Lappish magic drums.

UNDMAN, B. Publications on the physical anthropology of the Lapps.

ODENIUS, O. Contributions to Åke Campbell's bibliography.

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ARDAB'EVA, ELIZAVETA IVANOVNA, *see* Kafanova, M. Kak sozdavalas' karta. *1957.* No. 52124.

49366. ARDÖ, PAUL. On the feeding habits of the Scandinavian mosquitoes. (Opuscula entomologica, Oct. 1958. bd. 23, häfte 3, p. 171–91, 3 illus., 6 tables.) 68 refs.

Reviews observations of the last ten years, mainly in northern Norway and Sweden (Tromsö, Pajala). The data collected indicate that the female needs nitrogen for development of her eggs and normally takes it from a warm-blooded animal; but not necessarily so, as her source depends upon the actual composition of the fauna and relative abundance of its components. The energy-requiring flight in search of hosts requires carbohydrates, of which the nectar of flowering plants is the main or exclusive source.

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49367. ARDÖ, PAUL. Studies in the marine shore dune eco-system with special reference to the dipterous fauna. Malmö, Nya Litogafen, 1957. 255 p. 82 illus., 11 tables. (Opuscula entomologica, Supplementum 14) 168 refs.

Ecological study covering northern Norway (collections of R. G. Dahl and H. Andersson), western and southern Norway, Denmark and southern Sweden. The phytal component and its role in the dune ecosystem are discussed; vegetation records (of southern regions) are tabulated (table 6). Geophysical and geochemical constituents of biotopes are noted and discussed as: "biotic factors" (different qualities of the bio-mass) and the abiotic group of factors or "abiotic environment" (soil factors, its water, temperature and age; sand, its color and grain size, wind, etc.) Some 700 dipterous species are listed (p. 97–164), with notes including data on Scandinavian distribution, habitat and frequency. About a hundred of the species are native to northern provinces of Norway. The dipterous fauna consists of an eurytope group of species, not studied here, and a stenotope group. Species within the latter are often restricted to a single zone of the ecosys-

tem. Some of the stenotope flies are studied with the aid of experimental ecological methods, and a close relation demonstrated between thermal preference and choice of zone, as also between dry resistance and light preferenda.

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49368. AREMBOVSKIĬ, IOSIF VÎACHESLAVOVICH, *and* **L. N. IVAN'EV.** Novoe obsledovanie Irkutskoĭ paleoliticheskoĭ stoîanki. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniîa, 1953. vyp. 49, p. 51–55, illus.) 6 refs. Text in Russian. ***Title tr.:*** A new study of the Irkutsk paleolithic site.

Originally discovered in 1871 by the Siberian geologist I. D. Cherskiĭ, the site was examined anew in 1951 and yielded some rhinoceros (*Rhinoceros tihorhinus*) and reindeer (*Rangifer tarandus*) bones and bone artifacts. The artifacts, dated into the Solutrean era, are linked to the paleolithic culture of Mal'ta, Buret' and other Angara River sites.

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49369. AR'EV, T. ÎA., *and* **N. A. ÈSBERG.** Izmenenie krovi pri otmorozheniîakh. (Vestnik khirurgii, 1937. t. 51, kn. 135, p. 19–25, illus., tables.) 18 refs. Text in Russian. ***Title tr.:*** Blood changes due to frostbite.

Account of experiments on rabbits submitted to local or general frostbite. No significant changes were observed in the blood and no changes in osmotic resistance of the erythrocytes were noted. A peripheral leucocytosis appeared, due to redistribution of leucocytes between internal and external regions.

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49370. ARISTOVSKAÎA, T. V. O fermentativnoĭ aktivnosti severnykh ras mikroorganizmov. (Mikrobiologiîa, Sept.–Oct. 1948. t. 17, vyp. 5, p. 350–54, tables.) 6 refs. Text in Russian. ***Title tr.:*** On the fermentative activity of northern strains of microorganisms.

Strains of three species of mold from the Kola Peninsula showed considerably greater catalase and invertase activity then corresponding forms from the Leningrad area. *Cladosporium herbarum* grown at 10° C. also showed higher activity of these enzymes than cultures raised at 20° C. Protease activity on the other hand was less dependent on temperature at which the molds grew.

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49371. ARKHANGEL'SKAÎA OBLAST'. STATISTICHESKOE UPRAVLENIE. Narodnoe khozîaĭstvo Arkhangel'skoĭ oblasti; statisticheskiĭ sbornik. Arkhangel'sk, Arkhangel'skoe knizhnoe izd-vo, 1957. 147 p. tables. Text in Russian. ***Title tr.:*** The economy of Arkhangel'sk Province; a statistical handbook.

Presents data on the population, administrative division, cities and towns, industry (including forestry), agriculture (including reindeer breeding), housing, urban conditions, transportation and communication, labor, commerce, education and health. The Nentsy National District and Novaya Zemlya, Franz Joseph Land, Kolguyev, Vaygach, Matveyev and Solovetskiye Islands are included though the data are less complete.

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49372. ARKHINCHEEV, IL'ÎA STEPANOVICH, *d.* **1938.** Materialy dlîa kharakteristiki sotsial'nykh otnosheniĭ chukchi v sviîzi s sotsialisticheskoĭ rekonstruktsieĭ khozîaĭstva. (Akademiîa nauk SSSR. Institut ėtnografii. Trudy, 1957. nov. ser. t. 35, Sibirskiĭ ėtnograficheskiĭ sbornik, pt. 2, p. 43–98, tables.) 9 refs. Text in Russian. ***Title tr.:*** Materials for the analysis of the social relations of the Chukchis in connection with the socialist reconstruction of their economy.

Discusses the social and economic conditions of the settled (sea-mammal-hunting) and the nomad (reindeer-herding) Chukchis of the Chaunskiy Rayon, northeastern Chukotka, at the start of collectivization in 1933–1934. The close relationship between the two groups and the evolution of the herders from the fishers and hunters is noted. The primitive tools and weapons of the Chukchis prior to the advent of the Russians are listed. The customs, reindeer-herding and sea-mammal (whale, walrus, seal) hunting economies, family and clan ties, division of labor (male and female), practice of hire and adoption, etc., are described and examples taken from several Chukchi households: poor, middle-class and rich. Territorial organization, physical and geographic conditions, partition of herds on basis of pasturage available, advantages of collective farms, attempted settling of nomad herders, housing, etc., are dealt with. Selected statistics on population, households, herds, per capita income, etc., are given. The paper is prefaced (p. 38–43) by a review, mainly favorable, by M. A. Sergeev, who elaborates on

the subject and gives a biographical sketch of the author. ***Copy seen:*** DLC.

49373. ARKHIPOV, S. A. K stratigrafii chetvertichnykh otlozheniĭ Prieniseĭskoĭ chasti Zapadno-Sibirskoĭ nizmennosti; basseĭn srednego techeniĭa r. Eniseĭa. (Akademiĭa nauk SSSR. Doklady, Sept. 1, 1957. t. 116, no. 1, p. 123–25, fold. table.) 12 refs. Text in Russian. ***Title tr.:*** On the stratigraphy of Quaternary deposits in the Middle-Yenisey basin of the West Siberian lowland.

Contains a scheme of the stratigraphic subdivisions of Quaternary deposits of Yenisey basin, including its lower course. Characteristics of the deposits, faunal, floral and archeological remains, geological age and geographic data are tabulated for each horizon. The stratigraphy of the West Siberian lowland is somewhat different from that of the Russian plains: the result of more violent tectonic movements and larger boreal transgressions, under more severe climatic conditions.

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49374. ARKHIPOV, S. A. *and* **IU. A. LAVRUSHIN.** K voprosu o stoke r. Eniseĭa v period maksimal'nogo i Zyrianskogo oledeneniĭ. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geologicheskaĭa, June 1957, god 22, no. 6, p. 91–101, tables, text maps, cross-section.) 19 refs. Text in Russian. ***Title tr.:*** On the Yenisey River drainage during the maximal and Zyryansk glaciations.

Presents results of paleogeographic field studies and considerations concerning runoff during two periods of glaciation. Historical development of the Yenisey and its tributaries is reviewed and water balance during glaciations is calculated. The Yenisey is shown to have had the same direction in anthropogene time as at present. For the view (of others) that during glaciations the Yenisey flowed through the Pakulikha, Eloguy and Turukhan valleys to the Aral Sea, there is not sufficient evidence. Climatic and tectonic reasons for the continued northward flow of the river are analyzed.

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49375. ARKHIPOV, S. A., *and* **IU. A. LAVRUSHIN.** Nekotorye osobennosti stroeniĭa bichevnikov basseĭna srednego i nizhnego techeniĭa Eniseĭa. (Moskovskoe obshchestvo ispytateleĭ prirody. Biŭlleten', nov. seriĭa, god 129, t. 63, otdel geologicheskiĭ, Nov.–Dec. 1958. t. 33, vyp. 6, p. 127–36, illus.) 12 refs. Text in Russian. ***Title tr.:*** Some features of "tow-path" structure of the middle and lower Yenisey River basin.

Outlines the occurrence, structure, types and microrelief forms of so-called tow paths (bichevnik) as developed mainly on the right bank of the Yenisey. The term signifies the zone of the river bank between the median and high water levels, a zone where depositional and erosional processes are active. River dynamics, composition of the material, and the river ice are considered most responsible for this natural "tow path" development. According to microrelief forms, three types are distinguished and their appearance, measurements and forms described. Photos, cross-sections and diagrams of various types are included. "Tow paths" in the valleys of Nizhnyaya Tunguska, Sukhaya Tunguska, Fat'yanikha, Komsa and Bakhta, right tributaries of Yenisey, are also mentioned. Previous studies are reviewed.

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49376. ARKHITEKTURA SSSR. Zhilishchnoe stroitel'stvo v gorodakh Sibiri; na iv plenume pravleniĭa Soiuza arkhitektorov SSSR v Novosibirske. (Arkhitektura SSSR, 1958, no. 5, p. 21–31, illus.) Text in Russian. ***Title tr.:*** House building in the towns of Siberia; 4th Plenary Meeting of the Board of the Union of Architects of U S S.R. in Novosibirsk.

Construction problems discussed at the conference are reviewed with emphasis on planning of new towns with houses of special construction suitable for severe Siberian climates. Attention was given to orientation of the houses with respect to the predominant wind direction and sunshine, sufficiently large floor space, and provision of essential utilities and comfort. L. G. Nazarova reported on the construction, with 4- or 5-storey houses at Noril'sk in a permafrost region, for a population of over 100,000. Winter in Noril'sk lasts about 264 days with temperatures as low as −51° C. Other reports discussed appreciable differences between recommended housing standards adopted for European U.S.S.R. and those for Siberian conditions. ***Copy seen:*** DLC.

49377. ARKTISK INSTITUT, *København.* Arktisk Instituts årsberetning for 1958. Charlottenlund, 1959. 5 p. Mimeographed. Text in Danish. ***Title tr.:*** The Arctic Institute's annual report for 1958.

Reports gifts received, foreign visitors and guests, participation in meetings and conferences, etc.; its liaison work for the International Glaciological Expedition to Greenland, 1957–60, information service on Greenland matters, lending equipment to arctic expeditions, etc. are noted.
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49378. ARKTISK INSTITUT, *København.* Danish scientific activities in Greenland in 1957. Charlottenlund, 1958. 10 p. Mimeographed.

Summarizes research carried out by the Geological Survey of Greenland, and by Lauge Koch's geological expedition to East Greenland; glaciological investigations in connection with the IGY; work done by the Danish Geodetic Institute and by the Meteorological Institute; experiments with marking of ice floes off the east coast; limnological investigations and marine biological studies sponsored by the Universitetets Arktiske Station; zoogeographical, fisheries, and archeological research. ***Copy seen:*** DGS.

49379. ARKTISK INSTITUT, *København.* Danish Scientific activities in Greenland in 1958. Charlottenlund, 1959. 21 p. Mimeographed.

Outlines mapping activities of the Geological Survey of Greenland in the east and northwest, the Godthåb district, the Ivigtut-Nunarssuit and Julianehåb-Narssarssuaq areas; also geological investigations in the Julianehåb district and soil temperature measurements at Godthåb and Mesters Vig. Geological, biological, and paleontological studies by Lauge Koch's 46-man Expedition to East Greenland are reported; also glaciological investigations in the east (leader: B. Fristrup), a Botanical Expedition to West Greenland (T. W. Böcher in charge), and the Carlsberg Foundation Scoresby Sund Expedition (botanical sub-expedition of Lauge Koch's). A report from the Meteorological Institute, which carried out meteorological, climatological, nautical, and geophysical observations, is included. C. Vibe carried out zoogeographical investigations in the northeast; fishery-biological investigations were continued in the west as well as in the east. Three parties of the National Museum studied ancient Eskimo cultures (Gothåb, Thule, Hall Land) and Norse settlements (Julianehåb); social research was conducted at Disko Bugt. Brief reports from the Arktiske Station, Godhavn, and the Geodetic Institute, are included.
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49380. ARMAND, A. D. Nekotorye osobennosti stroeniia moreny na Kol'skom p-ove v sviazi s ikh vleniiami techeniia. (Akademiia nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiia, 1958. no. 3, p. 36–42, cross-sections, graphs.) 8 refs. Text in Russian. ***Title tr.:*** Some features of moraine structure in the Kola Peninsula in connection with flowage phenomena.

Study on the granulation and mechanical composition of morainic material collected in the Lake Imandra and Umb-ozero regions and the upper Ponoy River. The structure of moraines is considered in relation to flowage processes; solifluction and its effects in various morainic forms: eskers, hillocks, kames and drumlins are outlined. Various fractions of grains are distinguished and their occurrence in moraine material summarized and percentages given. Assortment of material is discussed as linked with flowage; the latter is recognized an important component and treated in detail. Postglacial and present solifluction are compared. The role of solifluction in forming of eskers, kames, drumlins is outlined. ***Copy seen:*** DLC.

49381. ARMSTRONG, FRED, *and* **D. J. NUTTING.** Engineer Task Force 87. (Military engineer, Jan.–Feb. 1957. v. 49, no. 327, p. 12–14, illus.) Ref.

Reviews experiences of this military unit in constructing roads, dwellings, launching sites, etc., for the Fort Churchill IGY station. Construction begun in April 1956 is to be completed by July 1957. ***Copy seen:*** DLC.

49382. ARMSTRONG, HARRY G., *and others.* The physiological effects of breathing cold atmospheric air. (Journal of aviation medicine, Aug. 1958. v. 29, no. 8, p. 593–97, table.) 10 refs. *Other authors:* A. C. Burton, *and* G. E. Hall.

Account of experiments with dogs breathing air as cold as −62° C. No irritation or injury to the respiratory tract were noted except frostbite, extending for a few millimeters inside the nostril. The air in the respiratory tract below the cricoid cartilage showed no significant difference in temperature from that of controls inhaling air of room temperature. ***Copy seen:*** DNLM.

49383. ARMSTRONG, J. G. Some practical cold climate feeding problems in Canadian Service operations. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 8–12.) 5 refs.

Contains information on the climate of arctic Canada; feeding situations (three) and circumstances of their application; rations; survival feeding; the problem of a high-fat diet in the Arctic; food packaging, processing (dehydration) etc.

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49384. ARMSTRONG, J. G. Some recent Canadian army ration trials. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, July 1951 (n.s.) v. 3, p. 79–86, illus.)

A firsthand account of field trials conducted during the past three winters at Fort Churchill, Manitoba. Climate, nature of the area, and indoctrination of newcomers are outlined. The rations (three kinds) and their trials, cooking and cooking equipment, life on the trail, and trail rations are discussed.

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49385. ARMSTRONG, TERENCE EDWARD, 1920– . The ice of the central polar basin. (Journal of glaciology, Oct. 1957. v. 3, no. 22, p. 105–110, 6 text charts, section, table.) 12 refs.

Drifting parties in the Arctic Basin, 1879–1955, are noted and some results given of recent, largely Russian, work. In winter, concentration of polar ice is ten-tenths, in summer nine- to ten-tenths. On the outer fringes of Basin, certain sea areas remain ice-covered while the surrounding ice melts, phenomena termed "ice massifs" (ledyanyye massivy) by the Russians (the English term "ice clusters" is proposed). "Clusters" north of the U.S.S.R. are shown (chart) in relation to shipping routes. Influence of Lomonosov ridge on ice movement is discussed, with reference to drifts of ice floe stations North Pole-3, -4, -5. In the Atlantic sector of Basin, ice is carried from Laptev and Kara Seas to the Greenland Current in two–three years. In the Pacific sector, drift is slower and ice remains in "closed circulation" about seven years. Effect of wind on ice drift, Zubov's isobaric drift hypothesis are discussed; also growth, thickness, and structure of ice floes. Shumskiĭ's explanation of stratification of a 3 m. vertical section taken on North Pole-3 in July 1954 is given. U.S., U.S.S.R., and Canadian plans for investigations in the International Geophysical Year are noted.

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49386. ARMSTRONG, TERENCE EDWARD, 1920– , *and* B. B. ROBERTS. Illustrated ice glossary, part 2. (Polar record, May 1958. v. 9, no. 59, p. 90–96, 15 plates.) In sequence to No. 43742, on sea-ice terminology.

Presents definitions and photo-illus. of 56 land-ice and snow terms, as a basic terminology, except for frozen ground and frost action terms, which are excluded.

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49387. ARMSTRONG, TERENCE EDWARD, 1920– . Insurance against ice risks at sea. (Polar record, May 1957. v. 8, no. 56, p. 421–28, text map, table.) 3 refs.

Reports additional winter insurance premiums for ships by the Institute of Warranties in London. Rates as established are scaled according to region and time of season on the basis of data on navigational hazards, and the ice-worthiness of a ship. The additional winter insurance rates from 1931–1955 for the Hudson Bay Route are tabulated together with official dates of opening and closing of Hudson Strait; waters barred to shipping all year or at specified periods in winter are mapped. Requirements for the strengthening of ships for navigation in ice are listed. ***Copy seen:*** DLC.

49388. ARMSTRONG, TERENCE EDWARD, 1920– . The recording and reporting of floating ice. (Polar record, Sept. 1958. v. 9, no. 60, p. 184–90.) 23 refs.

Notes immediate and long-term uses of such records, development of various, regional systems and recent efforts toward a common system for world-wide use in recording and reporting the distribution of floating ice. Development is traced of methods used in the Baltic, North Atlantic, north Russian, American arctic, and antarctic waters and in the northern Japan and Okhotsk Seas. New advances in recording and reporting techniques are cited. ***Copy seen:*** DLC.

49389. ARMSTRONG, TERENCE EDWARD, 1920– . The Russians in the Arctic; aspects of Soviet exploration and exploitation of the far North, 1937–57.

London, Methuen, 1958. 182 p. illus., diagr., maps. 23 refs.

Recounts for general readers some outstanding episodes in exploration: the *Sedov* drift of 1937–1940, the air expeditions of 1941 (to Pole of Inaccessibility) and since 1948 (High Latitides), the ice-floe drifting stations of 1937 and since 1950. The development of the Northern Sea Route is reviewed, its weather station network, icebreaker fleet, freight traffic, its role in World War II; its traverse by the German raider *Komet* in summer 1940 is discussed. Native population of the Soviet Arctic is outlined, its acculturation and collectivization described and appraised. Chapters are included on the Siberian mammoth and some recent archeological finds, as contributing to elucidate past conditions and events. Soviet achievements in science (meteorology, permafrost, oceanography, etc.) and in resource development (timber, mining, fisheries, etc.) are assessed. The role of the state is appraised, and Russian interest in the Arctic together with a reservoir of trained specialists is recognized, as factors in such achievement.

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49390. ARMSTRONG, TERENCE EDWARD, 1920– . William Scoresby 1790–1857. (Geographical journal, June 1957. v. 123, pt. 2, p. 269–70, port.)

Biographical sketch of this English whaler, ship's captain and Anglican priest who made his first voyage to Greenland at the age of ten. In 1806 he achieved a northing, 81°30′ N. 19° E., for a freely navigating ship. His descriptions of Greenland and Svalbard whaling, work on sea ice, instrumentation, and his Greenland survey of 1822 are noted. He left the sea for the church at age 32, but continued scientific enquiries, produced some 60 papers (not listed).

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ARMSTRONG, TERENCE EDWARD, 1920– , *see also* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

ARMSTRONG, TERENCE EDWARD, 1920– , *see also* Roberts, B. B., and T. E. Armstrong. The Arctic Institute, Leningrad. *1957.* No. 54333.

ARNAL, M. C., *see* Chevillard, L., *and others.* Activités respiratoire et cardiaque . . . *1958.* No. 50229.

ARNAL, M. C., *see* Chevillard, L., *and others.* Thermorégulation . . . après hypothermie . . . *1958.* No. 50230.

49391. ARNBORG, TORE, 1912– . Trädplantornas rotsystem, 1; anmärkningar rörande planteringsdjupet med exempel på humustäckets betydelse för utvecklingen av den planterade tallplantans rotsystem och plantornas tillväxt. (Svenska skogsvårdsföreningen. Tidskrift, 1956. årg. 54, nr. 1, p. 95–106, illus., graph, diagrs.) 10 refs. Text in Swedish. ***Title tr.:*** The woody plants' root system, 1; observations regarding planting depth with discussion of the humus layer's significance for development of the reset pine seedling's root system and the plant's growth.

Depth of root placement and its effects were studied in transplanting pine seedlings. Best development obtained where the roots had been placed at the contact between the surface humus layer and the underlying mineral soil. On the poor podsol soils of northern Sweden contact with the humus layer is recommended. Poor results with Siberian larch in Norrland may be due to the roots having been placed in pure mineral soil. Planting methods are evaluated.

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49392. ARNELL, SIGFRID VILHELM, 1895– . Hepaticae. Lund, CWK Gleerup, 1956. 308, vi p., 98 illus., fold. map. (*In:* Lund botaniska förening. Illustrated moss flora of Fennoscandia, I.) 9 refs. Text in English.

Contains a taxonomic treatment of liverworts of Fennoscandia (including Kola Peninsula) with keys, descriptions of orders, families, genera, 299 species and some varieties and forms; synonyms; critical notes and data on habitat and geographic distribution. Many arctic species are included in this basic work. A glossary of botanical terms and an index of botanical names are appended.

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49393. ARNOLD, CHESTER ARTHUR, 1901– . Microfossils from Greenland coal. (Michigan Academy of Sciences, Arts and Letters. Papers, 1931 (1931 meeting). v. 15, p. 51–61, 4 plates, text map.) 8 refs. *Pub. also as:* Papers from the Dept. of Botany, University of Michigan, no. 357.

Contains a study of some forty samples of coal from West Greenland, with notes on three localities on the south coast of

Nugssuak Peninsula and six on the east coast of Disko. The coal, coal-bearing formations and plant remains, are described. Evidence pertaining to climate is noted and discussed.

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49394. ARNOLD, FERDINAND CHRISTIAN GUSTAV. Labrador. München, Druck von Val. Höfling, 1896. 18 p. Text in German.

Lists 127 lichens with notes and Latin diagnoses, based on the collection made by J. W. Eckfeldt and A. Waghorne in 1895 in southern Labrador.

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49395. ARNOLD, FERDINAND CHRISTIAN GUSTAV. Lichenologische Fragmente, 35; Newfoundland. (Oesterreichische botanische Zeitschrift, 1896. Jahrg. 46, no. 4–10, p. 128–31, 176–82, 213–20, 245–51, 286–92, 326–32, 359–63, plate 4.) Text in German. ***Title tr.:*** Fragments of lichenology, 35; Newfoundland.

Annotated list of 261 species of lichens collected by A. Waghorne in 1893–96; based on No. 50684. ***Copy seen:*** DA.

49396. ARNOLD, FERDINAND CHRISTIAN GUSTAV. Lichenologische Fragmente, 36: I, Labrador; II, Newfoundland. (Oesterreichische botanische Zeitschrift, 1899. Jahrg. 49, no. 2–7, p. 56–60, 99–102, 146–49, 175–79, 226–29, 270–75.) Text in German. ***Title tr.:*** Fragments of lichenology, 36: I, Labrador; II, Newfoundland.

Contains an annotated list of about 60 lichens collected by A. Waghorne and J. W. Eckfeldt from the coast of Labrador and about 160 from Newfoundland.

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ARNOLD, K. C., *see* Canada. Defence Research Board. Op. Hazen 1957. *1958.* No. 50061.

49397. ARNOVLJEVIČ, V. Modifications de l'électrocardiogramme au cours de l'hypothermie profonde. (Cardiologia, 1957. v. 31, no. 5, p. 420–25, illus. table.) 6 refs. Text in French. Summary in English. ***Title tr.:*** Electrocardiographic changes during deep hypothermia.

In "hibernating" rats, low temperature "affected mainly impulse formation and conduction whereas the effect of depolarization and repolarization of the ventricles was far less pronounced." In the "non-hibernating" animal, temperatures of 21–22° C. represent the critical point for heart function. ***Copy seen:*** DNLM.

ARON, WILLIAM, *see* Allen, G. H., *and* W. Aron. Food of salmon . . . western North Pacific Ocean. *1958.* No. 49255.

49398. ARRON, WALTER JACK. Aspects of the epic in Eskimo folklore. (Alaska. University. Anthropological papers, May 1957. v. 5, no. 2, p. 119–41.) 31 refs.

Analyzes the epic characteristics of Eskimo folklore and cites excerpts from tales. Their episodic rather than epic aspects, absence of a common national hero and lack of political, patriotic or religious ideals are noted.

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49399. ARSEN'EV, A. A., *and* **N. S. ZAĬTSEV.** Mineral'nye bogatstva Sibirskoĭ platformy. (Akademiîa nauk SSSR. Vestnik, Nov. 1958. god 28, no. 11, p. 28–37, text maps.) Ref. Text in Russian. ***Title tr.:*** Mineral resources of the Siberian platform.

Reviews characteristics of the tectonics and stratigraphy of the area between the Yenisey and Lena-Aldan Rivers and outlines distribution of industrial mineral deposits: coal, iron ores, salt, petroleum (map p. 33), mica, graphite, kimberlite, non-ferrous metals, bauxite, etc. (map p. 35). This area ranks first in the Soviet Union for its coal, graphite, diamonds, gold, nickel, mica, optical minerals and salt. Plans of its development are discussed. ***Copy seen:*** DLC.

ARSEN'EV, VLADIMIR KLAVDIEVICH, 1872– , *see* Litvinov, A. A. V kraîu ognedyshashchikh gor . . . *1957.* No. 52866.

49400. ARSENT'EVA, EKATERINA IVANOVNA. Zavoevanie polîsov: ukazatel' literatury dlîa uchashchikhsîa 7–10 klassov. Leningrad. Gos. publichnaîa biblioteka, 1957. 35 p. illus., facs., maps. Text in Russian. ***Title tr.:*** Conquest of the Poles; guide to the literature for students of classes 7–10.

Annotated bibliography of popular books in Russian on the recent arctic and and antarctic expeditions by Russians and others. ***Copy seen:*** DLC.

49401. ARSHENEVSKIĬ, IÛ. Nekotorye voprosy avtomatizatsii i mekhanizatsii v Arktike. (Morskoĭ flot, Nov. 1958. god 18, no. 11, p. 17–20, illus.)

Text in Russian. ***Title tr.:*** Some problems of automation and mechanization in the Arctic.

Describes land-based and drifting (on ice) instruments in use on the Northern Sea Route for remote-triggered, automatic transmission of meteorological observations and ice-drift data. The drifting instruments, containing high-accuracy anemometers, thermometers, and aneroid barometers, transmit in code on radio frequencies to land-based receivers up to 1500 km. distant; their positions are determined by direction finders at the receiving station. Of 25 radio beacons placed on drift ice in the Arctic Basin in 1957, eleven were equipped for transmitting meteorological observations. Shore-based automatic stations are larger and carry more complicated equipment. One type (illustrated), transmitting four times daily in facsimile, produces synoptic charts (457 x 640 mm.) in 15–44 min. at the facsimile receiving stations, to be installed in all arctic weather bureaus and major ice-breakers. New ice-breaking vessels are being equipped for hydrographic investigations; research is being conducted at the Arctic and Antarctic Institute and the Dept. of the Navy to develop new means, other than ice-breakers, of breaking or weakening sea ice. ***Copy seen:*** DLC.

49402. ARTEM'EV, G. V. Vozdelyvanie pomidorov v Zapolâr'e. (Sad i ogorod, May 1957. god 95, no. 5, p. 18–21, illus.) Text in Russian. ***Title tr.:*** Growing tomatoes in the Arctic.

Reports work of a group at the Noril'sk state farm aimed at open-ground tomato growing: best results were obtained with hybrids of tomato and cold-resistant varieties of South American wild potato (two varieties of *Solanum*); since 1952 these strains have been yielding 2.5–4.5 kg./sq. m. in marketable green tomatoes. ***Copy seen:*** DLC.

49403. ARTHUR, JOSEPH CHARLES, 1850–1942. Orange rusts of *Rubus*. (Botanical gazette, June 1917. v. 63, no. 6, p. 501–515, text map.) 10 refs.

Contains some historical notes and a study of two independent but in part similar orange rusts of blackberries and raspberries: one, a long cycle form identified with *Gymnoconia interstitialis* of Europe, and the other a short cycle form (*Caeoma nitens* of Kunkel). *Kunkelia* n. gen. is described and *K. nitens* and *K. rosae-gymnocarpae* n. comb. are established. The hosts for the first rust include *Rubus carpinifolius*, occurring in Alaska, and the the second, *R. stellatus* (Unalaska) and *R. acaulis* (Yukon Territory). ***Copy seen:*** DLC.

ARZHAKOV, S. M., *see* Akademiâ nauk SSSR. Îakutskiĭ filial. Za sovetskuû vlast' . . . *1957*. No. 49170.

49404. ASAHINA, ÉIZO, *and* **K. AOKI.** A method by which frost-hardy caterpillars survive freezing at a super-low temperature. (Teion kagaku (Low temperature science), Sapporo, 1958. v. 16, ser. B. p. 55–63, tables.) 19 refs. Text in Japanese. Summary in English.

Slug caterpillars, *Cnidocampa flavescens* of the prepupal stage, first frozen at −20° and then subjected to −90° C. did not survive after thawing, while one-third of non-pre-frozen insects revived. Out of five groups of slugs variously pre-treated and then submerged for a full day in liquid O_2, only that group survived which was kept at −30° prior to and following freezing at extremely low temperature. Some of them developed up to the imago stage, but could not emerge.

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49405. ASAHINA, ÉIZO. Motility of some animals and an excised tissue in supercooled state. (Teion kagaku, 1957. v. 15, ser. B., p. 45–50, tables.) 5 refs. Text in Japanese. Summary in English.

Excised gills of *Mytilus* or oysters maintained ciliary beating for 15–24 days at −5° C. and for 4–6 days at −10° C. After some 10 days, synchronism of beat is lost at above temperatures. At 0° C. ciliary movement is nearly normal and continues for a month or more. Even after beating ceased at supercooled states, it usually returns to normal following rewarming. Insects were observed to move for ten days or more at −5° to −10° C.

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49406. ASAHINA, ÉIZO. On a probable freezing process of molluscan cells enabling them to survive a super-low temperature. (Teion kagaku, Sapporo, 1958. v. 16, ser. B. p. 65–75, illus., tables.) 19 refs. Text in Japanese. Summary in English.

Pieces of oyster gills died if exposed for 30 minutes to −30° C. However, if pretreated with sea water containing 4% glycerol they survived a four-day freezing at −30° C., ciliary movement regaining its vigor even after immersion in O_2. Pre-treatment at −20° had no similar

effect, the lower (−30°) temperature apparently having a dehydrating effect.
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49407. ASAHINA, ÉIZO, *and* **K. AOKI.** Survival of intact insects immersed in liquid oxygen without any antifreeze agent. (Nature, *London*, Aug. 2, 1958. v. 182, no. 4631, p. 327–28.) 4 refs.

Preliminary report on freezing experiments with pre-pupal stages of a 'slug caterpillar' and overwintering larvae of a butterfly. Both groups were first frozen to −20° or −30° for one day, then immersed in liquid oxygen (ca. −218° C.) for a day and thawed at room temperature.
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49408. ASCHOFF, JÜRGEN. Wärmeaustausch in einer Modellextremität. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 264, Heft 3, p. 260–71, illus.) 10 refs. Text in German. ***Title tr.:*** Heat exchange in an extremity model.

A study of temperature and heat exchange in a model of an arm, made of glass, with a copper cylinder as "hand," and water circulating in "arteries," "veins," and "capillaries." The sought-for parameters were found to depend in a complex way on the velocity of circulation.
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ASCHOFF, JÜRGEN, *see also* Wever, R., and J. Aschoff. Die Wärmedurchgangszahl . . . *1957*. No. 56007.

49409. ASH, C. E. The oil yield of fin whales. (Norsk hvalfangst-tidende, Oct. 1957. årg. 46, nr. 10, p. 559–69, tables, diagrs.) Text in Norwegian and in English. 6 refs.

Contains a formula for calculating the oil yield of fin whales, using the length and blubber thickness. Curves are drawn which enable the yield to be read off directly. Blubber may be measured on part of the day's catch, and the value estimated for the remainder. Production values in the British factory ship *Balaena* are in good agreement with computed yield (tables). Oil recovered from illegally caught whales should be estimated by this formula, as forfeited oil hitherto has been overestimated.
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49410. ASHOUB, M. A. El-R. Effect of two extreme temperatures on growth and tail-length of mice. (Nature, *London*, Jan. 25, 1958. v. 181, no. 4604, p. 284.)

Half of a mouse litter, gestated in a cool environment (50° ± 5° F.) was transferred and kept for seven weeks at 92° ± 1 F., the other half remaining in the cold room. The group transferred into the warm environment showed retarded growth coupled with longer tails. The animals kept in the cold developed short tails thus showing decreased body surface and heat loss.
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ASHWORTH, M. A., *see* Baker, D. G., *and* M. A. Ashworth. Effect . . . cold . . . islets of Langerhans . . . rat. *1958*. No. 49487.

49411. ASKANAS, ALINA, *and others.* Sztuczna hibernacja; gangliоplegia, neuroplegia, hibernoterapia. (Pediatria polska, Jan. 1956. t. 31, no. 1, p. 81–93.) 55 refs. Text in Polish. *Other authors:* M. Ochocka *and* T. Zalewski. ***Title tr.:*** Artificial hibernation; gangliоplegia, neuroplegia, hibernotherapy.

A review of the discovery and value of ganglioplegic and neuroplegic drugs; chlorpromazine and its physiologic and therapeutic action; its activity in aiding hypothermia; physiology of hypothermia; medical application of neuroplegics and of hypothermia; contra-indications.
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49412. ASKLUND, BROR HENRIK, 1896– . En återblick på den svenska fjällkedjeforskningen. (Geologiska föreningen, Stockholm. Förhandlingar, 1946. bd. 68, häfte 2, p. 212–250.) Refs. in text. Text in Swedish. ***Title tr.:*** A review of research on the Swedish mountain system.

Modern studies in Scandinavian bedrock geology were initiated by Alfred Törnebohm who proposed the overthrust theory in 1896. Research work in the arctic area as reviewed includes that of Holmquist, Axel Gavelin, V. M. Goldschmidt, Fredrik Svenonius, W. C. Brøgger, A. G. Högbom, Carl Wiman, Thorolf and Johan H. L. Vogt, Wilhelm Ramsay, and others. Progress to the present is summarized.
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49413. ASPREY, ROBERT B. The winter war; Finland vs. Russia. (Marine Corps gazette, Aug. 1958. v. 42, no. 8, p. 36–48, illus., maps.)

Analyzes battles of Nov. 29, 1939–Mar. 13, 1940: Russian forces, superior in mass but not equipped for arctic terrain and climate, were warded off and

counterattacked by light, mobile Finnish ski units, which inflicted heavy losses. Describes the Finnish tactic *motti:* areas parallel to the enemy's path (*motti*) were flooded with water prior to cutting and sealing off his forces within them; over paths cut at intervals between the flooded areas, one patrol raced from *motti* to *motti* and attacked with pulka-borne machine guns or light artillery. The enemy, thus isolated, was annihilated by hunger and cold. ***Copy seen:*** DLC.

ASSOCIATION DE GÉOGRAPHES FRANÇAIS, *see* Bibliographie géographique internationale. *1957, 1958.* No. 49713.

49414. ASSUR, ANDREW, 1918– . Composition of sea ice and its tensile strength. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 106–138, 22 graphs, 4 tables, appendix.) 25 refs.

Presents theory which accounts for whole range of strength variations in sea ice; based upon nine methods of testing tensile strength. Compares observed with computed strength of sea ice, and discredits the assumption that it is only one-third as strong as fresh-water ice. Factors known to affect the strength of sea ice were tested, viz.: temperature, salinity, density, age, original position in the ice sheet, and time elapsed after a change in environmental conditions; test results are presented. ***Copy seen:*** DN–HO.

ASTAKHOVA, T. N., *see* Petrov, I. R., *and others.* Gipotermiiâ . . . *1956.* No. 53968.

49415. ASTROF, HAROLD. Canada's map pegged in place by AF shoran survey. (Aircraft, Sept. 1957. v. 19, no. 9, p. 43, +, illus.)

Describes surveying operations in the Canadian Arctic by the 408 Photo Squadron of the Royal Canadian Air Force in 1956 and 1957. Main base in 1957 was Thule Air Base (76°34′ N. 68°48′ W.), and forward airfield, Resolute Bay (74°41′ N. 94°55′ W.); 400,000 sq. mi. north of the 75° parallel were measured; ten aircraft and 300 men participated. The 5,000 lbs. of supplies required to establish each of the numerous temporary field radar stations were airlifted by Dakotas from pre-positioned storage bases; the surveying was carried out by shoran-equipped Lancasters from altitudes of 10,000–18,000 ft.

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ASUNCION, CARMEN L., *see* Masoro, E. J., *and others.* Lipogenesis from carbohydrate . . . cold. *1957.* No. 53176.

49416. ATKINSON, E. L. Nike site carved from Alaskan mountain. (Pacific builder and engineer, Dec. 1957. v. 63, no. 12, p. 70–71, illus.)

A guided missile base built on a peak in the Chugach Mts. near Anchorage required excavation of 25,000 cu. yd. of material to level a site for construction of a 26,600 sq. ft. battery building, a 7,000 sq. ft. launcher control building, two launching section structures, 10,590 sq. ft. of monolithic concrete, etc. A 26 ft. standard highway eight miles long was built to the site, increasing the excavated materials to 95,000 cu. yd. Permafrost and very strong winds were encountered during the construction, and the buildings were anchored down with cables to withstand the pressure. A concrete batch plant was built to avoid hauling of the batch from Anchorage. The construction will be turned over to the Army in 1958.

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49417. ATKINSON, P. C. The northern Ungava tellurometer traverses. (Canadian surveyor, Oct. 1957. v. 13, no. 10, p. 672–75, sketch map.)

Reports satisfactory operation of tellurometers (2) during establishment of 2,700 mi. of traversing in 1957. Two Bell helicopters and two Beaver aircraft, operating from eight camp sites, moved the stations at a rate of six (60 mi.) a day. A 960 mi. loop on the perimeter, two traverses crossing the area east-west, and four traverses running north-south, were completed. ***Copy seen:*** DGS.

49418. ATLASOV, I. P. Geologicheskoe stroenie severnoĭ chasti Verkhoîanskogo khrebta. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiîa Sovetskoĭ Arktiki, 1957, p. 424–60.) Text in Russian. ***Title tr.:*** Geological structure of the northern part of Verkhoyansk Range.

Contains a new and comprehensive outline of the relief, stratigraphy, volcanism, tectonics and geological indications of mineral resources. The region (approx. 66°–71° N. 125°–128° E.) consists mainly of the Kharaulakh Mts. and the Orulgan Range. The western slope of the Orulgan and the southern part of the Kharaulakh Mts. are better explored and mapped on a larger scale than the

rest of the region. Stratigraphy of Cambrian, Silurian, Devonian, Carboniferous, Permian, Triassic, Jurassic, Cretaceous, Tertiary and Quaternary deposits is characterized. Magmatic formations, most intrusive, are reported from the Cambrian, Carboniferous, Permian, Triassic and Tertiary periods. The tectonics of the folded region are most influenced by late alpine folding and are well preserved. The main structures are described. For useful mineral resources, the Orulgan Range is most promising with metallic minerals, as yet little explored. ***Copy seen:*** DLC.

49419. ATLASOV, I. P., *and* **N. A. SIÂGAEV.** K tektonike severnogo Verkhoân'ia i smezhnoĭ chasti Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 300–307, text map.) Text in Russian. ***Title tr.:*** On the tectonics of the northern Verkhoyansk region and adjacent part of the Siberian platform.

Presents the results of author's 1951 field investigation and study of other geologists' work in 1952–53. In the Lower and Middle Paleozoic, this area presented tectonic unity. Folding and division first took place at the end of the Carboniferous and at the beginning of Permian periods by development of geosynclines and sub-geoanticlines. The final shaping of the region occurred in the Lamaric phase of the Alpine cycle. ***Copy seen:*** DLC.

49420. ATLASOV, I. P., *and others.* O nakhodke ſsirkonievogo redkozemel'nogo minerala v kore vyvetrivaniſa solooliĭskogo vykhoda proterozoĭskikh porod. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informaſsionnyĭ bûlleten', 1957. vyp. 6, p. 27–29.) Text in Russian. *Other authors:* A. F. Mikhaĭlova, *and* M. I. Tuchkova. ***Title tr.:*** On the find of the rare-earth mineral zircon in the weathered Proterozoic rocks of the Solooli River outcrops.

Describes Proterozoic deposits of the Solooli basin (approx. 70° N. 125° E.) in the Lena-Olenek watershed, and the predominantly zircon mineral identified in them. The geologic structure of the basin, weathering of bedrock and weathering processes are briefly outlined. Among the noted elements of this mineral are: silicon, zirconium, yttrium and titanium with admixture traces of hafnium, ytterbium, berylium and others. Data on measurements, and X-ray and spectral analyses are given. ***Copy seen:*** DGS.

49421. ATLASOV, I. P. Osnovnye ėtapy razvitiſa geologicheskoĭ struktury severnoĭ chasti Leno-Eniseĭskoĭ oblasti. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958, p. 61–74.) 15 refs. Text in Russian. ***Title tr.:*** Main phases in the development of geologic structures in the northern part of the Lena-Yenisey province.

Describes six geotectonic phases in the area north of the Arctic Circle between the Yenisey and the Lena-Omoloy watershed. It includes: the northern part of the central Siberian plateau, Taymyr lowland, Lena plain, northern Verkhoyansk, Taymyr Peninsula, Severnaya Zemlya and the New Siberian Islands. The Archean, Proterozoic, Sinian, Lower Paleozoic, Middle and Upper Paleozoic, and Mesozoic geotectonic phases, their extent, characteristics and effects are outlined. Development of these tectonic structures is considered in regard to the accumulation of oil and gas. The best prospects are considered to be in the Muna, Olenek and Anabar submerged anticlines, middle Olenek syncline, and Putorana mountain range. ***Copy seen:*** DGS.

49422. ATLASOV, I. P. Skhema razvitiſa struktury severnoĭ chasti Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informaſsionnyĭ bûlleten', 1958. vyp. 7, p. 17–22, map.) Text in Russian. ***Title tr.:*** Scheme of the development of structure in the northern part of the Siberian platform.

Reviews others' and presents his own scheme (map). Formations and magmatic cycles which took part in the formation of this part of the Siberian platform are enumerated. Six geotectonic periods are distinguished from preliminary analyses and geophysical data: Archeozoic, Proterozoic, Sinian, Lower Paleozoic, middle-upper Paleozoic and Mesozoic. Each is characterized and its subdivisions and distribution briefly outlined. ***Copy seen:*** DGS.

49423. ATLASOV, I. P., *and* **P. I. GLUSHINSKIĬ.** Soveshchanie po razvitiû proizvoditel'nykh sil ÎAkutskoĭ ASSR. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informaſsionnyĭ bûlleten', 1958. vyp. 11,

p. 14–19.) Text in Russian. ***Title tr.:*** Conference on the development of productive powers in the Yakut A.S.S.R.

Reports on a conference held at Yakutsk, Aug. 11–14, 1958, opened by P. F. Shvetsov and attended by representatives to discuss long-range (15–20 years) and immediate (1958–1965) plans. Some 40 organizations were represented. In addition to the general sessions, sectional meetings dealt with specific aspects of the national economy: mineral resources, heavy industry and fuel supply, transportation, sources of energy, agriculture, and general economy and planning. The reports which seem to have attracted most attention were I. A. Kobelʹt͡sev on objectives of geologic investigations in Yakutia for the next 15–20 years; R. K. Ĭurkevich and B. K. Breshov on diamond resources in Yakutia; Ĭ. D. Pakhomov on development of gold production; A. N. Sobolev on oil prospects in the Yana-Indigirka region; A. K. Bobrov on the Vilyuy depression and Verkhoyansk break; and B. D. Bashkov's discussion of mica resources in the Aldan region. ***Copy seen:*** DGS.

49424. ATLASOV, I. P., *and* **V. A. VAKAR.** Svĭaz' plikativnykh strukturnykh form Sibirskoĭ platformy s glubinnymi razlomami na primere Olenekskoo-Anabarskoĭ regional'noĭ diz''ĭunktivnoĭ zony. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958. vyp. 7, p. 10–15.) 7 refs. Text in Russian. ***Title tr.:*** Connection between plicated structural forms of the Siberian platform and deep fractures in reference to the Olenek-Anabar regional disjunctive zone.

Reviews the work of V. A. Vakar, P. S. Voronov, and R. M. Demenit͡skai͡a on three meridional and two parallel disjuntive zones of the Siberian platform. Discusses tectonic structure, gravity anomalies, basic and ultrabasic magmatic intrusions of the Olenek-Anabar disjunctive zone. The appearance and development of trap formation and occurrence of diamond-bearing kimberlite pipes are evaluated: further geophysical and magnetic investigations are in order to establish fractional crystallization and prove the existence of useful minerals.

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ATTUNGORUK, 1928– , *see* VanStone, J. W. The autobiography . . . Eskimo. *1958.* No. 55731.

49425. ***ATUAGAGDLIUTIT: GRØNLANDSPOSTEN.*** Den nye adoptionslov. (Atuagagdliutit: Grønlandsposten, Feb. 14, 1957. Ukiut 97-iat, nr. 3, p. 10–11, 18–20.) Text in Danish and Eskimo. ***Title tr.:*** the new law of adoption.

Text (p. 18–20) and comments on this law of adoption in Greenland, in effect from Jan. 1, 1957; with it complete uniformity with Denmark is achieved.

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49426. ***ATUAGAGDLIUTIT: GRØNLANDSPOSTEN.*** Thule. (Atuagagdliutit: Grønlandsposten, Dec. 6, 1956. Ukiut 96-iat, nr. 24, p. 14–15, illus.) Text in Danish and Eskimo. ***Title tr.:*** Thule.

Contains a series of pictures from Thule, formerly Qânâq (77°27′ N. 69°11′ W.) North Greenland, whither the inhabitants of old Thule, now officially called Dundas, moved after the air base was built. ***Copy seen:*** DLC.

AUGER, PAUL ÉMILE, 1908– , *see* Béland, R., *and* P. É. Auger. Structural features . . . northern . . . Labrador Trough. *1958.* No. 49613.

49427. AUNE, LEIF. Utbyggingsprogrammet for Nord-Norge. (Teknisk ukeblad, Feb. 14, 1957. årg. 104, nr. 7, p. 121–28, illus.) Text in Norwegian. ***Title tr.:*** The development program for North Norway.

Outlines accomplishments to date in the 1951–1961 state program. A special fund of 100 million kroner was distributed by July 1956 as loans and investments in 260 industrial, mining, fishery, etc. projects in Nordland, Troms and Finnmark, mostly in established centers. Appropriations have been made for new trade schools, communications, electric power, forestry and agriculture. Number of employed and unemployed persons are increasing, though unemployment data are lacking for localities.

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49428. AURÉN, TYCHO EMANUAL ERICSON, 1870– . Studies of solar radiation. (Arkiv för geofysik, 1953. bd. 1, nr. 14, p. 395–439, 15 diagrs., 18 tables.) 20 refs.

Compares maximum values of radiation intensity for three locations in Sweden with similar atmospheric conditions: Stocksund, Öregrund, and Abisko (68°20′ N. 18°51′ E.) to obtain standard curves for the relation between intensity and

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solar altitude. Means of total radiation and relative insolation are tabulated and discussed. Variations in spectral composition are discussed for a few ranges of the spectrum; methods of determining the solar constant are reviewed and evaluated. ***Copy seen:*** DLC.

49429. AUROLA, ERKKI. Maaninkavaaran vermikuliitista. Helsinki, 1957. 24 p., 11 figs., 5 tables. (Finland. Geologinen tutkimuslaitos. Geoteknillisiä julkaisuja, no. 60.) 10 refs. Text in Finnish. Summary in English. ***Title tr.:*** On the vermiculite of Maaninkavaara.

Description of vermiculite deposits found near Maaninkavaara hill in Posio parish approx. 35 mi. southeast of Kemijärvi (66°42′ N. 27°30′ E.) northern Finland. Thirteen deposits were found, two may have economic importance. Technical properties make the vermiculite usable; in addition to large flakes (10 x 10 cm.) small scales of mica were found. ***Copy seen:*** DGS.

49430. AUSTERLITZ, ROBERT. A linguistic approach to the ethnobotany of South-Sahalin. (Pacific Science Congress, 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 48–49.)

A study of 170 plant names known to the Gilyaks, Oroks and Ainu of southern Sakhalin Island. Etymological and ethnological aspects, folk-botanical notions, plant uses (nutritional, industrial, medicinal, ritualistic), plant anatomy and topographic terms were considered and the overlapping of plant uses ascribed to cultural borrowing. Deductions as to the origin of specific plant terminology and its loan pattern confirm previously adduced hypotheses: the Gilyaks and Oroks moved to Sakhalin from the Amur region; the reindeer-breeding Oroks originated in a more temperate area than the Gilyaks whose reindeer terminology is borrowed from the Tungus but not from the Oroks; the heavy borrowing of cultural features from Gilyak implies the Oroks' relatively remote separation from the main Tungus stock. The methodology used for this linguistic analysis and loan word determination is explained. ***Copy seen:*** DLC.

49431. AUSTERLITZ, ROBERT. Ob-Ugric metrics; the metrical structure of Ostyak and Vogul folk-poetry. Helsinki, Suomalainen Tiedeakatemia, 1958. 128 p. diagrs., tables. (Folklore fellows. FF communications, v. 70, pt. 2, no. 174.) 32 refs.

A detailed metric analysis of Ostyak and Vogul poetic texts based on materials collected by M. A. Castrén, A. Reguly, J. Pápay, B. Munkácsi, A. Kannisto, S. Patkanov and W. Steinitz. Some information is given on geographic distribution, history, linguistic affiliation, etc. ***Copy seen:*** DSI.

49432. AUSTIN, J. B. Manufacture of steels for low-temperature service. (U.S. National Bureau of Standards. Circular, May 7, 1952. no. 520, p. 36–47, graphs, tables.) 16 refs.

Austenitic steel is found to be superior to other steels for low temperature service, due to its low transition temperature. "In ferritic steels, tempered martensite has the lowest transition temperature, coarse pearlite the highest, and mixed structures containing pearlite and tempered martensite have an intermediate transition temperature. Other significant factors influencing the low temperature behavior are grain size, addition of alloying elements and mode of deoxidation."—From author's abstract.

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49433. AUSTIN, JAMES MURDOCK, 1915– , *and* L. KRAWITZ. 50-millibar patterns and their relationship to tropospheric changes. (Journal of meteorology, Apr. 1956. v. 13, no. 2, p. 152–59, 6 graphs, table, 10 text maps.) 6 refs.

Study of data, winters of 1951–52 through 1953–54, from stations in Alaska, Canada, and the United States, dealing with large changes in the temperature and flow fields at 50 mb. Major changes in this region are believed to result from the development of an unstable flow pattern through radiational cooling of air in polar regions. Developments in the upper stratosphere may influence tropospheric circulation, as analysis of numerous synoptic charts indicates.—From authors' abstract. ***Copy seen:*** DWB.

AUSTIN, R. REED, *see* Blair, E., *and others.* A study of the cardiovascular changes . . . *1957.* No. 49765.

49434. AUSTIN, TORALF. Skogreisingen må sikres ved årvisst etterarbeid. (Norsk skogbruk, Apr. 1956. årg. 2, nr. 8, p. 247–52, 2 illus.) Text in Norwegian. ***Title tr.:*** Forest raising must be ensured by a yearly cleanup.

Keeping a forest in the best condition

for high growth rate and productivity demands continual care: underbrush, trees no longer needed to shelter young growth, also weeds competing for space, light, and nutrients, should be eliminated each year. Seeding, replanting, fence repair to prevent damage by animals are also required. Regulations for government-supported forests are discussed. Demonstration areas and such educational media as films, lectures, etc., are recommended to publicize this work. Several of its aspects in northern Norway are noted: acreage planted to forest on the north and west coasts has been doubled: demonstration plantings have been established as far north as Troms province.
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49435. AUSTIN, TORALF. Skogtraernes frøsetning 1957. (Tidsskrift for skogbruk, 1958. årg. 66, hefte 1, p. 31–44, tables, graphs.) Text in Norwegian. ***Title tr.:*** Seed production of forest trees in 1957.

Summary of local conditions affecting production of tree seed: monthly rainfall and temperature data for the 1955–1957 growing seasons are given, compared with the norm, and effects noted on seed and cone development; beginning dates (1957) of flowering of spruce, fir, birch, mountain birch, Sitka spruce, etc., are given for each province; elevation to which 1957 conditions for seed maturing were good; and elevation below which seed was collected. Both coastal and inland locations in arctic Norway are included. Cones or seed quantities in proportion to numbers of trees with cones are tabulated for spruce, first- and second-year cones on fir, birch, and other trees. Fir trees have had moderately good cone yields each year since World War II but no large yield since 1948. Sale of tree seed increased irregularly from 4,400 kg. in 1950 to 8,400 kg. in 1957. In 1957 the nurseries were rather well supplied, but field seeding was low. ***Copy seen:*** DA.

49436. AVERIN, I͡U. V. Zoogeograficheskiĭ ocherk Kamchatki. (Moskovskoe obshchestvo ispytateleĭ prirody. Otd. biol., n. ser., Bi͡ulleten', Sept.–Oct. 1957. t. 62, no. 5, p. 29–37, text map, table.) 13 refs. Text in Russian. Summary in English. ***Title tr.:*** Zoogeographic survey of Kamchatka.

The ornithological fauna includes four types: Siberian, Tibetan, Chinese and arctic. The first of these, a poorer derivative of the continental taiga of East Siberia, has the greatest number of species. The Kamchatka forests have few species and a number of endemic subspecies, with a very light coloring and large dimensions. The taiga avifauna of the Peninsula is considered Kamchatkan and has some features inherent in insular fauna. Some of the forms are found in the northern and central sections of the Kuril group. The forest area of the Peninsula and a section of the Kurils forms the Kamchatka subprovince.
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49437. AVERINA, M. S., *and* **N. S. GOLOUSHIN.** Kharakteristika bituma Sangarskogo ugli͡a. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958. vyp. 10, p. 42–46, tables, diagr.) 4 refs. Text in Russian. ***Title tr.:*** Characteristics of Sangar bituminous coal.

Gaseous coal of Sangar, Yakutia (approx. 64° N. 127°35′ E.) is characterized by high discharge (6–13%) of bitumen. Processes of separating bitumen are described and these results tabulated: elements comprising this bitumen and its reaction to temperature; and the components of bitumen-bearing coal. This bituminous coal is not at present considered of practical use. ***Copy seen:*** DGS.

49438. AVERKIEVA, I͡U. P. Frans Boas, 1858–1942. (Akademi͡a nauk SSSR. Institut ėtnografii. Kratkie soobshcheni͡a, 1946. vyp. 1, p. 101–111.) Text in Russian. ***Title tr.:*** Franz Boas, 1858–1942.

Laudatory obituary of the famous American anthropologist, ethnographer and linguist, with sketch of his life and discussion of his scientific works (cited) and his contribution to the study of American aborigines.
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49439. AVERKIEVA, I͡U. P. K voprosu o potlache u indeĭt͡sev severo-zapadnoĭ Ameriki. (Akademi͡a nauk SSSR. Institut ėtnografii. Kratkie soobshcheni͡a, 1946. vyp. 1, p. 26–29.) Text in Russian. ***Title tr.:*** The problem of potlatch with the Indians of northwest America.

Discusses the practice of potlatch among the Tlingit, Haida, Kwakiutl and Salish Indians, and suggests that it is a kind of wealth-levelling process introduced by a collective-minded tribal society to counteract an excessive accumulation of property by any one individual.
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49440. AVERKIEVA, ÏÛ. P. Rabstvo u indeĭtsev Severnoĭ Ameriki. Moskva, Izd-vo Akademii nauk SSSR, 1941. 103 p. illus. 92 refs. Text in Russian. ***Title tr.:*** Slavery among the Indians of North America.

Enlarged and profusely illustrated edition of No. 33387, stressing the economic and social aspects of slavery. Includes some impressions and photos from author's trip on Vancouver Island and the Northwest Coast in 1930. About 75% of the cited bibliography is in English.

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AVERKIEVA, ÏÛ. P., *see also* Driver, H. E., *and* W. C. Massey. Comparative studies of North American Indians. *1957.* No. 50629.

49441. AVETISÏÂN, G. A., *and others.* Nasha rodina; fotoal'bom. Moskva, Gos. izd-vo geogr. lit-ry, 1957. 312 p., chiefly plates. Text in Russian, German, English and French. *Other authors:* N. E. Dik, N. P. Ermakov, B. V. ÏÛsov. ***Title tr.:*** Our country; an album of photographs. D. I. Shcherbakov, editor.

Contains 252 plates of photographs from various parts of the U.S.S.R. with brief comments. Included are: the European North (plates 28–36), Polar Ural (75–77), lower Ob' River (178–80), Yakutia (208–219), Kamchatka (240–43), the Arctic Basin and islands (244–52). The photographers are listed at end.

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49442. AVRORIN, NIKOLAĬ ALEKSANDROVICH, 1906– . O rode brusnika-*Rhodococcum* (Rupr.) gen. nov.; Vacciniaceae. (Botanicheskiĭ zhurnal, Dec. 1958. t. 43, no. 12, p. 1719–24, 2 illus.) 20 refs. Text in Russian. ***Title tr.:*** On the genus *Rhodococcum* (Rupr.) gen. nov.; Vacciniaceae.

Contains a taxonomic discussion of the genera *Vaccinium, Oxycoccus, Rhodococcum* n. gen., and x *Rhodocinium;* and a comparative table of two species *Rhodococcum minus* and *R. vitis-idaca.* Latin diagnoses are given of the tribe Oxycoceae and x *Rhodococcum hybridum* n. sp. (type Khibiny Mts., Kola Peninsula). *R. hybridum* f. *plenifiora* (Murmansk region) n. comb., is added.

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49443. AVRORIN, VALENTIN ALEKSANDROVICH. Literaturnye ïâzyki narodov Severa i mestnye dialekty. (Voprosy ïâzykoznaniïâ, Mar.–Apr. 1953. no. 2, p. 7–27.) 8 refs. Text in Russian. ***Title tr.:*** Literary languages of the peoples of the North and local dialects. Based on contributions of Avrorin, Konstantinova, Novikova and Tereshkin to a conference in 1952 (No. 55236).

Discusses problems in creation of a written and literary language for each of the 25 so-called small peoples of the far North. Comparatively few and spread over a vast area, they speak many dialects with many sub-dialects. The experiment of a literary language drawn from all a people's dialects and their variants is criticized as an artificial language, unfamiliar to everyone. The dialect of a large but culturally retarded group may be too poor and morphologically primitive, so that a dialect of an intellectual minority should be used, despite draw-backs: it may be too divergent from other local speeches, or already obsolete due to the culturally advanced group adopting Russian. Former errors in choice of sub-dialect have led to repeated changes of the base-tongue, e.g. of the Voguls, Evenki (Tungus), and Evens (Lamuts). Adoption of the Latin alphabet for the vernaculars, created problems in teaching Russian in the North but these were solved in 1936, by adapting Cyrillic to the phonetic systems of the new literary languages. ***Copy seen:*** DLC.

49444. AVRORIN, VALENTIN ALEKSANDROVICH. Novye issledovaniïâ po ïâzykam narodnostef Severa. (Akademiïâ nauk SSSR. Izvestiïâ, Otd. literatury i ïâzyka, Sept.–Oct. 1957. t. 16, vyp. 5, p. 468–77.) Approx. 30 refs. Text in Russian. ***Title tr.:*** New research on the languages of the peoples of the North.

Reports on publications and research on the grammar, morphology, vocabulary and phonetics. These languages are classified into three main groups (Finno-Ugrian-Samoyed or Uralic, Tungus-Manchurian, Paleoasiatic) and their divisions discussed. The first two groups comprise genetically akin languages, but Paleoasiatic consists of five unrelated units: the Chukotsk-Kamchatka (composed of the Chukchi, Koryak and Itel'men or Kamchadal), Eskimo (including Aleut); Yukaghir (with Chuvan); Keti (or Yenisseian) and Nivkhi (or Gilyak). The interrelationship and intra-influence of related and unrelated languages and the effect of Russian on the lexical content of aboriginal tongues are dealt with. ***Copy seen:*** DLC.

49445. AVRORIN, VALENTIN ALEKSANDROVICH. Ob oshibkakh v osveshchenii nekotorykh voprosov grammaticheskogo stroĭa nanaĭskogo ĭazyka i ego istorii. (Akademiĭa nauk SSSR. Institut ĭazykoznaniĭa. Doklady i soobshcheniĭa, 1953. no. 5, p. 107–135.) 12 refs. Text in Russian. ***Title tr.:*** Concerning mistakes made in the elucidation of some problems in the grammatical structure of the Gold language and its history.

Critical analysis of mistakes and wrong deductions in author's *Ocherki po sintaksisu nanaĭskogo ĭazyka* (Sketches on the syntax of Gold language) 1948, a book based on the erroneous linguistic theories of N. IA. Marr. Some grammatical and syntactic aspects of Gold are discussed. ***Copy seen:*** DLC.

49446. AVRORIN, VALENTIN ALEKSANDROVICH. Osnovnye pravila proiznosheniĭa i pravopisaniĭa nanaĭskogo ĭazyka. Leningrad, Uchpedgiz, 1957. 143 p. tables, diagr. 7 refs. Text in Russian. ***Title tr.:*** The basic rules of pronunciation and orthography in the Gold language.

Discusses the phonetics, spelling of vernacular and loan words, and punctuation rules of the literary language of the Golds (Nanaitsy), developed 25 years ago. ***Copy seen:*** DLC.

49447. AVRORIN, VALENTIN ALEKSANDROVICH. Predikativno-pritĭazhatel'nye formy v nanaĭskom i drugikh tunguso-man'chzhurskikh ĭazykakh. (Voprosy ĭazykoznaniĭa, May–June 1956. god 5, no. 3, p. 93–100.) 14 refs. Text in Russian. ***Title tr.:*** The predicative-possessive forms in Gold and other Tungus-Manchurian languages.

Analyzes certain grammatical peculiarities of Nanai (Gold) and compares them with similar forms in the languages of other Tungus peoples: Ul'chi, Eveny, Evenki, Orochi, Negidal'tsy, etc. ***Copy seen:*** DLC.

49448. AVRORIN, VALENTIN ALEKSANDROVICH. Singarmonizm glasnykh v nanaĭskom ĭazyke. (Akademiĭa nauk SSSR. Institut ĭazykoznaniĭa, Doklady i soobshcheniĭa, 1958. no. 11, p. 137–50, table.) 5 refs. Text in Russian. ***Title tr.:*** Synharmony of vowels in the Gold language.

Discusses the phonetic structure of the Gold language characterized by its juxtaposition of short and long, pure and nasal vowels and by its large diphthong complement. Principles of articulation, lip and tongue positions, etc. are dealt with. ***Copy seen:*** DLC.

49449. AVSIUK, GRIGORIĬ ALEKSANDROVICH. Glĭatsiologicheskie issledovaniĭa sovetskikh uchenykh. (Priroda, July 1957. no. 7, p. 55–56.) Text in Russian. ***Title tr.:*** Glaciological investigations of Soviet scientists.

Preparatory work and planned activities in the IGY 1957–1958 are outlined: three polar glaciological stations are set up by the Academy of Sciences USSR, Institute of Geography on Franz Joseph Land, Novaya Zemlya and the Polar Ural; and geomorphic investigations are to be conducted in the Altay Mts., Verkhoyansk Range and Zagorsk. Permafrost studies are to be carried out by the Institute of Permafrostology in the Verkhoyansk Range (Suntar-Khayata) and in Zagorsk. Three polar glaciological expeditions and five special sections did reconnaissance work in 1956 under auspices of the Institute of Geography. The new glaciological stations on Suntar-Khayata and in Zagorsk are nearly completed. ***Copy seen:*** DLC.

49450. AVSIUK, GRIGORIĬ ALEKSANDROVICH. Les investigations glaciologiques en l'URSS. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report, 1957. v. 4, *pub.* 1958, p. 535–52.) Text in French.

Soviet glaciological investigations prior to and during the IGY are discussed including those in the Urals and the Arctic: studies in present ice as related to climate, evolutional trends, the growth, form, and structure of ice, glacier types (based on ice type and thermal regime), factors governing the distribution of the various types, and irrigation and hydroelectric power problems. Soviet views on the concept of glacier type used in glacier morphology, and the main features of glacial morphology and processes are considered. Glacier distribution in the U.S.S.R. is outlined, and the objectives of glaciological studies during the IGY and associated problems are summarzed.—From SIPRE. ***Copy seen:*** DGS.

49451. AVSIUK, GRIGORIĬ ALEKSANDROVICH. Mezhdunarodnaĭa konferentsiĭa po morskim arkticheskim l'dam proiskhodivshaĭa v 1958 godu v SShA. (Akademiĭa nauk SSSR. Izvestiĭa, seriĭa geograficheskaĭa, Sept.–Oct. 1958. no. 5,

p. 128–30.) Text in Russian. ***Title tr.:*** The International Conference on Arctic Sea Ice in 1958 in the U.S.A.

Report on the conference at Easton, Md., Feb. 24–27, 1958. Six groups of problems are outlined, and the 28 topics presented by scientists of nine countries are reviewed. Participants in the Conference are mentioned, stressing contacts of the Soviet delegates: the writer, A. G. Kolesnikov, P. A. Gordienko, M. A. Rîzanov. ***Copy seen:*** DLC.

49452. AVSÎUK, GRIGORIÏ ALEKSANDROVICH. Modern glaciation of the Soviet Arctic. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 15–21.) Ref.

An approach to the study of glaciology is outlined; problems for study in the Arctic and principal features of land glaciation in the Soviet Arctic are described. The main mass of ice, which covers nearly 55,000 sq. km., is found on islands, only about 300–400 sq. km. being located on the continent. Island glaciation includes that of Franz Joseph Land (90% ice-covered), Novaya Zemlya with 23,000 sq. km. of ice, Severnaya Zemlya 16,000 sq. km., and De Long Islands 67 sq. km. On the continent glaciers are found in the Polar Urals in the upper reaches of the Usa and Shchyuch'ya Rivers, near Mts. Narodnaya and Sablya, in the Taymyr Peninsula, in the Kharaulakh Mts., on the upper reaches of the Indigirka, and in the Chukotsk Peninsula. —From SIPRE. ***Copy seen:*** DN–HO.

AVSÎUK, GRIGORIÏ ALEKSANDROVICH, *see also* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

49453. *AVTOMOBIL'NYÏ TRANSPORT.* Kombinirovannyĭ paropodogrev dvigatelîa dlîa oblegcheniîa ego puska zimoĭ. (Avtomobil'nyĭ transport, Aug. 1957. god 35, no. 8, p. 33, illus. diagr.) Text in Russian. ***Title tr.:*** Combined steam heating of the engine for easy winter starting.

Heating arrangement designed by P. Bratchenko and A. Luchko is described in detail. It can be used for any automobile engine and consists of a coil placed in the oil pan and pipes connected with the cylinder water jacket and radiator. Fresh steam is admitted to the pan and passing through engine the condensate is exhausted from bottom of radiator, as indicated by illus. At air temperature of −30° C., the engine is started within 15–12 minutes. ***Copy seen:*** DLC.

49454. AYTON, MAUREE W., *and others.* Cold weather operation of Diesel engines, a bibliography, part II. Washington, D.C., Library of Congress, Technical Information Division, Jan. 1958. vii, 145 p. Prepared for the Office of Naval Research under Naonr 13–47. *Other authors:* J. E. Shea *and* C. R. Brown. Sequel to No. 26095.

Lists, with informative abstracts, 311 unclassified (for security reasons) reports issued 1939–1950; also a few issued 1952–1954. Reports on anti-freeze, batteries, starters, fuels and lubricants, below −20° F. are included as pertinent to starting and operating of diesel engines. Originating agency is stated; subject and author indexes are appended.

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49455. AZBELEV, V. V., *and others.* Opyt ucheta semgi v rekakh Kol'skogo poluostrova. (Rybnoe khozîĭstvo, Feb. 1958. god 34, no. 2, p. 22–25, tables.) Text in Russian. *Other authors:* G. D. Gromov, *and* I. I. Lagunov. ***Title tr.:*** Estimate of salmon stock in the rivers of the Kola Peninsula.

An estimate of this stock in the Kolvitsa River and in the rivers emptying into Kola Bay. Number of schools caught or left to spawn, productivity, percentage of survival, etc., are discussed.

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AZBELEV, V. V., *see also* Lagunov, I. I., *and* V. V. Azbelev. O sostoîanii Tulomskogo stada semgi . . . *1958.* No. 52625.

49456. B., H. Wounded whale attacks catching boat. (Norsk hvalfangsttidende, Mar. 1955. årg. 44, nr. 3, p. 133–34.) Text in Norwegian and English.

Relates incident in 1890 of the *Gratia*, based at Bøle on Sørøya, north Norway, being rammed and sunk by a wounded whale. Interview with a crew member in *Vestfold socialdemokrat*, Feb. 1924, is quoted. This whale was dying, however, whales do not normally attack boats.

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49457. BAALSRUD, KJELL. Proteolytisk nedbryting av sild. (Tidsskrift for kjemi, bergvesen og metallurgi, May 1951. årg. 11, nr. 5, p. 71–73, table, graphs.) Ref. Text in Norwegian. ***Title tr.:*** Proteolytic decomposition of herring.

Causes of rapid deterioration of herring are sought in four sources: bacterial activity, autolysis by muscle enzymes, enzymes from bait or other food, and diffusion of digestive enzymes. The last is found of major importance. Methods of analysis, and comparison of summer and winter catches, and of non-eating, spawning herring are recorded. Arctic catches are included in the analysis.
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49458. BAALSRUD, KJELL, *and* **N. SAEBØ.** Sammensetning av håkjerring. (Tidsskrift for kjemi, bergvesen og metallurgi, Mar. 1951. årg. 11, nr. 3, p. 41–43, graphs, tables, diagr.) 10 refs. Text in Norwegian. ***Title tr.:*** Composition of Greenland shark.

Report is made on analyses of fat content and fat-free dry matter of various body parts of this shark, from which only the liver oil is collected at present. Unlike bony fishes with fat livers, whose muscles are generally rather fat-free, this shark, with cartilaginous framework, ranks high in content of muscle-fat which remains in oil form on processing. Results of experiments in methods of extracting the oil are summarized. The muscle fat, fat-free dry matter, and liver-fat of 68 identified fish species are tabulated. ***Copy seen:*** DLC.

49459. BAASTAD, KJELD FRIIS. En Grønlandsferd. (Norske turistforening. Årbok, 1952, p. 216–21, illus.) Text in Norwegian. ***Title tr.:*** A Greenland journey.

Climbing experiences of three men in the Stauning Alps region of northeast Greenland, 72–75° N. are recounted. Most of the journey was along the Skjoldunge glacier. Bedrock varieties are noted and vegetation reported to 2,000 m. elevation. Their transport, *Polarbjørn*, encountered pack ice problems throughout the summer.
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49460. BÅTH, MARKUS, 1916– , *and* H. BENIOFF. Aftershock sequence of the Kamchatka earthquake of November 4, 1952. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1819.)

Abstracts paper presented at the Society meeting in Los Angeles, Apr. 19–20, 1957: more than 400 shocks with magnitudes 6.0 and over occurred to Dec. 1956; a change in mechanism is suggested by the strain-release curve of the sequence; the foci were in or close to the Mohorovičić discontinuity. ***Copy seen:*** DGS.

49461. BÅTH, MARKUS, 1916– . The microseismic importance of cold fronts in Scandinavia. Stockholm, 1951. p. 267–356. diagrs., tables. (Arkiv för geofysik, bd. 1, nr. 12.) 29 refs. Issued also as Uppsala. Universitet. Meteorologiska institutionen. Meddelande, no. 21.

The rate of change of the effective coast length is studied theoretically for a cyclone with circular isobars and for fronts crossing a coast. It is shown that the effective coast length starts to increase when the cyclone is far from the coast, and that, under certain circumstances, the rate of change of the effective coast length may be far greater for fronts than for cyclones. Relations between wind direction and sea-wave propagation are discussed. With observations from Utsira, Kråkenes, Røst, Bjørnøya and Jan Mayen, the difference between sea wave heights for northerly and southerly winds of equal velocities is explained as due to the different turbulent character of the different air masses. A theoretical derivation for a cold front passage of a coast, expressed by microseismic amplitude, period, and time, is presented. Eighteen individual cases 1945–49 are studied by means of weather maps, autographic records, and tidal data, and comparisons are made with the simultaneous microseism. Most favorable situation for large and rapid increase of the amplitudes occurs when a NE-moving intense cyclone is situated in the vicinity of Lofoten (68° N. 14° E.) and cold fronts come down from the northwest. The tides show no immediate influence on the microseisms. ***Copy seen:*** DLC.

49462. BABB, M. F., *and* **C. H. DEARBORN.** Performance of fifty-five potato varieties in Alaska's Matanuska valley 1948–1951. Palmer, June 1957. 16 p. tables (Alaska. Agricultural Experiment Station. Bulletin 23) 5 refs.

Report on screening tests of commercial potato varieties, and of seedlings, the latter to be used for culture or as parental material in potato breeding. The results show a series of varieties exceeding in yield the now most commonly grown variety, Arctic Seedling.
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BABB, M. F., *see also* Laughlin, W. M., *and others.* Fertilizers . . . *1958.* No. 52678.

49463. BABICHEV, V., *and* V. DAVYDOV. Konferent͡siia po kompleksnomu ispol'zovaniiu prirodnykh resursov ėkonomicheskogo administrativnogo ra͡iona, Komi ASSR. (Planovoe khoz͡iaĭstvo, Sept. 1958, no. 9, p. 82–85.) Text in Russian. ***Title tr.:*** Conference on full utilization of the natural resources of the economic administrative district, Komi A.S.S.R

Reports proceedings of the Conference held July 3–7, 1958, at Syktyvkar and attended by over 500 representatives of administrative, economic and scientific organizations. The most important papers delivered are summarized; the leading role of the coal, natural gas, petroleum and wood industries of the Pechora basin in the economic development of the Komi A.S.S.R., and plans to double its industrial output by 1965, are noted. ***Copy seen:*** DLC.

49464. BABIN, O., *and* A. SHATUNOVSKIĬ. Poselok na l'dine. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 21, illus.) Text in Russian. ***Title tr.:*** Settlement on an ice floe.

Brief note on the drifting station North Pole–6, set up on a 75 sq. km. ice island 10–12 m. thick: warm houses, electric light, automatic telephone, etc. Photos of camp and air strip.

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49465. BABINGTON, CHURCHILL. Notice . . . of the lichens collected by Dr. Sutherland, during the arctic voyage of Capt. Penny in the "Lady Franklin." (Hooker's journal of botany, 1852. v. 4, p. 276–78.)

Contains notes on eleven numbered lichens, most in imperfect condition, and some numbers including a mixture of several lichens; they were collected mainly at Assistance Bay, Cornwallis Island, in 1850–1851. ***Copy seen:*** DA.

49466. BABLIŪK, BORIS TIMOFEEVICH. ĪAkutskie almazy. (Sibirskie ogni, May 1958. god 37, no. 5, p. 101–116.) Text in Russian. ***Title tr.:*** Diamonds in Yakutia.

Journalist's sketch of his second visit, Feb.–Mar. 1958, to Mirnyy, center of the diamond industry in the Vilyuy basin: his 300 km. trip by road from the port of Mukhtuy on the Lena River to Mirnyy; progress of construction since 1957; newcomers, personnel of the Amakinskai͡a (diamond prospecting) Expedition and "ĪAkutalmaz" trust, construction of two concentration plants; and a dam on the Irelyakh River; etc. Story of the search and discovery of diamonds in Siberia is recounted. ***Copy seen:*** DLC.

49467. BABLIŪK, BORIS TIMOFEEVICH. Na rodnom ī͡azyke. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 18.) Text in Russian. ***Title tr.:*** In the native language.

Interview with S. S. Nikiforov, director of the Yakut (state) publishing house, on its publications in the Yakut language: 170 books and pamphlets, classics of communism, text-books, and translations (among them Shakespeare's *Othello*), altogether 800,000 copies, were issued in 1956; about the same production is planned for 1957, but 60 percent of it is to be works of local authors. A new printing plant is to be completed in 1957.

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49468. BABLIŪK, BORIS TIMOFEEVICH. V strane almazov. Moskva, Izd-vo "Molodai͡a gvardii͡a," 1957. 223 p. illus., fold. map. (Biblioteka puteshestvi͡ĭ.) Text in Russian. ***Title tr.:*** In the country of diamonds.

Journalist's sketches based on his five-year stay and extensive traveling in Yakutia: the railroad journey from Tayshet on the Transiberian railway to Lena station near the Lena River port Osetrovo, and the trip down the river to Yakutsk (p. 5–21); Yakutsk, its streets, buildings, struggle with permafrost, theater, museums, university, experiments with landscaping (p. 22–36); lumbering in the Nyuya River basin (p. 37–47); the Yakut agriculturist, M. G. Egorov, and his achievements in growing vegetables on the farm at Pavlovskoye in the vicinity of Yakutsk (p. 50–59); the collective farm at Nyurba in the Vilyuy River basin (p. 60–64); the towns of Oymyakon and Ust'-Nera and the model state farm "Balagannakh" (p. 65–75); Sangary coal mines (p. 76–79); the towns of Verkhoyansk, Deputatskiy and their environs (p. 80–90); hunting and trapping in northern Yakutia and the hunting station on the Lyakhovskiye Islands at 74° N. (p. 91–98); a trip to Kyusyur, Tiksi and other settlements on the lower Lena and adjacent coastal areas and to the dairy farm and meteorological station at Tiksi (p. 99–126). The story is recounted of the gold discovery in the Aldan River basin in 1923 and present-day mining there (p. 127–44). The coal and iron ores of southern

Yakutia and discovery in 1952 of coking-coal deposits on the Neryungra River are outlined (p. 145–52). Nyurba, the base of the Amakinskaĭa Diamond Prospecting Expedition, Mirnyy, the center of the diamond industry, and the story of discovery of diamonds in Yakutia are dealt with at length (p. 153–222); achievements are described of A. P. Burov, L. Popugaeva, V. B. Belov, G. Kh. FaĬnshteĬn, V. N. Shchukin, IÛ. I. Khabardin, and others. A map of Yakutia (1:10 million) is included.

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BABLIÛK, BORIS TIMOFEEVICH, *see also* P'esy ĭakutskikh dramaturgov. *1957.* No. 53949.

49469. BACKUS, RICHARD HAVEN, 1922– . The fishes of Labrador. (American Museum of Natural History, New York. Bulletin, Oct. 14, 1957. v. 113, art. 4, p. 273–338, 2 illus., plates 4–5, 56 tables.) 87 refs. *Pub. also as* Contrib. No. 896 of the Woods Hole Oceanographic Institution. PhD. dissertation to Cornell Univ.

Contains notes on hydrographic conditions of the sea and fresh waters of the region; an historical review of Labrador ichthyology, and an annotated list of some 75 species and subspecies of marine and fresh-water fishes; local names, critical notes, dimensions (tables) and extensive lists of specimens are included. In some cases Labrador specimens are compared with those from other arctic regions. The fresh-water collections were made mainly in the Hamilton River-Lake Melville region. Author served as biologist on the *Blue Dolphin* expeditions of 1949–1951.

BACKUS, RICHARD HAVEN, 1922– , *see also* Gordon, M. S., *and* R. H. Backus. New records . . . fishes . . . Hebron Fjord. *1957.* No. 51286.

49470. BADEER, HENRY, *and* **A. KHACHADURIAN.** Role of bradycardia and cold *per se* in increasing mechanical efficiency of hypothermic heart. (American journal of physiology, Feb. 1958. v. 192, no. 2, p. 331–34, illus., table.) 6 refs.

Report on investigation of modified heart-lung preparations of the dog. At 31.5° C. with a rate of 110/min., the myocardium consumed less oxygen than a normothermic performing the same stroke work. It is concluded that the metabolic effect of cold *per se* is responsible for increased mechanical efficiency of the hypothermic heart. ***Copy seen:*** DNLM.

49471. BADER, HENRI, 1907– , *and others.* Excavations and installations at SIPRE test site, Site 2, Greenland. Wilmette, Ill., Apr. 1955. 32 p. illus., diagrs., tables. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954, v. 2, *pub.* 1957.) SIPRE report 20. *Other authors:* R. W. Waterhouse, J. K. Landauer, B. L. Hansen, J. A. Bender, *and* T. R. Butkovich.

Report of SIPRE participation in the Corps of Engineers Project on snow structures, June 30–Aug. 25, 1954.

Describes work done by 8- to 10-man party, and results of measurements made at Site 2. Work included: excavation of trenches, a circular tunnel and a deep pit; instrumentation of excavations for pressure and deformation measurements; tests on snow properties from the deep pit; construction of an experimental snow house. Observations and measurements over a five-year period are expected to be sufficient to establish satisfactory criteria for surface and subsurface military installations in such areas.

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49472. BADER, HENRI, 1907– , *and* **F. A. SMALL.** Sewage disposal at ice-cap installations. Wilmette, Ill., Apr. 1955. 4 p. diagr., table. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954, v. 2, *pub.* 1957.) SIPRE report 21.

Contains report on study of the sewage disposal pits at Sites 1 and 2, on the ice-cap, part of Corps of Engineers' Greenland Project 15, Waste disposal. Measurements of the cavities at both sites were made. The present methods of disposal were found adequate for many years to come. ***Copy seen:*** CaMAI.

49473. BADER, OTTO NIKOLAEVICH. Peshchera so skopleniĭami kosteĬ peshchernykh medvedeĬ na Severnom Urale. (Akademiĭa nauk SSSR. Komissiĭa po izucheniĭu chetvertichnogo perioda. BIÛlleten', 1958. no. 22, p. 126–29, illus.) Text in Russian. ***Title tr.:*** A cave in the Northern Ural with an accumulation of cave bear bones.

Reports the find in 1953 of a cave on the right bank of the Kizel River, near the city of Kizel (59°03′ N., 57°40′ E.) with the bones of several score *Ursus spelaeus* Rossm. The cave is described, with measurements and plan. General information is given on the position and preservation of these bones. Actual habitation of the cave by the bears

appears likely. Some other caves are mentioned with note of their fossil fauna. Further study of this paleontological find is anticipated. ***Copy seen:*** DLC.

BADGLEY, FRANKLIN I., *see* Untersteiner, N., *and* F. I. Badgley. Preliminary . . . thermal budget studies . . . pack ice . . . *1958*. No. 55663.

BADGLEY, FRANKLIN I., *see* Untersteiner, N., *and* F. I. Badgley. Preliminary . . . thermal budget . . . pack ice . . . *1958*. No. 55664.

49474. BADIGIN, KONSTANTIN SERGEEVICH, 1910(?)– . O zhelatel'nom napravlenii rabot Instituta okeanologii AN SSSR na morîakh Dal'nego Vostoka. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 13–19.) Text in Russian. ***Title tr.:*** On the desired direction of work of the Institute of Oceanology, Academy of Sciences USSR, for the Far Eastern seas.

The main aim being utilization of research for industrial needs, emphasis is to be placed on elucidating problems related to transport geography, coastal formation and regime, currents and other water movements. Details of this program are discussed and methods of investigation and information dissemination suggested. Finally each area of the region is analyzed as to the pertinent requirements in research. ***Copy seen:*** DLC.

49475. BÄCKSTRÖM, ERNST. Isbrytare och isbryting. (Tekniska Föreningen i Finland. Förhandlingar, 1956. årg. 76, no. 6, p. 154–59, illus., table.) Text in Swedish. ***Title tr.:*** Ice-breakers and ice-breaking.

Reports lecture by Prof. Bäckström from A/B Sandvikens Skeppsdocka; and presents tabular comparison of various domestic and foreign ice-breakers, from the Finnish *Murtaja* in 1890 to the projected Russian 22,000 hp ice-breakers under construction at A/B Sandvikens Skeppsdocka. A short discussion follows of hull- and engine-constructions for ice-breakers. ***Copy seen:*** DLC.

49476. BAEV, LEV KONSTANTINOVICH. Vertolët. Izd. 2., dop. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 56 p. illus. diagr. (Nauchno-populîarnaîa biblioteka, vyp. 76.) Text in Russian. ***Title tr.:*** The helicopter. 2nd enl. ed.

Development of the helicopter is outlined from M. V. Lomonosov's experiments before the Academy of Sciences in 1754. Basic principles of operation and recent types of Russian machines are presented. Their use in the Arctic is noted: for ice reconnaissance, meteorological services, rescue operations, servicing field parties, e. g., the drifting stations North Pole-3 and -4. They are used in far northern hunting and fishing, in agriculture, the armed services, etc. The helicopter can be operated in rain or snow, day or night. Further development of gas turbine and reaction motors for the helicopter is stressed in view of their simplicity and light weight.

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49477. BAGARÎATSKIÏ, B. A. Uchet spiral'nykh traektoriĭ protonov pri vychislenii dopplerovskogo kontura vodorodnykh liniĭ v polîarnykh siîaniîakh. (Astronomicheskiĭ zhurnal, Jan.–Feb. 1958. t. 35, vyp. 1, p. 101–111, figs., table.) 19 refs. Text in Russian. Summary in English. ***Title tr.:*** The influence of spiral paths of protons on the Doppler profile of hydrogen lines of auroras.

The depth of penetration into the atmosphere of the stream of corpuscles, having different initial directions, was calculated. The distribution function for the directions of the protons is taken on the assumption of an initial homogeneous bunch dispersed in a non-uniform magnetic field. It is shown that the form of the Doppler profile derived on these suppositions cannot explain the observed form of H_α and $H\beta$. This leads to the conclusion that the scattering of protons in the atmosphere plays an essential role which must lead to a more isotropic distribution of the direction of their velocities.—From author's summary.

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49478. BAGNOULS, F., *and* **H. GAUSSEN.** Les climats biologiques et leur classification. (Annales de géographie, May–June 1957. année 66, no. 355, p. 193–220, graphs, 2 tables.) 10 refs. Text in French. ***Title tr.:*** Biological climates and their classification.

Climatic classifications are reviewed, their inadequacies noted, and proposal advanced for a world classification based essentially on conditions favorable or unfavorable to vegetation: hot, cold, dry, humid periods. Three main divisions are established: warm and warm-temperate, cold and cold-temperate, and glacial climates. These are subdivided (12 re-

gions, 41 sub-regions) according to duration and intensity of dry period, cold period, characteristic temperature values, temperature and precipitation regimes. Regions 11 (axérique—cold) and 12 (cryomérique—glacial) comprise polar and alpine areas. Climatic graphs for Dikson Island (Karskoye More) and Angmagssalik (East Greenland) are included. ***Copy seen:*** DLC.

49479. BAILEY, ALFRED MARSHALL, 1894– . A curlew new to North America. (Auk, July 1939. v. 56, no. 3, p. 333–34.)

Notes an old-world curlew, *Numenius phaeopus variegatus* (an adult male) taken at Barrow, Northern Alaska, June 10, 1938, apparently a breeding form of northeastern Siberia. It is a new North American record. ***Copy seen:*** DLC.

49480. BAILEY, ALFRED MARSHALL, 1894– . Green-throated loon, *Gavia arcticaviridigularis* in southeastern Alaska. (Auk, Apr. 1953. v. 70, no. 2, p. 200).

Notes a specimen collected on May 13. 1948, in Chatham Strait; this form is similar in color to *pacifica* but differs in size. ***Copy seen:*** DSI.

49481. BAILEY, W. B. Oceanographic features of the Canadian Archipelago. (Canada. Fisheries Research Board, Journal, Sept. 1957. v. 14, no. 5, p. 731–69, illus., tables, maps.) 25 refs.

A study based on data collected during the first cruise of HMCS *Labrador* Aug.–Sept. 1954. Temperature and salinity structures of Baffin Bay, the Arctic Islands' and ocean waters were investigated. A comparison of these parameters at various depths of the ocean (Beaufort Sea) with those in Baffin Bay is presented. In addition, limited investigations were conducted on the effect of drifting ice floes on vertical temperature distribution of the water, origin of the "north water", long-term oceanographic changes in Baffin Bay, and calculated water movements through the channels into Baffin Bay. ***Copy seen:*** DI.

BAILEY, W. B., *see also* Hachey, H. B., *and others.* Oceanographic features of submarine topography. *1956.* No. 51470.

49482. BAILLIE, JAMES L. Recent additions to Ontario's bird list. (Ontario field biologist, May 1957. no. 11, p. 1–3, illus.)

Notes ten species new to Ontario fauna. Among them: the white-winged dove, killed by an Indian at Fort Albany on James Bay; the little Ross's goose (female), shot at Hannah Bay (James Bay) on Oct. 13, 1953; and the yellow-billed loon (female), a bird of western Arctic, which breeds east to the Thelon area of Keewatin and straggles occasionally as far east as Baffin Island and Greenland; it was found dead in the harbor at Port Credit (Lake Ontario) on Dec. 7, 1956. ***Copy seen:*** MH–Z.

49483. BAILLIE, JAMES L. Six old yet new Ontario breeding birds. (Ontario field biologist, 1958. no. 12, p. 1–7.)

Contains record of six birds to be added to the 44 others known to breed in Ontario. The fox sparrow, *Passerella iliaca,* was collected with a set of four eggs at Moose Factory on June 2, 1860, at Fort Severn on Hudson Bay in summer 1940, and on the west coast of James Bay in 1947. ***Copy seen:*** MH–Z.

49484. BAIRD, A. Evolution of gold-recovery methods in Yukon. (Western miner and oil review, Dec. 1957. v. 30, no. 12, p. 34–35, illus.)

Reviews development from ground-thawing with wood fires and hoisting with windlasses (late 1890's), to electrically operated dredges and hydraulic units now used. The principal mining companies, their operations and recovery data, are stated. ***Copy seen:*** DI.

49485. BAIRD, IRENE. Anoutoaloak, the mace of the Northwest Territories. (Canadian geographical journal, Sept. 1957. v. 55, no. 3, p. 120–23, 3 illus.)

Describes mace, gift of the Governor-General to the Council and people of the Northwest Territories. Made by Eskimos at Cape Dorset in 1955, of northern materials under direction of James Houston (Dept. of Northern Affairs and National Resources), it stands five and one-half ft. high, weighs 35 lbs. It is used at the Council's sessions and accompanies it north in summer. ***Copy seen:*** DGS.

BAIRD, PATRICK DOUGLAS, 1912– , *see* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

49486. BAKEEV, M., *and* **A. P. ROMANOVSKIĬ.** Iz opyta raboty uchiteleĭ v podgotovitel'nykh klassakh po russkomu ſazyku. (Russkiĭ ſazyk v natſional'no shkole. Jan.–Feb. 1957. god 1, no. 1, p. 48–51.) Text in Russian. ***Title tr.:*** Teaching Russian in prepara-

tory grades, based on the teachers' own experience.

Describes the methods used in non-Russian schools to increase proficiency in the teaching of Russian by introducing special pre-school preparatory language classes in compliance with the April 1946 decree of the Council of Ministers of RSFSR. Examples of students' increased achievement are cited from schools in Yakut and Komi ASSR.

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BAKER, BURTON LOWELL, 1912– , *see* Crane, W. A. J., *and others.* Pathologic changes . . . rats . . . cold. *1958.* No. 50371.

BAKER, BURTON LOWELL, 1912– , *see* Ingle, D. J., *and* B. L. Baker. Pathologic changes . . . sensitized rats . . . cold. *1957.* No. 51927.

49487. BAKER, D. G., *and* M. A. ASHWORTH. Effect of exposure to cold on the islets of Langerhans in the rat. (American journal of physiology, Mar. 1958. v. 192, no. 3, p. 597–98, tables.) 10 refs.

Exposure to cold (1.5° C.) for 50 days reduced the amount of insulin extractable from the pancreas, but the weight of the pancreas increased by cold exposure. The concentration of blood lactic acid remained unaffected. Changes in the weight of the islets were so variable as to be statistically valueless.

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49488. BAKER, FRANK COLLINS, 1867–1942. Notes on a small collection of shells from Alaska. (Nautilus, Oct. 1920. v. 34, no. 2, p. 67–69.) Contrib. from the Museum of Natural History, Univ. of Illinois, no. 12.

Contains notes on molluscs collected in Long (four species) and Saint Anne (five) Lakes, 250 miles apart, in the Copper River basin; Long Lake about 150 miles from Cordova. ***Copy seen:*** DSI.

49489. BAKER, RALPH CURTIS, 1912– . Fur seals of the Pribilof Islands. Washington, D.C., Govt. Print. Office, 1957. 22 p. illus., map. (U.S. Fish and Wildlife Service. Conservation in action, no. 12.)

Photographs with popular account of the Islands and the exploitation of the seals; measures for their preservation and management: the conventions of 1911, 1957, etc. The three fur-seal herds (Pribilof, Robben and Commander Islands, the latter two administered by the U.S.S.R.) are noted. The seal's life cycle, reproduction, growth and natural history, are outlined. Management of the Alaska (Pribilof) herd, the industry on the island, including by-products (meal, oil), processing and dyeing of skins, trade, are described.

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49490. BAKKE, ALF. Furuskuddvikleren, *Evetria buoliana* Schiff og *Evetria pinicolana* Dbld.; Lep., Tortricidae; en revisjon av det norske materialet. (Norsk entomologisk tidsskrift, 1958. bd. 10, hefte 4–5, p. 195–201, 3 illus.) 18 refs. Text in Norwegian. Summary in English. ***Title tr.:*** *Evetria buoliana* Schiff. and *E. pinicolana* Dbld.; Lep. Tortricidae; a revision of Norwegian materials.

Taxonomic characteristics, biological data and Norwegian distribution are given for these two closely related pine-twig moths; *E. buoliana* occurs in Nordland. ***Copy seen:*** DA.

49491. BAKKE, ALF. Skadeinsekter på skogen i 1955 og 1956. (Norsk skogbruk, Mar. 1957. årg. 3, nr. 5, p. 129–32, 4 illus.) Text in Norwegian. Summary in English. ***Title tr.:*** Harmful insects on trees in 1955 and 1956.

Includes description of the larch sawfly (*Nematus erichsoni*) infestation at 68½° N.; and refers to birch spanworm (*Oporinia autumnata*), also to several beetles in northern Norway. Similar infestations are reported from Sweden and Finland. ***Copy seen:*** DA.

49492. BAKKE, ARNT. Folkemusikken i Nord-Norge. Tromsø. 14 p. (Ottar, Mar. 1957. nr. 13 (1957, nr. 2).) Text in Norwegian. ***Title tr.:*** Folk music in north Norway.

Survey of songs known from about 1300 A.D. (one), a few from the 16th century and, after the Reformation, religious folk music. Later song types, musical instruments, dances, etc., are discussed, also Lapp music (joik). Text and music of three of the oldest songs are appended. ***Copy seen:*** DLC.

49493. BAKKEN, SIGMUND. The meteorological aspects of superrefractive layers in Alaska. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 61–66, 5 maps and 9 diagrs. at end of vol.)

Describes synoptic situations tending to cause superrefractive layers over Barter

Island, Barrow, Bethel, McGrath, St. Paul Island and other Alaskan stations. Refractive index curves may be computed from radiosonde data for temperature, humidity and pressure. Superrefractive layers occur less frequently over Alaska than in temperate regions, but may occur with temperature inversions, or strong moisture gradients or stratification. Longer study of temperature, humidity and pressure conditions and their relation to wind velocity, eddy diffusion and large scale weather patterns is needed to deduce refractive index profiles from available synoptic weather reports. ***Copy seen:*** CaMAI.

BAKULIN, FEDOR GRIGOR'EVICH, *see* Bozhenova, A. P., *and* G. F. Bakulin.

Èksperimental'nye issledovaniâ . . . v . . . gruntakh. *1957*. No. 49878.

BAKULIN, FEDOR GRIGOR'EVICH, *see* TSytovich, N. A., *and others.* O fizicheskikh svâzheniâkh . . . v . . . gruntakh. *1957*. No. 55539.

49494. BALAGUROVA, M. V. Materialy po biologii korûshki Onezhskogo zaliva Belogo morâ. (Akademiâ nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniû Belogo morâ, 1957. vyp. 1, p. 155–84, illus., tables, map.) 23 refs. Text in Russian. ***Title tr.:*** The biology of the smelt of Onega Bay, White Sea.

Reports investigation made during 1951–52: distribution, spawning migration, size and sex composition of spawners, size composition of catches at various seasons, sex composition of catches, conditions of reproduction, food and growth, fishery, fish stock. ***Copy seen:*** DLC.

49495. BALAKHMATOVA, V. T., *and others.* Kharakternye foraminifery mela i paleogena Zapadno-Sibirskoĭ nizmennosti. Moskva, Gos. nauchno-tekhnicheskoe izd-vo, 1955. 122 p. illus., 8 plates, tables, text map. (Leningrad. Vsesoûznyĭ geologicheskiĭ institut. Materialy, nov. seriâ, vyp. 2, paleontologiâ i stratigrafiâ.) 76 refs. Text in Russian. *Other authors:* R. Kh. Lipman, *and* V. I. Romanova. ***Title tr.:*** Characteristic foraminifera of the Cretaceous and Paleogene of the West-Siberian lowland.

Monographic study dealing with a wide area, notably localities (Berezovo, Khanty-Mansiysk, Pokur, and others) worked during recent years by the writer and colleagues of the All-Union Geological Institute in Leningrad. Description of the fauna is according to the method devised by B. P. Markovskiĭ. The Neocomian period is dealt with by V. I. Romanova, Upper Cretaceous by V. T. Balakhmatova, and Paleogene by R. Kh. Lipman. Forty-two species are described and illustrated, ten (and three varieties) are considered to be new. Comparison is made with foraminifera of other countries. The importance of this work for stratigraphy of the Cretaceous and Paleogene is emphasized.

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49496. BALAKSHIN, L. L. Vysokoshirotnaâ okeanograficheskaâ èkspediûsiâ na dizel'-èlektrokhode "Ob'." (Problemy Arktiki, 1958, vyp. 3, p. 124–27, map.) Text in Russian. ***Title tr.:*** High latitude oceanographic expedition on the diesel-electric ship *Ob'*.

Preliminary account, dated Dec. 4, 1956, of the Arctic Institute expedition in 1956 to the northern part of Greenland Sea. The party of 52 scientists headed by the author, left Leningrad on Aug. 4, and was joined en route by a Norwegian and two Swedish scientists; oceanographic observations were begun on Aug. 10; 59 deep-water stations were made in area between Greenland and Spitsbergen, 78–82° N., and bathymetric, hydrologic, hydrobiological and ice data and materials were collected. The favorable ice conditions, contrasting with the heavy ice encountered in 1956 in the eastern arctic seas, are noted. Harmonious collaboration of Soviet and Scandinavian scientists is stressed. The expedition reached Göteborg Sept. 30, on the way home.

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49497. BALAKSHIN, L. L. Vysokoshirotnaâ okeanograficheskaâ èkspediûsiâ na ledoreze "F. Litke" 1955 g. (Problemy Arktiki, 1957, vyp. 1, p. 123–35, map.) Text in Russian. ***Title tr.:*** High latitude oceanographic expedition on the ice-breaker *F. Litke* in 1955.

This expedition, sponsored by the Arctic Institute and headed by the author, left Murmansk on Aug. 24, sailed to Dikson Island, then north across the Kara Sea and explored the Arctic Basin north of Franz Joseph Land. The vessel reached 83°21′ N. 53°11′ E. on Sept. 11, the farthest north for a free-sailing ship, refuelled twice at Barentsburg, made two trips in area north from Spitsbergen, and on Oct. 28th returned home. Taking advantage of favorable ice conditions, the expedition studied

the hydrology, chemistry, biology and geology of the little known area of the Arctic Basin, 80–83° N. 15–65° E.; 57 deep water stations were made, 84 bottom samples, including a 412 cm. core, were taken, 27 trawls were made, including 12 in deep water. A depth of 5449 m. was found at 82°23′ N. 19°31′ E., the deepest spot so far known. The great number of polar bears (50–60) on edge of the ice pack is noted. Route of expedition is shown on map (p. 124).

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BALAKSHIN, L. L., *see* Kanaki, V. G. Ekspeditsii . . . 1957 godu. *1958.* No. 52155.

49498. BALBYSHEV, I. N. Sroki razvitiia rastenii Severa. (Priroda, Aug. 1958. god 47, no. 8, p. 127–28, illus.) Ref. Text in Russian. ***Title tr.:*** Periods of development of northern plants.

Notes on the order of blooming of common plants within the tundra and forest-tundra. Appearance of mushrooms and berries is also listed. Descriptions apply to the Vorkuta region, Bol'shezemel'skaya Tundra.

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49499. BALCHEN, BERNT, 1899– . Obituary: Sir Hubert Wilkins, 1888–1958. (Arctic, 1958. v. 11, no. 4, p. 258–59, port.)

Outlines his life and activities, his more notable expeditions, flights, noting contributions to exploration of both polar areas, and quality of character.

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49500. BALCHEN, BERNT, 1899– . Transportproblemer i Arktis. (Polarboken 1957, p. 56–65.) Text in Norwegian. ***Title tr.:*** Transport problems in the Arctic.

Sketch of sea, land and air transport problems encountered in building military bases. Tractor trains used on the Greenland icecap are described, also method of building and supplying a base entirely by means of air transport.

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BALDER, SINGH, *see* Anand, B. K., *and others.* Effect of hypothermia . . . *1958.* No. 49282.

49501. BALDINI, L. Azione della cloropromazina e dell'esametonio sull'ECG del ratto ipotermico. (Società italiana di Biologia sperimentale. Bolletino, Dec. 1956. v. 32, no. 12, p. 1625–28, illus.) 8 refs. Text in Italian. ***Title tr.:*** Action of chlorpromazine and of hexamethonium upon the ECG of the hypothermic rat.

Report on experiments with rats given these drugs intraperitoneally prior to being made hypothermic to 18°–20° C. Chlorpromazine in the given doses had no effect on the ECG, though it acted against the injurious effect of hypothermia. The effects of hexamethonium upon the heart, toxic to some degree, are analyzed via the ECG.

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49502. BALDINI, L., *and* L. CAVALLERI. Su una caratteristica morfologica della fase ventricolare lenta nell'ECG del ratto ipotermico. (Archivio "E. Maragliano" di patologia e clinica, Oct. 1956. v. 12, no. 5, p. 803–806, illus.) 6 refs. Text in Italian. Summary in English. ***Title tr.:*** A morphological characteristic of the late ventricular phase in the ECG of the hypothermic rat.

A description of the ECG picture in rats made hypothermic to 20° C. core temperature. The main characteristic observed, and considered typical for this animal's heart in hypothermia, is "a modification of the late ventricular phase." ***Copy seen:*** DNLM.

BALDINI, L., *see also* Cugurra, F., *and* L. Baldini. Sulla capacità . . . ganglioplegici . . . 6 . . . cloropromazina. *1956.* No. 50400.

49503. BALDWIN, JOHN R. The DOT's Air Services Branch, a regulating force. (Aircraft, July 1956. v. 18, no. 7, p. 70, +, illus.)

Outlines organizational aspects and administrative responsibilities of the Canadian Dept. of Transport's Air Services Branch. It provides, among other functions, aids to commercial, civil and military operations in the Canadian North and on polar routes, helicopter service for arctic re-supply missions, etc. Operational facilities (navigational, meteorological etc.) maintained by the Service, are listed. ***Copy seen:*** DLC.

49504. BALITSKII, I. G. Ob opyte uborki sel'di na plavbazakh Severo-atlanticheskoĭ sel'dianoĭ ėkspeditsii. (Rybnoe khoziaĭstvo, Dec. 1957. god 33, no. 12, p. 25–27, illus.) Text in Russian. ***Title tr.:*** Processing of herring on the floating bases of the North Atlantic Herring Expedition.

Description of a new method of processing herring tried out in 1956 on the base

ship *Sovetskaîa Arktika* in the North Atlantic. The method, which is outlined in step-by-step detail, has many advantages over the previous technique, especially on floating factories.

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49505. BALL, CARLETON ROY, 1873– . Notes on willows of sections Pentandrae and Nigrae. (Botanical gazette, Oct. 1921. v. 72, no. 4, p. 220–36, 4 illus.) 8 refs.

Contains synonyms, critical notes, and distributional data on six species and descriptions of three new varieties of willows; *S. serrissima* occurring in Keewatin District (Slave River) is included.

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49506. BALOG, JAMES. Operation Ice Skate. (Alaska sportsman, Nov. 1957. v. 23, no. 11, p. 24–26, illus.)

Recounts a news photographer's visit in May 1957 to Station A during its establishment for the IGY on an ice island north of Alaska. ***Copy seen:*** DI.

BAMBERG, PAUL G., *see* Hardenberg, E., *and* P. G. Bamberg. Venous blood flow . . . dog . . . cold injury. *1957.* No. 51581.

BAMPING, FRANK, *see Polar record.* Films . . . *1957.* No. 54043.

49507. BANCROFT, A. M. Gravity measurements in the Queen Elizabeth Islands of arctic Canada. (American Geophysical Union. Transactions, Aug. 1958. v. 39, no. 4, p. 615–19, illus., tables, diagrs.) 9 refs.

Presents summarized tables of gravimetric readings for Resolute, Mould Bay, Isachsen, Eureka, and Alert, readings corrected for diurnal change and instrument drift, computed values of the difference in reading, and calculated mean difference; the values are based on the adopted gravity value of 981.7669 gal. at the Churchill airport station. Stations, equipment, and procedure are described and the measurement accuracy is discussed. ***Copy seen:*** DLC.

49508. BANDI, HANS GEORG, 1920– . Einige Gegenstände aus Alaska und Britisch Kolumbien, gesammelt von Johann Wäber (John Weber), Bern/London, während der dritten Forschungsreise von James Cook, 1776–1780. (International Congress of Americanists, 32nd. *Copenhagen,* 1956. Proceedings, 1958. p 214–20, illus.) Ref. Text in German. ***Title tr.:*** Some objects from Alaska and British Columbia, collected by Johann Wäber (John Weber), Bern/London, during the third expedition of James Cook, 1776–1780.

Short biographical sketch of this London-born Swiss painter and illustrator, and description of objects collected by him at Nootka Sound, Prince William Sound, Unalaska, also some of undetermined origin: harpoon heads and shafts, arrows and arrow points, a sacrificial ax, human figurines, a human mask, etc.

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49509. BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918– . The Canadian caribou research programme. (Arctic circular, 1957, *pub.* Jan. 1958. v. 10, no. 2, p. 17–20.) 2 refs.

Caribou is important as food and clothing source in northern Canada. Population estimated at about 670,000 in 1948–49 declined to 277,000 in 1955 in the Mackenzie-Keewatin area. An 18-month research program started Apr. 1957 to determine causes of mortality, and study pathology, range requirements, reproductive cycle, etc. is outlined. Windchill on calving grounds, wolf predation, and drownings are indicated as important mortality causes. Coordinated management practices and auxiliary meat sources for the natives are required. ***Copy seen:*** DLC.

49510. BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918– . The plight of the barren-ground caribou. (Oryx, Apr. 1957. v. 4, no. 1, p. 5–20, 3 plates, 4 text maps.) 4 refs.

Account based on investigation of *Rangifer arcticus arcticus* conducted by the Canadian Wildlife Service from 1948 to 1956, in the region from Hudson Bay to the Mackenzie River delta. Data on the food, behavior, habits, breeding, migration (maps), past and present ranges, the population trend and its causes, are presented. All the evidence in 1948–56 indicates a continued decline in caribou numbers, and man's hunting methods and excessive wastage as the cause. In 1949 168,000 head were estimated killed (100,000 by hunters, 34,000 by wolves, 34,000 by disease and weather); and 145,000 calves born; annual deficit: 23,000 caribou. Not only does man wastefully destroy the caribou itself, but he causes forest fires which ravage its habitat, especially lichens, its chief winter food. The present caribou popu-

lation is large enough to supply basic needs of the dependent human population on a continuing basis, if needed game only are killed and wastage stopped.

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49511. BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918– , *and* J. S. TENER. A preliminary study of the Ungava caribou. (Journal of mammalogy, Nov. 1958. v. 39, no. 4, p. 560–73, tables.) 25 refs.

Report on caribou numbers, distribution and utilization based on interviews with Eskimos, Indians, traders, missionaries, etc. A geographical and climatological sketch of Labrador Peninsula and of the biology, taxonomy and aggregations of the animal introduces the report. Over-exploitation by the natives is considered the main cause of decline in numbers; forest fires, which reduce the food reserves, as second.

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49512. BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918– . A provisional life table for the Barren Ground caribou. (Canadian journal of zoology, June 1955. v. 33, no. 3, p. 143–47, illus., tables.) 7 refs.

Prepared from 292 mandibles on ranges in Mackenzie and Keewatin Districts, and based on eruption and wear of teeth. Mean expected life span at birth was found to be 4.09 years, average mortality for the first 10 years of life was estimated at 71%; potential longevity about 13 years. ***Copy seen:*** DLC.

49513. BANG, GISLE, *and others.* The effect of an excess of vitamin A on oxygen consumption and I^{131} metabolism in rats. Ladd Air Force Base, Alaska, Aug. 1957. 19 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–39.) 9 refs. *Other authors:* D. Metz *and* K. Rodahl.

A study on the effects of single massive doses and of repeated doses of this vitamin administered over long periods. Neither had any effect on the resting metabolism, on thyroid uptake of I^{131}, the plasma I^{131}, the PBI ^{131} or the conversion ratio.

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BANG, GISLE, *see also* Rodahl, K., *and* G. Bang. Thyroid activity in men . . . cold. *1957.* No. 54355.

49514. BANK, THEODORE PAUL, 1923– . The Aleuts. (Scientific American, Nov. 1958. v. 199, no. 5, p. 113–20, illus., maps.) Substantially the same paper was pub. with title: *The southern Eskimos,* in Michigan alumnus, quarterly review, Autumn 1958. v. 25, no. 10, p. 51–58, illus.

A popular sketch of Aleut history, origin, proto-Eskimo racial affiliation, material culture, seamanship and sea-mammal hunting, mortuary customs, etc. The theories concerning the two Aleut physical types (brachy- and dolichocephalic) are discussed. The conjectured proto-Eskimo migration route from northeastern Asia, branching south to the Aleutians and east along the Arctic coast to Canada and Greenland, is mapped.

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49515. BANK, THEODORE PAUL, 1923– . Ethnobotany of northern peoples and the problem of cultural drift. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 46–47.)

Discusses possibility of prehistoric Aleut contacts with Kamchatka and the Kurils, indicated by cultural similarities (aconite poison, whaling, preparation, use, and beliefs in use of plants) among Ainus and Aleuts. Independent invention and historical contact, e.g., from Aleut-Koniag voyages may account for such correspondences; no indication of prehistoric cultural drift via the Aleutians.

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49516. BANK, THEODORE PAUL, 1923– . Medicinal plant lore of the Aleut. (Pacific Science Congress, 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 44.)

Plants are described (18 medicinal, 3 magic, one poisonous) and their use indicated. Of 150 plants used by the Ainu of northern Japan, half of the genera occur and are similarly used in the Aleutian Islands; but this is not sufficient evidence to suggest a prehistoric cultural contact between these two peoples.

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BANK, THEODORE PAUL, 1923– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

BANK, THEODORE PAUL, 1923– , *see also* Harp, E. Notes and news; Arctic. *1957.* No. 51593.

49517. BANKS, H. C. Observed weather in the Arctic Ocean. (*In:* Alaskan Science Conference . . . 1954. Pro-

ceedings *pub.* 1957. p. 66–73, map, 7 diagrs.).

Summary of weather observations made on ice island T–3, Apr. 1, 1952–May 14, 1954. Surface and upper air observations showed cold weather throughout the year; summers were cloudy and foggy; winters and springs were relatively clear. Snow fell every month; rain and drizzle occurred frequently in summer. Gale winds were rare at the surface; considerable variation from month to month was noted between the two years.

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49518. BANKS, MIKE E. B., 1922– . High Arctic; the story of the British North Greenland Expedition; with 4 chapters by Angus Erskine. London, Dent, 1957. xii, 276 p. 25 photos, incl. ports., 9 maps, and drawings by Lilias Stirling.

Describes preparations, transportation of equipment and personnel, and daily life 1952–54, during the expedition (headed by C. J. Simpson, q.v.) to Dronning Louise Land and the northern part of the icecap. From the landing point on Young Sund, a six-man team traveled with dog sledges to establish the icecap station, Northice, and receive equipment, air-dropped from Thule-based airplanes. Eight weasels, landed at Kap Rink, were driven via Danmarkshavn to the northern base and the icecap. Erskine in charge of the dog transport describes the establishment of Northice, also his sojourn at Jakobshavn in 1951 training the expedition's dogs (with trips to Egedesminde, Jakobshavn Glacier, Qudtligssat, and Umanak). Banks in charge of weasel operations and gravity work describes the journey from Kap Rink via Danmarkshavn to the base at Britannia Sø in Dronning Louise Land, thence to the icecap station, day-to-day life there, work of gravity and seismic teams, and finally their trip across the icecap to Thule. Expedition personnel (30) are listed, 16 participating throughout its two-year period. A chronology, glossary and useful index are appended. ***Copy seen:*** DLC.

BANKS, MIKE E. B., 1922– , *see also* Simpson, C. J. W., *and others.* North ice . . . *1957.* No. 54901.

49519. BANKS, NATHAN, 1868–1953. Neuropteroid insects, notes and descriptions. (American Entomological Society. Transactions, 1908. v. 34, no. 3, p. 255–67, plates 17–19.)

Thirty-nine are listed, 30 of them new to science; *Platyphylax designata* var. *alaskensis* is included. ***Copy seen:*** DA.

49520. BANKS, NATHAN, 1868–1953. The Phalanginae of the United States. (Canadian entomologist, Aug. 1893. v. 25, no. 8, p. 205–211.)

Contains a key to the genera of this subfamily of arachnids and descriptions of four new genera and seven new species, among them *Homolophus arcticus* n. sp. from Commander Islands.

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BANNA, R. G., *see* Navarra, S., *and others.* Variazioni del flusso . . . di ossigeno del sangue . . . *1957.* No. 53517.

49521. BANNAN, MARVIN WILLIAM, 1908– , *and* W. L. FRY. Three Cretaceous woods from the Canadian Arctic. (Canadian journal of botany, May 1957. v. 35, no. 3, p. 327–37, 21 illus.) 20 refs.

Structure is described of new species of coniferous woods from Cretaceous formations: *Cedroxylon disjunctum* n. sp. (Christopher formation of Strand Fjord Peninsula on Axel Heiberg Island), *Piceoxylon christopheri* n. sp. and *P. thomsoni* n. sp., both from the Lower Cretaceous (Christopher and Isachsen formations) of Amund Ringnes Island.

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49522. BANNIKOV, A. G. Sneg i dikie kopytnye. (Priroda, Mar. 1958. god 47, no. 3, p. 106–107.) Ref. Text in Russian. ***Title tr.:*** Snow and the wild ungulates.

Deals with investigations on the problem since 1936, specifically the studies of A. A. Nasimovich. Snow-cover is discussed in relation to food supply and utilization, migrations, ungulate association, distribution, etc.

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49523. BANSE, KARL. Die Gattungen *Oriopsis, Desdemona* and *Augeneriella*; Sabellidae, Polychaeta. (Dansk naturhistorisk forening. Videnskabelige meddelelser, 1958. bd. 119, p. 67–105, 9 illus.) 46 refs. Text in German. Summary in English. ***Title tr.:*** The genera *Oriopsis, Desdemona* and *Augeneriella*; Sabellidae, Polychaeta.

Contains a revision of the genus *Oriopsis* of subfam. Fabricinae, three new species and one subspecies described as new. Two new genera are erected: *Desdemona*

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with two new species, and *Augeneriella* with one new species. Keys to the genera and species are provided. *Oriopsis rivularis* (Okhotsk Sea) and *O.? crenicollis* (Bering Island, littoral), are included. ***Copy seen:*** DLC.

49524. BARABANOV, V. F. Apofillit iz ushchel'ia Gakmana v Khibinakh. (Akademiia nauk SSSR. Doklady, June 1, 1957. t. 114, no. 4, p. 876–79, 2 illus. 2 tables.) 11 refs. Text in Russian. ***Title tr.:*** Apophyllite from the Gakman Gorge in Khibiny.

Contains results of mineralogical, crystallographic and chemical analyses of this rare mineral from natrolite-apophyllite veins in Gakman Gorge on the southeastern slope of the Yukspor Mts. This mineral is represented by two color varieties: greenish-yellow (large crystals) and white, which is more frequent. Apophyllite is a rare silicate of schistose structure which associates readily with natrolite. The greenish form is apparently an earlier stage of development. It is also noted that the white form contains 1.92 percent of fluorine.

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49525. BARABANOV, V. F. Lamprofillit iz ushchel'ia Gakmana v Khibinakh. (Leningrad. Universitet. Vestnik, 1958. god 13, no. 12, ser. geologii i geografii, vyp. 2, p. 15–24, illus., tables.) 6 refs. Text in Russian. Summary in English. ***Title tr.:*** Lamprophyllite from Gakman Gorge in the Khibiny tundras.

This rare mineral was discovered by W. Ramsay in the Khibiny in 1890. Results of previous studies of its physical properties and chemical composition as found in the Khibiny and Lovozerskaya tundras are summarized. Data are added on the needle-shaped and fibrous varieties of lamprophyllite from apophyllite veins in Gakman Gorge, discovered and studied by the author in 1946–1951 (*supra*).

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49526. BARAGAR, W. R. A. Ahr Lake map-area, New Quebec. Ottawa, Queen's Printer, 1958. 6 p., fold. map. (Canada. Geological Survey. Paper 57–7; map no. 21–1957.)

Brief preliminary description of area, 55°30′–55°45′ N. 66°30′–67° W. based on field work 1954, 1955, by the author. Text describes formations, all Proterozoic; rock structure; and economic geology. Minerals of economic interest were observed in few places. Map, scale 1:63,360, shows location of surface features. ***Copy seen:*** DGS.

BARAKHOV, I. N., *see* Akademiia nauk SSSR. Iakutskii filial. Za sovetskuiu vlast' . . . *1957*. No. 49170.

49527. BARANENKOVA, A. S. Materialy k raspredeleniiu morskikh okunei roda *Sebastes*. (Akademiia nauk SSSR. Doklady, Mar. 11, 1957. v. 113, no. 2, p. 468–71, 3 text maps, table.) 3 refs. Text in Russian. ***Title tr.:*** Materials on the distribution of sea perch of the genus *Sebastes*.

Contains results of an investigation carried out on the trawler *Rossiia* in the western part of the Barents Sea and in the Greenland Sea between Bjørnøya and the Lofotens. Distribution of *S.m. marinus*, *S.m.* infra sp. *mentella* and *S. viviparus* in Mar.–Apr. 1956 are shown, also that of *S.m.* infra sp. *mentella* in Mar.–Apr. in the daytime (maps); and distribution by the measurements for each species (males and females) is tabulated. *S.m.* infra sp. *mentella* proved to be the most abundant species in Kopytov region (71°20′–73°30′ N. 15°–22° W.); *S. viviparus* is the smallest and *S.m. marinus* the largest species in this perch-like genus.

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49528. BARANENKOVA, A. S. Predvaritel'nye dannye po uchetu molodi treski i pikshi v Barentsovom more. (Akademiia nauk SSSR. Murmanskaia biologicheskaia stantsiia. Trudy, 1957. t. 3, p. 148–58, illus. tables, maps.) 4 refs. Text in Russian. ***Title tr.:*** Preliminary data on the stock of young cod and haddock in the Barents Sea.

Account of investigation commenced in 1946 for purposes of yield prognosis, mainly in the southern part of the Sea. In most instances, fall conditions were studied after settlement of the new generation; fish up to the age of three years were considered as young. Distribution, percentage of catch and of fishing effort, growth rates and deviations from their, average; regional differences in growth. etc. were studied. ***Copy seen:*** DLC.

BARANOV, D. A., *see* Akademiia nauk SSSR. Institut ėkonomiki. Problemy . . . Iakutskoĭ ASSR. *1958*. No. 49171.

49529. BARANOVA, IU. P., *and others.* Paleogeografiia basseĭnov verkhnikh techeniĭ rek Olenek i Markhi. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut

geologii Arktiki. Trudy, 1958. t. 67, Sbornik stateĭ po geologii Arktiki, vyp. 7, p. 163–76, fold. table, cross-sections, text map.) 9 refs. Text in Russian. *Other authors:* S. F. Biskė *and* A. P. Puminov. ***Title tr.:*** Paleogeography of the upper courses of the Olenek and Markha River basins.

Presents conclusions on paleogeographic development in the Olenek and Markha headwaters during the Quaternary period, based mainly on field work 1952–1954 under direction of the Institute of Geology of the Arctic. The pre-Quaternary geologic development of the area is reviewed. The extent and procedure of Quaternary glaciation and its effects are outlined. Formation of relief and river network and character of vegetation during the Quaternary period are outlined and a comparative stratigraphic diagram included. ***Copy seen:*** DGS.

49530. BARANOVSKAÏA, A. V., *and* **O. A. GRABOVSKAÏA.** K 75-letiiû Zinaidy ÏUl'evny Shokal'skoĭ. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiia, July–Aug. 1957. t. 89, no. 4, p. 365–67, port.) Text in Russian. ***Title tr.:*** 75th anniversary of Zinaida ÏUl'evna Shokal'skaïa.

Brief biography and appraisal of the scientific activities of this pedologist, director of the Central Soil Science Museum (TSentral'nyĭ muzeĭ pochvovedeniia); she is the daughter of ÏU. M. Shokal'skiĭ, the noted geographer. Her soil investigations in the Lake Imandra region on Kola Peninsula, carried out in the 1920's, are noted. ***Copy seen:*** DLC.

BARANOVSKAÏA, N. V., *see* Zhirov, K. K., *and others*. Opredeleniia absoliûtnogo geologicheskogo vozrasta . . . *1958*. No. 56198.

49531. BARANSKIĬ, NIKOLAĬ NIKOLAEVICH. Ocherednye zadachi geografii. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiia, Jan.–Feb. 1957. t. 89, vyp. 1, p. 36–43.) 8 refs. Text in Russian. ***Title tr.:*** The current tasks of geography.

Need to extend exploration, increase education and publishing in this field are discussed; the lag in studies of the vast area of Asia above 55° N. is noted.

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49532. BARASHEV, PAVEL ROMANOVICH. Million; iz bloknota zhurnalista. (Vokrug sveta, July 1958, no. 7, p. 53–55, illus.) Text in Russian. ***Title tr.:*** One million; from a journalist's notebook.

Sketches of activities of flyers in Kamchatka: emergency landing in mountainous area of the extinct volcano, Faraonovyy Kamen', payroll delivery to a remote fisheries combine, etc.

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49533. BARASHEV, PAVEL ROMANOVICH. Ot Severnogo do ÏUzhnogo. (Vokrug sveta, Jan. 1957, no. 1, p. 40–42, illus.) Text in Russian. ***Title tr.:*** From North to South Pole.

Sketch of Ivan Ivanovich Cherevichnyĭ and his flights to the so-called "Pole of Inaccessibility" in 1941, the North Pole in 1948, and to the South Geomagnetic Pole in 1956. ***Copy seen:*** DLC.

49534. BARASHEV, PAVEL ROMANOVICH. Sputniki Oriona; zapiski reportera. Moskva, Izd-vo "Molodaïa gvardiia," 1957. 149 p. illus., map. Text in Russian. ***Title tr.:*** Orion's satellites; a reporter's notes.

Account of the Soviet antarctic expedition on the *Ob'* and *Lena* in 1955–56, with (in introduction, p. 3–7) brief story of the arctic flights of the pilot Guriĭ Vladimirovich Sorokin to the drifting stations North Pole-2 in 1952(1951?) and to North Pole-3 in 1955.

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49535. BARASHKOV-ÈPCHELEĬ, I. V. Puteshestvie F. Nansena v "Stranu budushchego." (Sibirskie ogni, May–June 1957. god 36, no. 3, p. 173–75, illus.) Text in Russian. ***Title tr.:*** F. Nansen's journey into the "Land of the future."

Eulogy of Nansen as a great humanitarian and friend of the Russian people. His account (No. 41535) of a trip in 1913 from Tromsø to the Yenisey on the *Korrekt*, his lectures at Yeniseysk, Krasnoyarsk, etc., on a possible trade connection with central Siberia via the Kara Sea, and his prophetic views on the industrial potential of Siberia are discussed.

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49536. BARBEAU, CHARLES MARIUS, 1883– . Haida carvers in argillite. Ottawa, 1957. 214. p. 227 illus. incl. ports., maps on end-papers. (Canada. National Museum. Bulletin, no. 139; Anthropological ser. no. 38.).

Deals with Haida Indians' argillite carvings of the post-contact period, mainly the second half of the 19th century. The sculptures and totems originating from Queen Charlotte Islands,

now at various American, Canadian and European museums and private collections, are described and their artistic value discussed. Art periods and trends are characterized and biographical sketches of individual artists are given, often from first-hand accounts of relatives or friends. ***Copy seen:*** DLC.

49537. BARBEAU, CHARLES MARIUS, 1883– . Medicine-men on the North Pacific Coast. Ottawa, 1958. 95 p., 90 illus., maps on end-papers. (Canada. National Museum. Bulletin, no. 152; Anthropological ser. no. 42.)

A discussion of shamanism, sorcery and mystic medicine based primarily on Haida carvings of medicine men. Extracts from tales on shamanism and witchcraft from the American Northwest and northeastern Siberia as reported by J. R. Swanton (No. 32341) and narratives, mostly Tsimshian, recorded in 1952–1954 by William Beynon, are included. ***Copy seen:*** DLC.

49538. BARBER, HARRY G. A new species of *Nysius* from Alaska and Alberta, Canada; Hemiptera, Lygaeidae. (Entomological Society of Washington. Proceedings, Apr. 1958. v. 60, no. 2, p. 70.)

Describes: Nysius fuscovittatus n. sp., a cinch-bug from Lower Tonsina, Alaska, June 28, 1953, W. C. Frohne.

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BARBU, E., *see* Panijel, J., *and others.* Effets de la congélation . . . bacteriophages. *1957.* No. 53851.

49539. BARDIN, IVAN PAVLOVICH, 1883– . Dvadtsat' pîat' let razvitiîa nauchnykh uchrezhdeniĭ Akademii nauk SSSR na periferii. (Akademiîa nauk SSSR. Izvestiîa vostochnykh filialov, 1957. no. 8, p. 3–24.) Text in Russian. ***Title tr.:*** Twenty-five years' development of the peripheral scientific institutions of the Academy of Sciences of the U.S.S.R.

Survey of the Academy's provincial and local branches ("filial," formerly called "baza" of the "kompleksnyĭ institut"), initiated in 1932. Of the 12 branches and one general research institute active in 1957, several are in the North: the Ural, Kola Peninsula, Komi A.S.S.R., West Siberia, East Siberia, Yakutia and the Far East. Their organization and activities, their relation with the central Academy and their role in developmental effort in fringe areas are noted. ***Copy seen:*** DLC.

49540. BARDIN, IVAN PAVLOVICH, 1883– , *and* **V. RIKMAN.** Perspektivy razvitiîa chernoĭ metallurgii v vostochnykh raĭonakh SSSR. (Planovoe khoziĭstvo, Feb. 1957, no. 2, p. 18–29.) Text in Russian. ***Title tr.:*** Prospective development of ferrous metallurgy in eastern areas of the U.S.S.R.

Deals with planned development of, among others, iron ore deposits in the Angara basin (p. 26 and 27): Nizhne-Angarskoye, Korshunovskoye, Rudnaya Gora, etc. ***Copy seen:*** DLC.

49541. BARFOD, PIE. Træk af Grønlands økonomi og erhvervsliv siden 1950. (Grønland, Aug. and Sept. 1958: nr. 8 and 9, p. 281–90, 332–44, illus., tables.) Text in Danish. ***Title tr.:*** An outline of the Greenland economy and trade since 1950.

Reviews aims of the economic development initiated by the Greenland Commission in 1950, the means then favored and measures taken subsequently. Greenland production does not yet support the rise in standard of living; increasing government subsidies are required. Private enterprise is almost entirely lacking. The main problems at present are to increase production, adjust Greenlanders' wages, and find a way of subsidizing the Trading Company. ***Copy seen:*** DLC.

49542. BARGETON, D., *and others.* Échanges de chaleur de la main. (Journal de physiologie, Mar. 1958. t. 50, p. 148–52, illus.) 5 refs. Text in French. *Other authors:* J. Durand, J. Mensch-Dechene, *and* J. Decaud. ***Title tr.:*** Heat exchange of the hand.

A theoretical study based on experiments with five subjects. It is concluded that there is no temperature regulation in the hand, the median temperature of which varies with that of the environment. However, a large zone showed heat-regulation independent of calorimetric temperature. The implications of this condition are discussed.

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49543. BARGHOORN, ELSO S. Palynological studies of organic sediments from Ice Island T–3 and of coated slides exposed on T–3 and Ellesmere Island. Cambridge, Mass. Harvard University, June 30, 1957. 27 p. 8 tables. (U.S. Air Force Cambridge Research Center.

Geophysics Research Directorate. Contract No. AF 19(604) 1371, Final Report, AFCRC TR–57–296.) 6 refs.

Contains results of detailed microscopic study to determine the presence, abundance, and identification of pollen, spores, and other microfossils, collected on T–3 and Ward Hunt Island (Ellesmere) May to Sept. 1954 and 1955. Source materials and methods of study are described; the results (meager) are discussed; among conclusions reached are the holarctic origin of the pollen found, and the relatively recent age of T–3. Little or no long-range transport of pollen or spores was discovered. ***Copy seen:*** DWB.

BARILA, TIMOTHY GEORGE, 1922– , *see* Riley, P. A., *and others.* Antifibrillary drugs . . . hypothermia . . . dog. *1957.* No. 54314.

49544. BARKER, FRED. Geologic quadrangle map, Juneau (B–3) Alaska. Washington, D.C., 1957. (U.S. Geological Survey. Geologic quadrangle maps of the U.S. GQ–100).

Map 25 x 30 in. at scale 1:63,360, covers 58°15′–58°30′ N. 134°40′–135° W., with brief text. ***Copy seen:*** DGS.

49545. BARKHATOVA, V. P. Novoe v stratigrafii karbona i permi Severnogo Timana (Akademiîa nauk SSSR. Doklady, Apr. 11, 1958. god 26, t. 119, no. 5, p. 999–1002.) 7 refs. Text in Russian. ***Title tr.:*** New data on the stratigraphy of the Carboniferous and the Permian of northern Timan.

Outlines the distribution, age, faunal characteristics and stratigraphy of Carboniferous and Permian deposits on western and eastern slopes of this range in north-central Arkhangel'skaya Oblast' (approx. 66°30′ N. 50° E.). On the western slope, they are distributed in the Volonga and Pesha basins; on the eastern they have wider distribution: in the Indiga, Sula and other basins and on Capes Svyatoy Nos, Zheleznyy. These deposits previously considered by the author as the same in both western and eastern Timan are now distinguished and their differences stressed. Similar conditions for development of deposits existed only in the Lower Carboniferous; later the western and eastern parts of northern Timan underwent different histories.

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BARKHUDOV, S. G., *see* Sunik, O. P. Soveshchanie po fazykam . . . *1953.* No. 55236.

BARKSDALE, W. L., *see* Black, R. F., *and* W. L. Barksdale. Terrain and permafrost . . . *1948.* No. 49754.

49546. BARLOW, GEORGE, 1926– , *and others.* Circulating levels of 17-hydroxycorticosteroid in hypothermia. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 9.) *Other authors:* G. B. Spurr *and* R. L. Bowe.

Report on plasma concentration of this steroid in normothermic and hypothermic dogs, cooled to 33, 30, 28, and 25° C. The plasma-steroid concentration fell not significantly till a rectal temperature of 30° was obtained; from this point it rose again to normothermic levels.

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BARLOW, GEORGE, 1926– , *see also* Spurr, G. B., *and others.* Influence of body temperature on cardiac sensitivity to potassium. *1958.* No. 55103.

49547. BARNES, DAVID F., 1921– , *and* **L. D. TAYLOR.** Preliminary results of study of a permanently frozen lake in Greenland. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1751.) Abstract of a paper presented at the Ninth Alaskan Science Conference, College, Sept. 3–5, 1958.

Describes summer 1957 investigations by the Air Force Cambridge Research Center and Dartmouth College, of Angiussaq Lake about 50 mi. northeast of Thule, which has maintained an ice cover 6–13 ft. thick for ten years. Ice crystals, strength, composition, surface, water depth and temperature were studied, in quest of an explanation of its permanently frozen condition. The crystals were platelike, with horizontal axes and from 0.2 to 100 sq. cm. in size. Glacial ice more than 200 ft. thick was present, also four ice islands over 40 ft. thick. Average water depth was approx. 250 ft. with a 615 ft. maximum. Temperature was approx. 0.2° C. at the surface, increasing to approx. 0.4° C. at the deepest point. ***Copy seen:*** DGS.

BARNES, FARRELL FRANCIS, 1905– . *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

BARNES, FARRELL FRANCIS, 1905– , *see* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

49548. BARNES, H. The northern limits of *Balanus balanoides* (L.). (Oikos,

1957. v. 8, no. 1, p. 1–15, text map.) 66 refs. *Pub. also as:* Contrib. no. 897 from Woods Hole Oceanographic Institution.

Contains a study of distribution of this barnacle in polar regions of Europe, Asia and North America and of factors affecting its limits, such as snow and ice cover, ice-foot and severity of conditions. The northern limit of *B. balanoides* and of certain littoral molluscs is determined by conditions in the sub-littoral; this limit closely parallels the summer limits of the pack ice, i.e., its annual maximum retreat. Not the ice-limit as such, but conditions it indicates, determine the limit of these intertidal animals. On the west coast of Greenland, local factors, particularly the high arctic conditions in Melville Bight, are limiting. The biology of the individual species should be considered in attempting to assess the determining factor in their distribution.

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49549. BARNES, R. S., *and* **M. Z. FAINMAN.** Synthetic ester lubricants. (Lubrication engineering, Aug. 1957. v. 13, no. 8, p. 454–58, tables, graph.) 20 refs.

Forty-eight esters made from polyhydric alcohols and monobasic acids were synthesized and compared with six dibasic-acid esters; very good properties in lubricity and thermal stability make synthetic esters good lubricants under conditions too severe for mineral oils. Alcohol derived from neopentane has no *beta* hydrogen and gives esters of improved thermal stability. Straight-chain monobasic-acids give good lubricity; such esters improve the lubricity of silicone oils as well as mineral oils. Prepared discussion of the paper and author's comments on the discussion are included (p. 457–58). ***Copy seen:*** DLC.

49550. BARNIER, LUCIEN. L'exploit du "Nautilus." (Géographia, Oct. 1958. no. 85, p. 39–44, illus., text map.). Text in French. ***Title tr.:*** The exploit of the *Nautilus.*

Popular account of the transpolar voyage of this atomic-powered submarine, stressing scientific aspect.

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49551. BARON, H. G. Stress/strain curves of some metals and alloys at low temperatures and high rates of strain. (Iron and Steel Institute. Journal, Apr. 1956. v. 182, pt. 4, p. 354–65, illus.) 32 refs.

Comparative tensile tests were made on a number of metals and alloys at temperatures of +20°, −78°, and −196° C. using strain rates of 10^{-3} and 10^{2} in./in./sec. The experimental methods employed for these static and dynamic tensile tests are described. Microphotographs of the structure of materials tested are included together with a number of stress/strain curves. Strain rate and temperature were found to have a marked effect on iron and the softer ferritic steels. All the ferritic materials exhibited a type of premature failure in dynamic tests below a critical temperature. Lesser effects were noted on the other materials tested. ***Copy seen:*** DLC.

49552. BARON, V. A., *and* **ĬŪ. G. GLOTOV.** Samokhodnyĭ morskoĭ ledokol'nyĭ parom. (Sudostroenie, Jan. 1958. god 24, no. 1, p. 3–6, illus.) Text in Russian. ***Title tr.:*** Self-propelled icebreaking ferry.

Describes the *Syprus,* built in 1956 as the first of a series of car- and passenger ferries for use between Estonian islands and in the Gulf of Finland. It has a loading capacity of 113 t. and carries 40 passengers. Two main engines of 300 hp. each, give a maximum cruising speed of 11.4 knots. Its poor utilization of engine power in ice-breaking, poor steering properties, etc., caused considerable modifications to be made in later models.

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49553. BARR, RALPH, *and* **P. R. EHRLICH.** Mosquito records from the Chukchi Sea coast of northwestern Alaska. (Mosquito news, Mar. 1958. v. 18, no. 1, p. 12–14.)

Records of mosquito larvae, pupae and adults collected in midsummer 1956 in Kotzebue and adjacent areas, with notes on the species identified (9), their morphology, frequency of occurrence, geographic distribution and origin.

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49554. BARRETT, RICHARD E. Western Canada uranium as a fuel resource. (Canadian mining and metallurgical bulletin, Aug. 1958. v. 51, no. 556, p. 476–78.) *Also pub.:* Canadian Institute of Mining and Metallurgy, Transactions, 1958, v. 61, p. 250–52.

Brief general survey of reserves, production, and use of uranium as a source of power. Mining areas in Canada (Port Radium, Rayrock, Beaverlodge, Eldorado, Blind River, Gunnar and others)

and elsewhere are noted. Uranium will be important as a fuel by the late 1960's; future of the industry will continue to depend upon exports, competition will be stiff. ***Copy seen:*** DGS.

49555. BARRIÉTY, L. Un ramier près du Cercle Polaire. (Oiseau et la revue française d'ornithologie, 1958. v. 28, no. 1, p. 88.) Text in French. ***Title tr.:*** A ring dove near the Polar Circle.

Notes recovery of *Columbia palumbus* L. banded at Biarritz (43°04′ N. 01°01′ W.) on Dec. 5, 1954, and captured in Sweden, at Mattsundsberget near Nederluleå (65°36′ N. 21°55′ E.) on Nov. 5, 1957. ***Copy seen:*** DSI.

49556. BARRY, THOMAS A., *and* **J. N. EISENHART.** Ross' geese nesting at Southampton Island, N.W.T., Canada. (Auk, 1958. v. 75, no. 1, p. 89–90.)

Notes two nestings of *Chen rossi* seen in July 1953, one four miles inland on a river island; three eggs, measuring 74 x 49 mm., 76 x 53 mm. and 75 x 50 mm. were found; all eggs were hatched. ***Copy seen:*** DSI.

BARSANTINI, J. C., *see* Angelis, W. de, *and others*. Action du stress sur l'activité de l'arginase hépatique . . . *1956*. No. 49324.

49557. BARSKAIÂ, V. F. T͡Sirtofillidy t͡sentral'nogo Taĭmyra. (Moskovskoe obshchestvo ispytateleĭ prirody. Bi͡ulleten', nov. seri͡ia, god. 129, t. 63, otdel geologicheskiĭ, Sept.–Oct. 1958. t. 33, vyp. 5, p. 111–22, plates.) 5 refs. Text in Russian. ***Title tr.:*** Cyrtophyllidae of central Taymyr.

Describes these Ordovician coral polyp fossils, hitherto unknown in the Taymyr Peninsula, from material collected by the author with the geologists team "Arktikrazvedka" in 1952. Characteristics of the genus *Cyrtophyllum* are given; eight species (most of them new) are fully described, with diagnosis, comparison, location and age. ***Copy seen:*** DLC.

BARSS, M. S., *see* Hacquebard, P. A., *and* M. S. Barss. A carboniferous spore assemblage . . . South Nahanni River . . . *1957*. No. 51474.

49558. BARSUKOV, V. V. Raspredelenie zubatok *Anarhichas lupus, A. minor* i *A. latifrons* v Barent͡sovom more. (Voprosy ikhtiologii, 1957. vyp. 8, p. 28–50, illus. tables, maps.) 26 refs. Text in Russian. ***Title tr.:*** Distribution of the wolf-fishes, *Anarhichas lupus, A. minor* and *A. latifrons* in the Barents Sea.

Of these three Atlantic species studied, the first was found in the warmer inshore waters and the two others in the open sea in the region of the polar front. Spawning and feeding areas, migrations, summer and winter locations, and utilization of these fishes are also discussed. ***Copy seen:*** DLC.

49559. BARSUKOV, V. V. Ryby bukhty Provideni͡ia i sopredel'nykh vod Chukotskogo poluostrova. (Akademi͡ia nauk SSSR. Zoologicheskiĭ institut. Trudy, 1958. t. 25, p. 130–63, illus., table, maps.) 26 refs. Text in Russian. ***Title tr.:*** The fishes of Provideniya Bay and adjacent waters of the Chukotsk Peninsula.

The first full account of these fishes, based in part on author's study during summer and fall of 1955. An introductory outline of the geography of the area, water temperature and fisheries introduces the treatment of the morphometry, size, color, conditions and location of catch, etc. In the more common and known forms, size and growth rate, sexual conditions, size-to-weight relation, economic value, etc., are also discussed. ***Copy seen:*** DLC.

49560. BARTELMES, RAYMOND F. Military prefabricated buildings. (Military engineer, Mar.–Apr. 1957. v. 49, no. 328, p. 96–99, illus.)

Includes descriptions and illustrations of prefabricated shelters for arctic conditions: the all-aluminum Theodolite Shelter for Signal Corps weather observations; a demountable Multi-Package Shelter for Signal Corps communications equipment; a plywood structure called the Finnish "Igloo;" an all-weather Special-Weapons-Assembly Shelter; and the Arctic Shelter, which can be air-dropped, an easily assembled construction of three-in. stressed-covered panels with plywood surfaces for use as barracks, communications buildings, or first aid station. ***Copy seen:*** DLC.

BARTH, EDVARD K., *see* Bateson, P. P., *and* E. K. Barth. Notes . . . geographical variation . . . ringed plover . . . *1957*. No. 49576.

49561. BARTHEL, F. "Thora Dan", "Helga Dan" und "Elgaren." (Schiff und Hafen, Apr. 1957. Jahrg. 9, Heft 4, p. 279–98, illus., diagrs., plates.) Text

in German. ***Title tr.:*** *Thora Dan, Helga Dan,* and *Elgaren.*

Contains detailed descriptions (with plates, cross sections, etc.) of these ships, the first two built for polar voyages of the J. Lauritzen Co., Copenhagen. Of 5200 (*Thora Dan*) and 5050 (*Helga Dan*) t. dw., they have a cruising speed of 14.5 knots and carry 11 passengers in addition to a crew of 36. Builder is Stückenwerft, Hamburg. ***Copy seen:*** DLC.

BARTHOLOMÉ, PAUL, *see* Wager, L. R. Sulphides . . . Skaergaard . . . *1957.* No. 55906.

49562. BARTLETT, ROSCOE GARDNER, 1926– , *and others.* Core to surface thermal gradients in the rat at several environmental temperatures. (American journal of physiology, June 1958. v. 193, no. 3, p. 541–46, illus.) 5 refs. *Other authors:* N. Mantel, G. L. Foster, *and* P. Bernstein.

A study of colonic, subcutaneous and cutaneous temperatures in cold-exposed animals both restrained and unrestrained, clipped and non-clipped. Restraint produced hypothermia at low temperatures (0° and 8° C.) and abolished at higher ones subcutaneous to surface temperature-gradient. With severe stress all animals became hypothermic.

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49563. BARTLETT, ROSCOE GARDNER, 1926– , *and* **P. BERNSTEIN.** Effect of clipping on body temperature of restrained rats exposed to cold. (Society for Experimental Biology and Medicine. Proceedings, Apr. 1957. v. 94, no. 4, p. 639–40, illus.) Ref.

Clipping of restrained rats exposed to cold resulted in less body temperature fall than clipping of non-restrained animals. This is explained by the assumption that the less erected hair of restrained rats caused greater heat loss than the fully erected hair of free animals.

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49564. BARTLETT, ROSCOE GARDNER, 1926– . Prognostic physiologic changes during immersion hypothermia in the anesthetized rabbit. (Journal of applied physiology, Jan. 1957. v. 10, no. 1, p. 143–45, illus.) 7 refs.

The investigated animals died at temperatures of 4–14° C. An analysis of these results revealed that those which died at higher temperatures (11° to 14° C.) had significantly greater drop of blood pressure, of heart rate and respiratory rate during hypothermia than the group which died at lower temperatures.

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49565. BARTLETT, ROSCOE GARDNER, 1926– . Restraint hypothermia and I^{131} uptake by rat thyroid. (Society for Experimental Biology and Medicine. Proceedings, Apr. 1957. v. 94, no. 4, p. 654–56, illus.) 6 refs.

Iodine uptake by restrained animals was higher at one hour and lower at four hours than in non-restrained controls. The lower the temperature was in restrained rats at four hours, the lower was the I^{131} uptake by the thyroid, and restrained hypothermic animals showed a greater I^{131} uptake than free controls. It is concluded that restraint hypothermia is not attributable to lowered basal metabolism. ***Copy seen:*** DLC.

49566. BARULIN, I. Istreblenie gnusa. (Grazhdanskaîa aviatsiîa, May 1957. god 14, no. 5, p. 25, illus.) Text in Russian. ***Title tr.:*** Extermination of mosquitoes.

Reports an attempt at mosquito control from aircraft in the construction area of the Bratsk hydroelectric plant on the Angara. The infested area was sprayed from 5–30 m. height at 100 m. intervals with a 2.5–4.5 percent DDT solution or other insecticide, using 100 liters/hectare. Up to 85% of the pests were exterminated and mosquitoes disappeared in the sprayed area for four-five days. ***Copy seen:*** DLC.

49567. BASHARIN, GEORGIĬ PROKOP'EVICH. Iz istorii priobshcheniîa îakutov k russkoĭ zemledel'cheskoĭ kul'ture. [Âkutsk, [Âkutskoe knizhnoe izdvo, 1958. 52 p. tables. Approx. 50 refs. Text in Russian. ***Title tr.:*** History of the Yakuts' integration into the Russian agricultural system.

An analysis, based on contemporary documents, of Yakutia's agricultural development, stressing the important role of the Russian peasants, settlers, political exiles, etc. The peasants introduced agriculture in the upper and middle Lena, Olekma, Amga and Vilyuy River basins during the 17th century and in the Kolyma and Indigirka in the 19th. The gradual spread of farming to the Yakut population and their acceptance of agriculture as a subsidiary economy, particularly in the Yakutsk, Olekminsk and Vilyuysk districts, at the turn of the 18th century are discussed.

The equality of rights enjoyed by Yakut and Russian land-holders is stressed; the problem of unequal taxation (ſasak levied on Yakuts) is minimized and ascribed to the general tyranny of the tsarist and local chieftain's (toyon) administration. Statistical data are given on the 18th-19th century farming population (Russian and Yakut), sown and harvested crops (barley, wheat, rye, garden truck, etc.). A different view of the same question was expressed by the author in 1950 (No. 43898).

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49568. BASHARIN, GEORGIĬ PROKOP'EVICH. Rynok ĪAkutii konſsa xviii–pervoĭ poloviny xix vv. (Akademiſa nauk SSSR. Istoricheskie zapiski, 1956. t. 55, p. 289–309, tables.) 27 refs. Text in Russian. ***Title tr.:*** The market of Yakutia at the end of the 18th to the first half of the 19th centuries.

Discusses the importance of Yakutia as a clearing-house for Russia's trade with the entire Northeast from Olekma and Vilyuy to Okhotsk, Chukotka, Kamchatka, Bering Sea and Alaska. Yakutia's fairs and markets (for foreign and domestic trade), exports (pelts, mammoth and walrus tusks) and imports (textiles, household goods, grain, spirits), trade turnover, gradual transition from fur to monetary tribute, etc., are dealt with. The advantages for Yakutia derived from its integration into the Russian Empire are stressed and the resulting, though embryonic, industrial and economic development described. The fairs with seasons of operation and the local merchants with locations of their trading houses are listed. Nineteenth century statistics are given for: trade-turnover, workshops, laborers and their annual incomes, Russian and native urban and rural population, housing, etc.

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49569. BASHARIN, GEORGIĬ PROKOP'EVICH. Skotovodstvo i zemel'nyĭ vopros u tungusov ĪAkutii v posledneĭ treti xviii–pervoĭ treti xix v. (Akademiſa nauk. Institut istorii. Doklady i soobshcheniſa, 1957. vyp. 12, p. 121–27, table.) 13 refs. Text in Russian. ***Title tr.:*** Animal husbandry and land tenure problems of the Tungus of Yakutia in the last third of the 18th to the first third of the 19th century.

Discusses local opposition to Tungus holding land. By the 17th–18th century, cattle and horse breeding had spread from the Yakuts to the hitherto nomadic, reindeer-herding Tungus tribes, mainly in the Vilyuy River area. As the latter thus adopted a settled mode of life, they attempted to acquire pastures and hay fields, but encountered opposition from the long-established Yakuts. Statistical data collected in 1828–30 by the ſasak (fur tax) commissions on population and stock in the Yakutsk, Vilyuy, Verkhoyansk and Kolyma districts (tabulated) showed that 43.3% of all Tungus in Yukatia engaged in stock raising. But their land claims disputed as those of reindeer-herders rather than stockbreeders were recognized only on an *ad hoc* basis. Tungus rights to land in Yakutia remained unprotected by law until 1917.

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49570. BASHARINA, L. A. Vodnye vytſazhki pepla i gazy peplovoĭ tuchi vulkana Bezymſannogo. (Akademiſa nauk SSSR. Vulkanologicheskaſa stanſsiſa. Bſulleten', 1958. no. 27, p. 38–42, tables.) 3 refs. Text in Russian. ***Title tr.:*** Aqueous extracts of ash and gases of the Bezymyannyy Volcano ash cloud.

Presents results of mineralogical and chemical analyses of samples of ashes and gases ejected by eruptions and explosions of the Bezymyannyy Volcano Oct. 22, 1955–Mar. 30, 1956, and taken at Klyuchi and other localities 12–16 km. distant from the volcano. Tabulated data are given and discussed.

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BASHIROV, G. O., *see* Akademiſa nauk SSSR. ĪAkutskiĭ filial. Za sovetskuſ vlast' . . . *1957.* No. 49170.

49571. BASKAKOV, G. A., *and* **N. F. KUDRſAVTſSEV.** Dolgovremennye avtonomnye stanſsii nablſudeniĭ nad techeniſami v otkrytom more. (Problemy Arktiki, sbornik stateĭ, 1957, vyp. 2, p. 93–96, illus.) Ref. Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Autonomous stations for long-range observation on currents in the open sea.

In 1956, the Arctic Institute's Kara Sea Expedition used 19 autonomous stations with 30 Alekseev automatic recorders, attached to anchored buoys for current observations. The stations were set at 15 points 25–75 mi. from shore and 15–150 m. depth; the recorders were installed at 12 and 25 m. depth and operated from

two weeks to two months. Technical details of the setting up and recovery of the stations by the ice-breaker *Litke* and schooner *Aktiûbinsk* are described. The experiment was considered satisfactory though two stations were lost, and this method is to have wide use in the future. Chief engineer of the expedition, I. N. Ovsiânnikov was responsible for the technical part of the work.

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49572. BASKAKOV, G. A., *and* **A. V. KOPTEVA.** Èkspeditsiia po issledovaniiu techeniĭ Karskogo moria v 1956 g. (Problemy Arktiki, sbornik stateĭ, 1958, vyp. 3, p. 122–24, map.) Text in Russian. ***Title tr.:*** Expedition for studying currents of the Kara Sea in 1956.

Preliminary account (dated Nov. 26, 1956) of the work of an Arctic Institute party of 49 scientists headed by G. A. Baskakov, on the ice-breaker *F. Litke* and schooners *Aktiûbinsk* and *Buĭ*. The vessels left Murmansk on Aug. 4–10, and finished work Oct. 7 (*Litke*)–25 (the schooners). For the survey of currents (the main task of the expedition), scientific equipment included 36 current meters constructed by IU. K. Alekseev, for automatic recording of speed and direction, also 19 buoys, built by I. N. Ovsiânnikov, for setting up these meters. Distribution, duration and methods of observations of stations made by the expedition are shown schematically on text map. ***Copy seen:*** DLC.

BASKAKOV, G. A., *see* Kanaki, V. G. Èkspeditsii . . . 1957 godu. *1958*. No. 52155.

BASOV, V. A., *see* Saks, V. N., *and others*. Predvaritel'nye rezul'taty . . . iûrskikh . . . otlozheniĭ . . . Anabara . . . *1958*. No. 54522.

BASS, DAVID ELI, 1912– , *see* Iampietro, P. F., *and others*. Caloric intake . . . cold . . . *1957*. No. 51892.

BASS, DAVID ELI, 1912– , *see* Iampietro, P. F., *and others*. Caloric intake . . . cold . . . *1958*. No. 51893.

BASS, DAVID ELI, 1912– , *see* Iampietro, P. F., *and others*. Diurnal oxygen consumption and rectal temperature of man . . . cold . . . *1957*. No. 51894.

BASS, DAVID ELI, 1912– , *see* Iampietro, P. F., *and others*. Effect of food, climate and exercise on rectal temperature . . . *1957*. No. 51895.

BASS, DAVID ELI, 1912– , *see* Iampietro, P. F., *and others*. Effects . . . food, climate . . . rectal temperature . . . *1957*. No. 51896.

BASS, DAVID ELI, 1912– , *see* Iampietro, P. F., *and others*. Heat exchanges . . . cold . . . humidity, temperature and windspeed. *1958*. No. 51898.

BASS, DAVID ELI, 1912– , *see* Iampietro, P. F., *and others*. Heat exchanges . . . nude men . . . cold . . . *1958*. No. 51897.

BASS, DAVID ELI, 1912– , *see* Kreider, M. B., *and others*. Effect . . . cold exposure on nocturnal body temperatures of man. *1958*. No. 52481.

BASS, DAVID ELI, 1912– , *see* Kreider, M. B., *and others*. Oxygen consumption and body temperatures during the night. *1958*. No. 52482.

BASS, DAVID ELI, 1912– , *see* Wood, J. E., *and others*. Responses of peripheral veins of man . . . cold exposure. *1958*. No. 56105.

BATA, A., *see* Šahović, K., *and others*. Periferna motorna nervna ekscitabilnost . . . *1956*. No. 54498.

BATA, A., *see* Šahović, K., *and others*. Uloga pojedinih organa . . . hipotermiji. *1956*. No. 54499.

BATA, A., *see* Šahović, K., *and others*. Uticaj hipotermije . . . *1956*. No. 54500.

49573. BATALOV, I. U beregov Podkamennoĭ Tunguski. (Okhota i okhotnich'e khoziâĭstvo, Apr. 1957, no. 4, p. 20.) Text in Russian. ***Title tr.:*** On the banks of the Podkamennaya Tunguska.

Sketches hunting and trapping of the Ket (Yeniseian) hunters of Sulomay (approx. 61°40′ N. 91°17′ E.): beginning of the use of traps for sables, trailing and killing bear, etc. ***Copy seen:*** DLC.

49574. BATES, CHARLES CARPENTER, 1918– . Current status of sea ice reconnaissance and forecasting for the American Arctic. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 285–322, maps, graphs, tables.) 14 refs.

A typical, comprehensive monthly ice briefing for the eastern American Arctic in April 1956 is presented to illustrate

the observing and forecasting of sea ice conditions as developed by the U.S. Navy since 1949. Steps in preparing the long-range ice outlook are outlined, and the resulting forecast charts are reproduced. Meteorological data and sea-ice conditions are tabulated and mapped. The ice service was developed to facilitate supply operations of the Military Sea Transport Service. The reporting system is based on shore and ship observations combined with air reconnaissance. The observations, forecasts (48 hr., 5 day, 30 day) and outlooks (120–180 days) are appraised. Some of the research projects are discussed. The U.S. Navy Hydrographic Office ship ice log is appended.
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BATES, CHARLES CARPENTER, 1918– , *see also* Winchester, J. W., *and* C. C. Bates. Meteorological . . . ice distribution in the Chukchi Sea . . . summer 1955. *1958.* No. 56083.

49575. BATES, D. E. B., *and* **W. SCHWARZACHER.** The geology of the land between Ekmanfjorden and Dicksonfjorden in central Vestspitsbergen. (Geological magazine, May–June 1958. v. 95, no. 3, p. 219–33, maps, diagrs.) 11 refs.

Results of work on this peninsula (78°40′ N. 15° E.) by a two-man party of the Queens University (Belfast) Expedition to Spitsbergen July 1957. "Devonian sandstones are overlain unconformably by a Permo-Carboniferous sequence of limestones (200 m.) and dolomites and gypsum (300 m.). This is followed by more than 150 meters of Permian cherts. The strata show a slight but consistent dip towards the SSE. A fault having the trend of this dip has been proved in Ekmanfjorden. Sills are intruded in the higher levels of the succession and it is suggested that the intrusions are contemporaneous with the faulting. By comparing the lithology the area can be correlated with the known sections of Billefjorden and Kongsfjorden."—Author's abstract.
Copy seen: DGS.

BATES, R. G., *see* Houston, J. R., *and others.* Reconnaissance for radioactive deposits . . . *1958.* No. 51823.

49576. BATESON, PAUL P., *and* **E. K. BARTH.** Notes on the geographical variation of the ringed plover *Charadrius hiaticula* L. (Nytt magasin for zoologi, 1957. v. 5, p. 20–25, map, 2 tables.) 16 refs.

Contains wing length measurements (in mm.) of *Charadrius hiaticula* from various parts of its range: northern Scandinavia, Greenland, Spitsbergen; also measurements of eggs (northern Scandinavia). Too little material is forthcoming from arctic Russia and Siberia to form any definite conclusion about the ranges of *C. h. tundrae* and *C. h. placidus.*
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49577. BATHEN, REIDAR. Island-Norge; beretning om islendingenes tur til Troms år 1949. (Tidsskrift for skogbruk, June 1950. årg. 58, hefte 6, p. 136–40, illus.) *Also pub. in:* Skogen, *Oslo,* 1951, årg. 16, hefte 4, p. 38–42. Text in Norwegian. ***Title tr.:*** Iceland-Norway, account of the Icelanders' trip to Troms, 1949.

Describes a trip made by young Icelanders to Troms to study cultivation of forests and take part in forest planting. The trip was part of an exchange program.
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49578. BATIEVA, I. D. Shchelochnye granity raĭona Kanozero-Kolvitskoe ozero. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 146–79, illus., tables, diagrs., fold. map and text map.) Text in Russian. ***Title tr.:*** Alkaline granites of the Kanozero-Kolvitskoye Lake district.

Describes alkaline granites in this 170 km.² area (approx. 67° N. 34° E.) in southwest Kola Peninsula. Geologic structure and cross-section of the country rocks are described. According to petrographic composition, the alkaline granites are distinguished into two groups: those to which belong widespread alkaline gneissose-granites, alkaline gneiss-blastomylonites, aplite-like and aplite granites; and the alaskites and pegmatoid granites. Both groups occur in eight-nine various intrusions which are characterized and shown on map (p. 153). Structural features and mechanics are outlined. Petrographic characteristics of alkaline granites and alaskites are treated and the component minerals, optical constants, texture and other properties outlined. Characteristics of chemical composition are presented, and mode of development characterized. ***Copy seen:*** DLC.

49579. BATTISTA, ARTHUR F. Effects of cold on evoked cortical potentials in the rat. (American journal of physiology,

Nov. 1957. v. 191, no. 2, p. 209–212, illus.) 18 refs.

When the animals were cooled, the primary response to sciatic stimulation increased in size to a maximum of 26° to 20° C. of calculated brain temperature. The primary response could be evoked down to a temperature of 15° to 13° C. On rewarming, the response reappeared at 18° to 25° C. ***Copy seen:*** DNLM.

BAUER, ALBERT, 1916– , *see* Court, A., *and others*. The classification of glaciers. *1957*. No. 50358.

49580. BAUER, WALTER, 1904– . Die langen Reisen; eine Nansen-Biographie. München, Kindler Verlag, 1956. 327 p. ports., illus., map. Text in German. ***Title tr.:*** The long journey; a biography of Nansen.

The first half of this book is devoted to Nansen's early scientific studies and arctic endeavors: his first visit to Greenland; the first crossing of Greenland and his life with the Eskimos; planning and execution of the *Fram* voyage, the march across the ice in the Arctic Basin; overwintering in Franz Joseph Land, and the return of the entire party. One chapter describes Nansen's Siberian journey. The latter half of the book reviews his humanitarian work after World War I. The history of earlier arctic exploration and its post-war developments to 1930, the year of his death, are briefly summarized.

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49581. BAUGH, CHARLES WILLIAM, 1927– , *and others*. Blood volumes of Eskimos and white men before and during acute cold stress. (Journal of physiology, Mar. 1958. v. 140, no. 3, p. 347–58, illus. tables.) 32 refs. *Other authors:* G. S. Bird, G. M. Brown, C. S. Lennox *and* R. E. Semple.

Plasma volumes in a group of Eskimos were found to be significantly greater than those in a group of whites, and resulted in high blood volumes. Eskimo hematocrit was lower but red cell volume not different; protein concentrations in Eskimo plasma were also higher. The high blood and plasma volumes are believed to be a feature of cold acclimatization, which is discussed together with the experimental results.

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49582. BAULIN, V. V. K voprosu ob istorii razvitiâ mnogoletnemerzlykh porod na severe Zapadno-Sibirskoĭ nizmennosti. (Moskva. Universitet. Vestnik, ser. biologii, pochvovedeniâ, geologii, geografii, 1958, no. 1, p. 163–71, diagrs., text map.) 11 refs. Text in Russian. ***Title tr.:*** On the question of the historical development of long-lasting frozen strata in the north of the West-Siberian lowland.

Presents data and results of investigations on the origin, age, thickness, forms and distribution of permafrost ground in the area approx. 61°–68° N. 64°–86° E.; based on geologic and paleogeographic studies carried out by the permafrost division of Moscow University in 1951–1957. Previous studies are evaluated; climatic fluctuations during the Quaternary period are reviewed. With the specially constructed hydrointegrator IG–1, the duration of freezing and thawing processes for the 90,000-year period was figured out and data are presented. Two frozen ground layers are recognized and their development is discussed. Partial thawing of long-lasting frozen strata to 60–200 m. depth is considered and the age of this phenomenon is given.

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BAUMGARDNER, F. M., *see* Mardoian, M. G., *and others*. Winterization of construction equipment . . . *1957*. No. 53128.

BAUMGARTNER, J., *see* Petrak, F., *and* J. Baumgartner. Schedae ad Cryptogamas exsiccatas . . . *1958*. No. 53963.

49583. BAVYKINA, I. God, v kotorom 18 mesâtsev. (Pioner, June 1957. god 34, no. 6, p. 17–21, illus.) Text in Russian. ***Title tr.:*** The year that has 18 months.

Describes Soviet research planned for IGY: the non-magnetic vessel *Zarâ* to be used for studies in earth magnetism, sonic depth-sounding explorations in the North Pacific, especially the Kuril Trench, with the research vessel *Vitâz'*, etc. ***Copy seen:*** DLC.

49584. BAXTER, DOW VAWTER, 1898– . Observations on forest pathology as a part of forestry in Europe. Ann Arbor, 1933. 39 p. illus., 8 plates. (Michigan. University. School of forestry and conservation. Bulletin no. 2.) 29 refs.

Contains an analysis and interpretation of the part played by forest pathology in the practice of forestry in certain sections of Europe, with a discussion of specific fungi causing various diseases. The willow rust (*Melampsora salicina*) is prevalent in Norway and Sweden. Ob-

servations in Abisko, Torne Lappmark, show the degree of infection of the willow species. *Dasyscypha fuscosanguinea* causing canker, was found abundant on Scotch pine near Gällivare in Lapland. No doubt exists that this pest would be dangerous if introduced into northwestern United States, Canada and Alaska. Many fungi attack stumps. *Polyporus borealis* is common in northern Norway on spruce. ***Copy seen:*** DLC.

49585. BAXTER, DOW VAWTER, 1898– , *and* W. E. MANIS. *Polyporus ellisianus* (Murr.) Sacc. & Trott and *P. anceps* PK. in culture: a study of isolates from widely separated forest species. (Michigan Academy of Sciences, Arts and Letters. Papers, 1939 (1938 meeting). v. 24, pt. 1, Botany and forestry, p. 189–95, 2 illus., 3 plates.) 7 refs.

Contains a study of cultures of these two wood-destroying fungi, considered synonymous by various investigators. The cultures originated from widely separated forest localities, including Fort Wrigley, Northwest Territories. It is concluded "that the known morphological distinctions (largely in habit of growth) are not great enough to separate the two as species." ***Copy seen:*** DLC.

49586. BAXTER, DOW VAWTER, 1898– . *Saprolegnia* on Kodiak; the great big bear and the infinitesimal fungus. (Michigan alumnus, quarterly review, Spring 1956. v. 62, no. 18, p. 243–45, illus.) Refs.

Popular account of author's observations of the Kodiak brown bear at Karluk Lake: stalking, marking for census, etc. Two methods of bear marking are described: shooting a bolt tipped with a thin glass bulb containing paint, or fastening a paint bottle over a beartrail to be tripped by the passing animal. These bears rid the streams and lakes of dead and dying salmon, thus preventing an epidemic spread of *Saprolegnia* fungus infection. Grazing lands are encroaching on bear territory and depredations on cattle are to be expected.

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49587. BAXTER, DOW VAWTER, 1898– . Some resupinate Polypores from the region of the Great Lakes, V–XXVI. (Michigan Academy of Science, Arts and Letters. Papers, meetings of 1933–1954, *pub.* 1934–1955:

V, *pub.* 1934, v. 19, p. 305–332, illus. 6–8, plates 58–65, table;

VI, 1935, v. 20, p. 273–81, 2 tables;

VII, 1936, v. 21, p. 243–67, plates 30–39, table;

VIII, 1937, v. 22, p. 275–95, plates 31–37, table;

IX, 1938, v. 23, p. 285–305, 9 plates, table;

X, 1939, v. 24, pt. 1, Botany and forestry, p. 167–88, 7 plates, table;

XI, 1940, v. 25, pt. 1, p. 145–70, 12 plates, table;

XII, 1941, v. 26, pt. 1, p. 107–121, 7 plates;

XIII, 1942, v. 27, pt. 1, p. 139–61, 4 text maps, 4 tables;

XIV, 1943, v. 28, pt. 1, p. 215–33, 6 plates, table;

XV, 1944, v. 29, pt. 1, p. 85–109, 6 plates;

XVI, 1945, v. 30, pt. 1, p. 175–91, 14 plates;

XVII, 1947, v. 31, pt. 1, p. 117–30, 5 plates;

XVIII, 1948, v. 32, pt. 1, p. 189–211, 10 plates;

XIX, 1949, v. 33, pt. 1, p. 9–30, 9 plates, table;

XX, 1950, v. 34, pt. 1, p. 41–56, 6 plates;

XXI, 1951, v. 35, pt. 1, p. 43–59, 6 plates;

XXII, 1952, v. 36, pt. 1, p. 69–83, illus., 8 plates, table;

XXIII, 1952, v. 37, pt. 1, p. 93–110, 18 plates, 2 tables;

XXIV, 1953, v. 38, pt. 1, p. 115–23, 5 plates, table;

XXV, 1954, v. 39, pt. 1, p. 125–38, 2 illus., 6 plates, table;

XXVI, 1955, v. 40, pt. 1, p. 91–108, 6 plates.) 254 refs. (at ends of the parts).

A taxonomic study of North American polypores, their geographic distribution and natural and artificial ranges, reaction to different environments, and responses to various substrates, their hosts (woody plants); the reaction in cultures and importance of these fungi as forestry pests. More than four hundred species are treated in the parts of this work so far published, and about 20 of them are described as new. Parts I–IV of the study deal with polypores from the Great Lakes region exclusively, and include no arctic species; pts. V–XXVI, present results of field work conducted throughout the continent, from the Arctic to the southern limits of the United States, through all the Canadian provinces, and especially the Yukon and Northwest Territories.

More than a hundred species native to all sections of Alaska and northern Canada are treated in pts. V–XXVI, a few arctic species described as new. The study is still in progress.

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49588. BAXTER, DOW VAWTER, 1898– . Unforgettable river, unforgettable pilot; once more up the Stikine. (Michigan alumnus quarterly review, Spring 1958. v. 64, no. 18, p. 252–57, illus.) 2 refs.

Recounts a four-day steamboat trip up the Stikine River, Southeast Alaska, to a base camp 13 miles south of Telegraph Creek, to collect information on wood-destroying fungi in the Stingy Mountain area. The river, river fishing, etc., are described; the swift current shortened the return trip to 12 hours.

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49589. BAYLY, M. B. The Lower Hecla Hoek rocks of Ny Friesland, Spitzbergen. (Geological magazine, Sept.–Oct. 1957. v. 94, no. 5, p. 377–92, 3 illus., 3 text maps, 2 tables.) 16 refs.

The Lower Hecla Hoek rocks in northwestern Spitsbergen are described petrographically and assigned to definite positions in the facies classification of metamorphic rocks. The facies boundaries are parallel to the fold-axes and the line of greatest intensity coincides with a major structural arch. Observations confirm the belief that severe facies depend on depth and evidence is presented relating to some granitic rocks in this group whose mode of origin is uncertain. ***Copy seen:*** DGS.

BAZHENOV, V., *see* Fedorako, B., *and* V. Bazhenov. Okhotovedenie . . . *1958*. No. 50854.

BAZHENOVA, T. K., *see* Chaĭkovskaĭa, E. V. Bituminoiogicheskaĭa kharakteristika . . . *1958*. No. 50158.

49590. BEAL, M. A. Sea-level studies at Point Barrow, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1905.)

Contains abstract of a paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957. Describes a tide station, suitable for arctic use, designed and installed at Point Barrow as part of the IGY sea-level study. Analysis of six months' records reveals changing sea levels daily up to 2 ft., monthly up to 5 in., and a 20- to 30-minute oscillation of small amplitude. Comparisons are made with Russian sea-level data from the Siberian Arctic.

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49591. BEALS, CARLYLE SMITH, 1899– , *and others*. A search for analogies between lunar and terrestrial topography on photographs of the Canadian Shield. (Royal Astronomical Society of Canada. Journal, Sept.–Oct., Nov.–Dec. 1956. v. 50, no. 5, 6, p. 203–211, 250–61, illus., map.) 20 refs. *Other authors:* G. M. Ferguson *and* A. Landau.

Correlations between lunar craters and terrestrial meteorite craters and evidence of their similar origin are reviewed. A study of Canadian aerial photographs revealed nine craters or crater-like objects near Great Slave Lake, on Baffin Island, in Quebec, Labrador, etc. Four of the nine are attributed to volcanic action; the others may have been due to meteorite impact. ***Copy seen:*** DLC.

49592. BEALS, RALPH L. Father Acosta on the first peopling of the New World. (American antiquity, Oct. 1957. v. 23, no. 2, pt. 1, p. 182–83.)

Refers to R. L. Ives' (No. 45754) discussion on the beginnings of the Asiatic origin theory of American aboriginals and cites Father José de Acosta's *História Natural y Moral de las Indias*, pub. in 1590 (copy in DLC). Acosta speculated on possible landbridges in unexplored northern and southern latitudes and suggested the probability of an overland migration from Asia by small groups of hunters rather than long-distance ocean crossings.

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49593. BEAULNES, A., *and* M. DAY. Effect of temperature on arrhythmia in isolated rabbit atria. (Journal of physiology, June 1957. v. 137, no. 1, p. 86–94, illus., tables.) 21 refs.

Arrhythmias produced at 37° C. diminished and often ceased altogether with falling temperature. High temperatures were more favorable for production of arrhythmias under the same experimental conditions. Action potential had a longer duration at lowered temperature.

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49594. BEAVAN, A. P. The Labrador uranium area. (Geological Association of Canada. Proceedings, Dec. 1958. v. 10, p. 137–45, fold. map.) 13 refs.

Describes the extent, geology, and mineral occurrences of Precambrian rocks

east of Seal Lake, supplementing Evans' account of the geology and copper occurrences (No. 21719). Much of the 2500 sq. mi. belt between Seal Lake and the coast at Makkovik (55°N. 59°10′W.), is underlain by folded sedimentary and volcanic rocks, termed the Croteau Series in the west and the Aillik Series on the coast, but considered to be the same. Pitchblende was discovered in 1954 ten miles south of Makkovik and at numerous sites subsequently. The distribution and variety of radioactive occurrences mark the area as potentially productive; geologically and mineralogically it is similar to the Beaverlodge and Great Bear Lake deposits. It should be termed the Kaipokok (not Labrador) uranium area. ***Copy seen:*** DGS.

49595. BEAVERS, WILLIAM R., *and* **B. G. COVINO.** Antifibrillary effects of glycine in hypothermia. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 281.)

Summary of experiments with dogs made hypothermic with and without surgical insult. Intravenous administration of glycine eliminated cardiac arrhythmias, reduced the incidence of ventricular fibrillation and increased survival.

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49596. BEAVERS, WILLIAM R., *and* **B. G. COVINO.** Evaluation of glycine in frostbite prophylaxis. Ladd Air Force Base, Nov. 1957. 13 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57-24.) 9 refs.

In an environment of −17.8° C. (0° F.) young, adult males showed increased metabolism two hours after ingestion of glycine. They also showed increased toe, forehead and average body temperatures, and higher forefinger blood flow than their own controls. Thus glycine may be applicable for raising heat production in cold environment.

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49597. BEAVERS, WILLIAM R., *and* **B. G. COVINO.** Glycine as an antifibrillary agent in hypothermia. Ladd Air Force Base, March 1958. 9 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57-29.) 11 refs.

Dogs were given 5% glycine intravenously and subsequently chilled to terminus, with others submitted to experimental surgical intervention or venous occlusion. Glycine reduced ventricular fibrillation from 96 to 0% in the hypothermic group and from 93 to 29% in that with additional cardiac surgery.

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49598. BEAVERS, WILLIAM R., *and* **B. G. COVINO.** Relationship of potassium and calcium to hypothermic ventricular fibrillation. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 347.)

Dogs cooled to terminus showed 96% ventricular fibrillation, no change in plasma calcium concentration but a fall in plasma potassium. Animals similarly cooled and receiving potassium chloride infusions showed ventricular fibrillation in 57% of cases, and in 50% only when potassium chloride and a chelating agent were used. ***Copy seen:*** DNLM.

BEAVERS, WILLIAM R., *see also* Adams, T., *and others.* Racial variations . . . cold stress. *1957.* No. 49113.

BEAVERS, WILLIAM R., *see also* Covino, B. G., *and* W. R. Beavers. Cardiovascular response to hypothermia . . . acclimatization. *1957.* No. 50361.

BEAVERS, WILLIAM R., *see also* Covino, B. G., *and* W. R. Beavers. Cardiovascular response to hypothermia; effect . . . acclimatization. *1958.* No. 50362.

BEAVERS, WILLIAM R., *see also* Covino, B. G., *and* W. R. Beavers. Changes in cardiac contractility . . . immersion hypothermia. *1958.* No. 50363.

BEAVERS, WILLIAM R., *see also* Covino, B. G., *and* W. R. Beavers. Effect of cold . . . isolated and intact rabbit heart. *1958.* No. 50364.

BEAVERS, WILLIAM R., *see also* Covino, B. G., *and* W. R. Beavers. Effect of hypothermia on ventricular fibrillary threshhold. *1957.* No. 50365.

BEAVERS, WILLIAM R., *see also* Covino, B. G., *and* W. R. Beavers. Hind limb blood flow . . . hypothermia. *1957.* No. 50366.

BEAVERS, WILLIAM R., *see also* Covino, B. G., *and* W. R. Beavers. Hind limb blood flow . . . hypothermia. *1957.* No. 50367.

49599. BECKEL, DOROTHY K. (BROWN). Studies on seasonal changes in the temperature gradient of the active layer of soil at Fort Churchill, Manitoba. (Arctic, 1957. v. 10, no. 3, p. 151-83,

7 tables, map, 20 graphs, diagr.) 16 refs.

Reports Canadian Defence Research Board's study, 1950–54. Experiments on rates of freeze and thaw of the active layer are described, showing the effects of surface cover, snow cover and characteristics determining the ability of the soil to conduct and absorb heat. Soil temperatures at varying depths were obtained at stations in swamp and high, dry areas of forested and non-forested localities by means of copper-constantan thermocouples and a portable potentiometer. Snow depth, water level measurements and snow temperatures were recorded for part of the time. Correlations between ambient air temperatures and soil temperatures at varying depths and with varying moisture content, ground and snow covers are presented in graphic and tabular form and discussed; also changes in snow temperature at different depths. Findings show a lag, increasing with depth and longest in relatively dry areas, of soil temperature behind ambient air temperatures; and variations in the effect of snow cover according to its hardness, moisture content and depth. The thermal gradient of the snow is affected by changes in temperature of the ambient air and of the soil, ice or water below it.

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49600. BECKEL, W. E. Investigations of permeability, diapause, and hatching in the eggs of the mosquito *Aedes hexodontus* Dyar. (Canadian journal of zoology, Aug. 1958. v. 36, no. 4, p. 541–54, illus., table.) 29 refs.

Contains description of methods of obtaining and separating eggs from this common North Canadian species. A study of its development showed two changes in permeability during the prediapause, which are described and analyzed. Diapause was obligate and not broken by moisture or alternate periods of light and darkness. Low temperature (1° and −3° C.) terminated the diapause but the number of eggs hatched did not increase with the time of exposure to cold. ***Copy seen:*** DLC.

49601. BECKEL, W. E. Observations on the rearing of larvae, pupae, and adults of some *Aedes* mosquitoes of northern Canada. (Canadian journal of zoology, Oct. 1958. v. 36, no. 5, p. 797–808.) 6 refs.

Account of experiments and observations, largely with *A. communis* from the vicinity of Churchill, Man. Collection, environment, feeding and rearing of larvae, rearing of adults (including feeding, mating and oviposition) are described and compared with conditions in the open and with the natural biology of these insects.

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BECKER, DAVID A., *see* Harkema, R., *and others. Trichobilharzia alaskensis,* a new . . . schistosome . . . Alaska. *1957.* No. 51589.

49602. BECKETT, EVA. Cedar waxwings at Churchill, Manitoba. (Canadian field-naturalist, July–Sept. 1958. v. 72, no. 3, p. 145–46.)

Contains record of two, June 26, 1957.

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49603. BECKETT, EVA. Red-shafted flicker and American coot at Churchill, Manitoba. (Canadian field-naturalist, Oct.–Dec. 1958. v. 72, no. 4, p. 168.)

Describes the flicker, *Colaptes cafer collaris,* captured on June 4, 1957, and coot, *Fulica americana,* found dead on June 5, 1957. ***Copy seen:*** DA.

BECKETT, EVA, *see also* Crosby, J., *and* E. Beckett. Rock wren . . . *1957.* No. 50393.

49604. BECQUEREL, PAUL. La mort par le gel de la cellule végétale dans l'azote liquide à −190°. (Académie des Sciences, *Paris.* Comptes rendus, 1937. t. 204, no. 17, p. 1267–69, illus. table.) Ref. Text in French. ***Title tr.:*** Death of the plant cell from freezing in liquid nitrogen of −190°.

Description of microscopic phenomena appearing in the onion epidermis during and after freezing to −190° C. for 10 min. to 21 days. Death is claimed to be due to syneresis, i.e., separation of the cellular liquid from its colloidal components, which is not reversed upon thawing.

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BEDER, B. A., *see* Fomin, V. M., *and others.* O razvitii . . . termal'nye vody . . . *1958.* No. 50943.

49605. BEDERKE, E. Zur Geologie und Geophysik der Tiefen. (Geologische Rundschau, 1957. Bd. 46, Heft 1, p. 229–45, text map, cross-section, graph.) Approx. 30 refs. Text in German. Summary in English, p. 260. ***Title tr.:*** On the geology and geophysics of the depths.

Includes (p. 242–44) brief discussion and review of the literature on paleomagnetism as related to polar wandering and

paleogeographical questions such as continental drift. Map shows various apparent positions of the north pole from Precambrian to Miocene.

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49606. BEE, JAMES W. Birds found on the Arctic Slope of northern Alaska. Lawrence, Kansas, 1958. 165–211 p., illus., map. (Kansas. University. Museum of Natural History. Publications, v. 10, no. 5.)

Account of field studies made during the summers of 1951 and 1952. Included are: the itineraries, synonyms of species, and account of observations on individual forms concerning sexual condition, nests and eggs, occurrence, behavior and call, habitat, enemies, food, sometimes size and weight, etc. Forty-four species were collected and are described; 29 others seen, are noted ***Copy seen:*** DI.

BEEBE, JOHN FRED, *see* Jakobson, R., *and others.* Paleosiberian . . . bibliographical guide. *1957.* No. 52044.

49607. BEER, ROBERT EDWARD, 1928– , *and* D. T. DAILEY. Biological and systematic studies of two species of cheyletid mites, with a description of a new species; Acarina, Cheyletidae. (Kansas. University. Science bulletin, Dec. 20, 1956. v. 38, pt. 1, no. 5, p. 393–437, 6 plates.) 34 refs. *Pub. also as:* Contrib. no. 893 from Dept. of Entomology, University of Kansas.

Includes a description of development stages of *Cheyletus eruditus,* a cosmopolitan species, occurring in Greenland. It was reported on many occasions, yet its complete development history, has been unrecorded prior to the publication of this paper. ***Copy seen:*** DLC.

49608. BEETLE, ALAN ACKERMAN, 1913– . A key to the North American species of the genus *Scirpus* based on achene characters. (American midland naturalist, Mar. 1943. v. 29, no. 2, p. 533–38, 45 illus.)

Contains a key, illus., and distributional data to 45 species of this cyperaceous genus, among them *S. cespitosus* var. *callosus* (Greenland, Labrador, Alaska), *S. hudsonianus* (Labrador), and *S. microcarpus* (Alaska). ***Copy seen:*** DLC.

49609. BEHMANN, F. W., *and* E. BONTKE. Die Regelung der Wärmebildung bei künstlicher Hypothermie, 1; experimentelle Untersuchungen über den Einfluss der Narkosetiefe. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 266, Heft 4, p. 408–421, illus.) 16 refs. Text in German. ***Title tr.:*** Regulation of heat production in artificial hypothermia, 1; experimental investigations on the effect of depth of narcosis.

Accounts of experiments with intravasally cooled dogs (rectal temperature 25° C.) under various degrees of Pernocton-narcosis. Nervous regulation is still superimposed during deep narcosis and minimal metabolism above some 31° C.; below that temperature, however, regulation concerns mainly maintenance of respiration. In shallow narcosis O_2-consumption shows an increasing trend with a maximum dependent on degree of narcosis. ***Copy seen:*** DLC.

49610. BEHMANN, F. W. Die Regelung der Wärmebildung bei künstlicher Hypothermie, 2; theoretische Untersuchungen. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 266, Heft 4, p. 422–46, illus.) 27 refs. Text in German. ***Title tr.:*** Regulation of heat production in artificial hypothermia, 2; theoretical investigations.

Author develops a mathematical theory of temperature regulation in hypothermia. It demonstrates how the amount of heat production can be regulated through central and peripheral temperature stimuli and how this regulation is quantitatively affected by the Arrhenius relation and by narcosis. Two diagrams make it possible to determine (on the basis of some experimental data) the sensitivity of the thermoregulatory centers as well as the heat producing capacity of the organism.

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BEHRENDT, J., *see* Thiel, E., *and others.* The thickness of Lemon Creek Glacier . . . *1957.* No. 55399.

49611. BEIGBEDER, P. A., *and others.* Report on Greenland operation, 1955–1956. Fort Belvoir, Va., 1957. 14 p. illus., diagr. (U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–1956, v. 1. ERDL report.) *Other authors:* L. A. Smitherman, *and* H. W. Leathers, *Jr.*

The Engineer Research and Development Laboratories' activities were concentrated on four projects, dealing with: snow compaction, trailmarking, detection of crevasses, and use of new or modified tractors in support of Transportation Corps; results of the work are summar-

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ized; equipment (illus.), plans, tests, etc. are noted. ***Copy seen:*** CaMAI.

BEKKER, M. G., *see* Weiss, S. J., *and others.* Preliminary study of snow values . . . *1956.* No. 55981.

49612. BEKLEMISHEV, K. V. The interrelations between phyto- and zooplankton in the Behring and Okhotsk Seas. (Pacific Science Congress, 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 180.)

Causes of direct and inverse relationships of copepods and phytoplankton in these seas are considered. There are no general determinants for plankton distribution, the major factors being movement of biological seasons from the south northward, and difference of seasonal states of adjacent plankton communities.

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49613. BÉLAND, R., *and* **P. É. AUGER.** Structural features of the northern part of the Labrador Trough. (Royal Society of Canada. Transactions, June 1958. ser. 3, v. 52, sect. 4, p. 5–15, fold. map., cross-sections.) 24 refs.

Describes area, approx. 58°–61° N. 69°–71° W., from Lake Gérido to Roberts Lake and the basin around Lake Armand to the northwest, the northernmost in a series of sinks and saddles exposed for almost 100 mi., which terminates the Trough in the north. A half graben, it is structurally asymmetrical, with all folds having the same northwest-southeast trend. Lithologically the main part is asymmetrical but the Payne Bay-Roberts Lake segment is symmetrical, with the same sedimentary formations outcropping on both sides. This facilitates locating the eastern boundary of the Trough in this area; elsewhere it is a major problem. On the evidence of partly granitized, highly metamorphosed metasediments older than the Proterozoic Trough rocks, the suggestion is made that some of the other high-rank pararocks recognized along the eastern boundary may not be coeval with the Proterozoic Trough rocks and that the boundary should be sought stratigraphically above them. At Hopes Advance Bay, the structure distribution and composition of the iron-bearing sediments seem to confirm the known theories on deposition of iron-formation in lagoonal basins.

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49614. BELĚHRÁDEK, JAN. Physiological aspects of heat and cold. (Annual review of physiology, 1957. v. 19, p. 59–82.) 251 refs.

A review of representative literature (since publication of No. 49615) selected from some 3000 items published in the field. The second section deals with the effect of temperature on the rate of physiological processes (temperature coefficients, theories of absolute rates and of "breaks", role of diffusion, etc.). The third section, on low temperature effects, covers problems of chilling and freezing, supercooling, ice formation, frost resistance; cold hemolysis, vitrification, protoplasmic contraction, cold-injury.

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49615. BELĚHRÁDEK, JAN. Temperature and living matter. Berlin, Borntraeger, 1935. 10, 277 p. illus., tables. About 1,200 refs.

A comprehensive "concise, but well documented summary of the facts and theories hitherto published" with emphasis on cellular and physico-chemical aspects. Consecutive sections deal with the principles of biological temperature action; rate of biological processes at biokinetic temperatures; temperature coefficients as affected by external and internal factors; theories of temperature coefficients; chemical and physical properties of living systems at biokinetic temperatures; variations of morphological equilibria at such temperatures; freezing and frost resistance (freezing, supercooling, limits of frost resistance, causes of death by freezing, cellular changes due to frost, internal factors, etc.) chilling, chill-coma and death by chilling (general and historical aspects, biological zero of vital activities, cellular changes due to cold, internal and time factors, etc.); heat injury and heat resistance; stimulative action of temperature. A subject index is appended to the bibliography and author index. ***Copy seen:*** DNLM.

49616. BELĬAEV, D. K. Rol' sveta v upravlenii biologicheskimi ritmami mlekopitaŭshchikh. (Zhurnal obshcheĭ biologii, Jan.–Feb. 1950. t. 11, no. 1, p. 39–51, table.) 19 refs. Text in Russian. ***Title tr.:*** The role of light in the control of biological rhythms of mammals.

A general account of the effect of light on mammalian reproduction, on molt and growth of hair; with report of author's observations on foxes, light requirements at different ages; relation of problem to Lysenko's teachings. ***Copy seen:*** DLC.

BELÎAEV, S. V., *see* Makarova, L. A., *and others.* Pochvennoe raĭonironvanie. *1958.* No. 53063.

49617. BELÎAEVA, ANNA VASIL'EVNA. Russkie na Kraĭnem Severe; istoriko-geograficheskiĭ ocherk Magadanskoĭ oblasti. Magadan, Oblastnoe knizhnoe izd-vo, 1955. 73 p. illus., 2 fold. maps. 20 refs. Text in Russian. ***Title tr.:*** Russians in the far North; an historical and geographic sketch of Magadan Province.

Russian expansion into northeasternmost Asia is outlined by one of the present-day native (Kamchadal) intelligentsia. The general geography, climate and economy of the area is described. Magadan Province, created on Dec. 3, 1953, has an area of 1,100,000 sq. km. and extends from Magadan to Vrangel Island in the north and Cape Dezhneva on the east. Russian conquest and exploration from the Cossacks in the 16th century, and peoples native to the region: Tungus, Yukaghirs, Yakuts, Chukchis, Koryaks, Kamchadals, Eskimos, are sketched (p. 14–44). Conditions during the tsarist period and the educational, economic and industrial development, progress of acculturation and collectivization, etc., in Soviet time are described. Dal'stroĭ (Main Administration for Construction in the far North, Glavnoe Upravlenie Stroitel'stva Dal'nego Severa), set up in 1931 as State Trust for Roads and Industrial Construction in the upper Kolyma area, and its activities (p. 57–59), and rise of the town of Magadan (p. 67) are noted. Fold. maps show: (1) routes of Dezhnev, Erastov and Moskvitin expeditions; (2) the boundaries and principal towns of Magadan Province.

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49618. BELÎAEVSKIĬ, N. A. Itogi soveshchaniîa po obobshcheniîu opyta provedeniîa geologicheskoĭ s"emki i poiskov. (Sovetskaîa geologiîa, May 1958. god 1, no. 5, p. 141–45.) Text in Russian. ***Title tr.:*** Results of the conference for exchange of experience on geologic mapping and prospecting.

Reports conference held in Leningrad, Feb. 25–Mar. 1, 1958, under auspices of the All-Union Geological Institute of the U.S.S.R., with 228 participants, representing more than 40 organizations. Its purpose was to pool experience and to develop plans for 1959–1965. Some 60 scientific reports were presented in the plenary sessions. Exhibits included geologic maps of U.S.S.R. and foreign countries, materials on air mapping methods, and on regional geophysics, prospecting equipment, laboratories, etc. The 1959–1965 nine-point program is stated: continuing and completing various geologic maps, etc. As of Feb. 1, 1958, geologic mapping at scale 1:1,000,000 to 1:500,000 was completed for 98.7% of U.S.S.R. territory; at 1:200,000 to 1:100,000, for 39.5%; and at 1:50,000 or larger, for 6.2%. Kola Peninsula and Karelian A.S.S.R. are mapped on a scale of 1:200,000. ***Copy seen:*** DLC.

49619. BELÎAKINA, E. D. Nekotorye dannye po spektroskopicheskomu izucheniîu porod i mineralov slîudonosnykh pegmatitov. (Akademiîa nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Trudy, 1957, vyp. 10, p. 57–73, illus. diagrs. incl. 1 fold., tables.) 6 refs. Text in Russian. ***Title tr.:*** Some data on spectroscopic study of rocks and minerals of mica-bearing pegmatites.

Presents the results of investigation on mica-bearing pegmatites, collected by author in the Yena River region (67°30′ N. 31° E.) of Kola Peninsula, in northern Karelia (Loukhskoye Ozero, approx. 66° N. 33°20′ E.), and in the Mama region of eastern Siberia. Spectroscopic analyses were done by S. A. Borovik, A. S. Dudykina and L. N. Indrichenko in the Academy of Sciences' laboratory. Single pegmatitic vein minerals in rocks of different structure, component pegmatite veins, secondary veins, and 35 mineral elements were investigated. Appearance of accessory and micro-elements are treated and their distribution in the minerals outlined. Elements in different rocks are compared. Characteristics of zonic muscovites are reviewed. Differences between the minerals of the Mama region and those of Yena and Loukhskoye are explained. Recrystallization processes of various minerals are noted. ***Copy seen:*** DLC.

49620. BELÎAKOV, ALEKSANDR VASIL'EVICH, 1897– . Arkticheskiĭ most. (Vokrug sveta, June 1957, no. 6, p. 5–6, illus., map.) Text in Russian. ***Title tr.:*** The arctic bridge.

Notes on early Soviet transarctic flights and on the Scandinavian Airlines System Copenhagen - Anchorage - Tokyo service. Writer, a participant in Chkalov's 1937 flight, is lieutenant general of Soviet aviation. ***Copy seen:*** DLC.

BELIÂKOV, G. D., *see* Demokidov, K. K., *and others.* Geologicheskoe stroenie . . . *1957.* No. 50494.

BELIÂKOV, T. A., *see* Polyntseva, O. A. *and others.* Obshchie usloviâ pochvoobrazovaniâ. *1958.* No. 54068.

49621. BELIÂVSKAIÂ, B. M. Tema druzhby russkogo i âkutskogo narodov v tvorchestve V. G. Korolenko. (*In*: Akademiâ nauk SSSR. ÎÂkutskiĭ filial. Doklady, 1954. p. 80–101.) 20 refs. Text in Russian. ***Title tr:*** The theme of friendship among the Russian and Yakut peoples in the literary works of V. G. Korolenko.

Discusses the ties of friendship between Russian political exiles and Yakuts as reflected in the short stories of V. G. Korolenko, exiled to Yakutia from 1881 to 1884. ***Copy seen:*** DLC.

49622. BELIKOVA, Z. P. Uslovnoreflektornye izmeneniâ mobil'nosti élementov kholodovoĭ retsepsii kozhi. (Biûlleten' éksperimental'noĭ biologii i meditsiny, Jan. 1957. god 22, t. 43, no. 1, p. 3–6, tables.) Text in Russian. Summary in English. ***Title tr.:*** Conditioned reflectory changes in mobility of cold receptors of the skin.

Account of experiments with three subjects 16–50 years old. Conditioned reflex changes revealed that functional mobility of cold receptors proceeds both by the way of unconditioned as well as conditioned reflexes. ***Copy seen:*** DLC.

49623. BELINOVICH, NADEZHDA SERGEEVNA, *and* **F. PLESKOVSKIĬ.** Periâ, bogatyr'. (Pioner, Feb. 1957. god 33, no. 2, p. 49–52, illus.) Text in Russian. ***Title tr.:*** Periâ, the knight.

Adaptation and translation into Russian of a Zyryan tale. ***Copy seen:*** DLC.

49624. BELINSKIĬ, NIKOLAĬ ALEKSEEVICH. Morskie gidrometeorologicheskie informatsii i prognozy. 2 izd., perer. Leningrad. Gidrometeorologicheskoe izd-vo, 1956. 254 p. illus. tables, maps. Text in Russian. ***Title tr.:*** Marine hydrometeorological information and forecast. 2d. rev. ed. Textbook for hydrometeorological colleges.

Consecutive sections deal with development of methods; hydrometeorological prognosis and its role in national economy; some basic concepts; short term forecasts of tides and currents; storm forecasts; temperature- and ice-prognosis; methods of long-range forecasts; conditions and requirements for installing and running hydrometeorological observations. The chapter on temperature and ice forecast (p. 129–216) deals with heat balance and exchange of the sea, water balance, temperature forecast, foretelling the date of ice appearance and its temperature, forecast of freezing, of growth and drift of ice; spring break-up, etc. The first, shorter (166 p.) edition of this book appeared in 1950. ***Copy seen:*** DLC.

49625. BELITSER, VERA NIKOLAEVNA. O formirovanii kul'tury verknepechorskikh i nizhnepechorskikh komi. (Sovetskaiâ étnografiiâ, 1952, no. 1, p. 60–74, illus., diagr.) 7 refs. Text in Russian. ***Title tr.:*** The formation of culture among the Komi of the lower and upper Pechora.

Preliminary report on findings of the 1950 ethnographic expedition to Komi A.S.S.R., headed by author, investigating the Pechora, Usa and Izhma River basins. The population is divided ethnically and linguistically into two groups; the upper Pechora or Zyryans, and lower Pechora or Izhma-Komi. The migration, economy (hunting, fishing, agriculture, and reindeer herding introduced by the Nenets-Samoyeds), material culture (housing, clothing, hunting and agricultural implements), language and folklore of both groups are described and compared. Collectivization and economic advances under the Soviet regime are mentioned.

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49626. BELITSER, VERA NIKOLAEVNA. Rabota étnograficheskogo otrâda kompleksnoĭ ékspeditsii v Komi ASSR. (Akademiâ nauk SSSR. Institut étnografii. Kratkie soobshcheniâ, 1947. vyp. 2, p. 59–63, illus.) Text in Russian. ***Title tr.:*** The work of the ethnographic section of the Complex Expedition to Komi A.S.S.R.

A preliminary report on the fall 1945 field work, headed by the author, investigating the material culture, social organization, and religious beliefs of the Zyryans living along the Sysola and Vym' Rivers (60°–64° N. 51° E.).

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BELITSER, VERA NIKOLAEVNA, *see also* Levin, M. G. Polevye issledovaniâ . . . 1950 g. *1951.* No. 52794.

BELKNAP, R. W., *see* Garcia, J. F., *and others.* Increase in red cell volume . . . cold. *1957.* No. 51081.

49627. BEL'KOV, I. V., *and* M. I. VOLKOVA. Chevkinit iz pegmatitovykh zhil raĭona zapadnykh Keĭv na Kol'skom poluostrove. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova, 1958, p. 140–45, tables.) 5 refs. Text in Russian. ***Title tr.:*** Chevkinite from pegmatite veins of the western Keyv region in Kola Peninsula.

Describes the geological structure of the region, discovery of chevkinite 5 km. southeast of Lake Rovozero. Its properties are characterized by Bel'kov, and chemical analysis given by Volkova. Chevkinite seems to have been found hitherto only in the Ural, by V. I. Kryzhanovskiĭ in 1924. ***Copy seen:*** DGS.

49628. BEL'KOV, I. V. Ittrievaĭa mineralizat͡siĭa amazonitovykh pegmatitov shchelochnykh granitov Kol'skogo poluostrova. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova, 1958. p. 126–39, illus., tables, text map.) Ref. Text in Russian. ***Title tr.:*** Yttric mineralization of amazonite pegmatites in alkaline granites in Kola Peninsula.

Characteristics are given of yttric amazonite pegmatites from the western part of the Keyv region (Serpovidnyy mountain range in the middle Pova River region). The rare minerals gadolinite, fergusonite, yttrialite, and yttrium-garnet are described in detail and new chemical analyses given. The laws of the geochemical processes of amazonite pegmatites of alkaline granites are summarized; further prospecting is urged.

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49629. BEL'KOV, N., *and* N. KONDĬURIN. Slavnoe sorokaletie. (Sel'skoe khozĭaĭstvo Sibiri, 1958, no. 11, p. 90–93, illus.) Text in Russian. ***Title tr.:*** Glorious forty years.

Brief survey of activities of the Omsk Veterinary Institute, founded in Oct. 1918. Some 3,700 veterinarians have been graduated by the Institute, which today has 24 departments, with 107 professors and scientists teaching 1,156 students. Reindeer-breeding and disease research by staff members is mentioned.

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49630. BELL, CORYDON. The wonder of snow. New York, Hill and Wang, 1957. 269 p. illus., map, photos.

Contains popular account of snow and related phenomena interspersed with historical anecdotes. Brief remarks are made concerning the effects of snow on early peoples. The development of the sleigh and ski for transportation and sport is discussed. The hydrological value of snow and the development and use of snow surveys are presented. Avalanches and glaciers and polar ice sheets are dealt with, as well as the Arctic and its early exploration. A chapter primarily on meteorology is included which demonstrates the causes of snowstorms. Scientists who have attempted to study snow and snow crystals are noted. The final two chapters deal with properties of snow crystals and with their natural and artificial production.

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BELL, F. C., *see* Cremer, B., *and others.* Oxygen uptake of tissue . . . shivering . . . *1958.* No. 50377.

BELL, F. C., *see* Davis, T. R. A., *and others.* Shivering and non-shivering thermogenesis in man. *1958.* No. 50463.

BELL, J. M., *see* MacDonald, M. A., *and* J. M. Bell. Effects of low . . . temperatures on farm animals . . . respiration rate . . . *1958.* No. 52996.

BELL, J. M., *see also* MacDonald, M. A., *and* J. M. Bell. Effects of low . . . temperatures on farm animals (2) . . . water intake . . . *1958.* No. 52997.

49631. BELL, MURIEL E. Rations for the New Zealand Trans-Antarctic Expedition. (New Zealand medical journal, Aug. 1957. v. 56, no. 314, p. 289–304, tables.) 29 refs.

Following a general introduction, the author describes the rations at the base camp, the caloric and protein value, methods of preservation and weight, individual items, beverages, vitamins, etc. Sledging rations are discussed; food items, consumption and nutrient values are listed. Rations for dogs are treated in a similar order. ***Copy seen:*** DNLM.

BELL, ROSCOE E., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

49632. BELL, W. A. Lower Cretaceous floras of western Canada. Ottawa, Queen's Printer, 1956. 331 p. 85 plates, fold. table. (Canada. Geological Survey. Memoir 285.) 167 refs.

Report based on study of fossil plants collected by geologists of the Geological

Survey from non-marine Lower Cretaceous rocks at 365 localities since 1883; stratigraphy, age and correlation of the Tantalus formation are discussed as found in coal-bearing beds at Tantalus, in the Lewes (Yukon) and Nordenskiöld Rivers coal district, and in the Wheaton River area of Yukon Territory. Localities (four) producing fossils from the Tantalus formation are listed (p. 149). Distribution of some Tantalus fossil species is shown (fold. table in pocket). Most were collected from British Columbia formations. ***Copy seen:*** DGS.

BELLI, J., *see* Rieck, A. F., *and others.* Temperature acclimation in amphibians, *1958.* No. 54300.

49633. BELMONT, ARTHUR DAVID, 1920– . Apparent diurnal variations of arctic stratospheric temperatures. (American Geophysical Union. Transactions, Aug. 1957. v. 38, no. 4, p. 462–68, diagr., tables.) 18 refs. Extracted from No. 33518.

The diurnal variations of radiosonde temperature data for Narsarssuak, West Greenland (61°11′ N. 45°25′ W.) during 1946–1948 are inspected and compared with data for Thule, Alert, Eureka, and Resolute. Observations were taken at Narsarssuak at local noon and midnight. In winter and spring, the stratospheric temperatures there show a tendency for the difference, noon minus midnight, to diminish or even become negative. Similar patterns for apparent night warming in the lower stratosphere are found also at other stations. Adiabatic semi-diurnal vertical motions required to produce the observed night warming amount to one or two cm./sec. Atmospheric tides may be a contributing cause.—From author's abstract.

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49634. BELMONT, ARTHUR DAVID, 1920– . A brief review of research in arctic meteorology. (*In:* Polar Atmosphere Symposium, *Oslo,* 1956. v. 1, *pub.* 1958, p. 30–36.)

Reviews work since the first International Polar Year of 1882–83, principally that since World War II in North America. Need for better information on the general circulation in polar regions and the deficiencies with respect to publication of data are stressed. Two problems are cited for study with arctic data made accessible: the polar trajectory of anticyclones, and the polar stratospheric temperature field.

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49635. BELMONT, ARTHUR DAVID, 1920– . Lower tropospheric inversions at ice island T–3. (*In:* Polar Atmosphere Symposium, *Oslo,* 1956. v. 1, *pub.* 1958, p. 215–84, map, graphs, tables.) 45 refs.

About 11 radiosonde observations from this drifting station in the Arctic Basin, June 21, 1952–Apr. 26, 1954, were analyzed with respect to thermal inversions. An objective classification of the inversions was developed with respect to type, magnitude of component layer, and frequency of occurrence. The characteristics and features of the most important types are described. A new unit of inversion "intensity" is introduced which is a combined measure of lapse rate and duration of lapse rate. Some new relationships of inversion characteristics are presented, and a general qualitative theory is suggested to explain the differences found with previous theory. Summaries of the data are tabulated, and suggestions for future work with the data are listed. ***Copy seen:*** DLC.

BELON, ALBERT, *see* Elvey, C. T., and A. Belon. Description . . . all-sky camera . . . *1957.* No. 50746.

49636. BELOPOL'SKIĬ, LEV OSIPOVICH. Ėkologiîa morskikh kolonial'nykh ptiţ Barenţsova moriîa. Moskva, Izd-vo Akademii nauk SSSR, 1957. 460 p. illus., tables, maps. About 300 refs. Text in Russian. ***Title tr.:*** Ecology of marine colony-forming birds of the Barents Sea.

A comprehensive study based on author's activities in the area since 1926 and on other sources. In the main, the relations of these birds (the gulls, auks, skuas, terns, etc.) to their environment, to other and to their own species, are considered. Consecutive sections deal with earlier studies and present material and methods; the Barents Sea and the distribution of these birds over it; their food: its nature, acquisition and composition, changes in food habits with age, season, sex, requirements in amount of food, food connections; propagation: migration, nest building, egg-laying, periods, number, care of eggs and young; development and growth; breaking up of nests and colonies; dispersal of birds. Intra- and interspecific relations, competition, enemies, etc., are covered

briefly (p. 365–403). General conclusions, some theoretical problems and practical aspects are included in the final chapter (p. 404–435). Indexes are appended of the birds and Russian and foreign individuals cited in the text.

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49637. BELOPOL'SKIĬ, LEV OSIPOVICH. Nekotorye adaptivnye osobennosti razmnozheniia morskikh kolonial'nykh ptits v Arktike. (Zoologicheskiĭ zhurnal, Mar. 1957. t. 36, vyp. 3, p. 432–43, illus., tables.) 12 refs. Text in Russian. Summary in English. ***Title tr.:*** Some adaptive features of propagation of marine colony-forming birds in the Arctic.

Discusses two modes of egg development in the Arctic: one, also common in lower latitudes, consists in isolating the eggs from the cold ground by a layer of down, thus ensuring a high temperature in the nest necessary for egg development; in the other mode which represents an arctic adaptation, the embryo develops both at high temperature (in the upper part of the egg, close to the mother's body) and at low temperature when at the bottom of the egg. Other adaptations to the Arctic, including the precocious development of the young, are also discussed. ***Copy seen:*** DLC.

49638. BELOUSOV, ALEKSEĬ ALEKSANDROVICH. Lesnaia aviatsiia. (Kryl'ia rodiny, Mar. 1957. god 8, no. 3, p. 2–3, illus.) Text in Russian. ***Title tr.:*** Forest aviation.

The forests of the U.S.S.R., covering 1.1 billion hectares, represent one-third of the world's forests. Fire is their main enemy, and special teams of fliers and parachutists combat this danger. Their organization, equipment and methods of work are outlined in an interview with A. A. Belousov, chief engineer in the Administration for Protection of Forests of the Ministry of Agriculture. Teams operating in the far North and Yakutsk are mentioned and the outstanding parachutists noted. ***Copy seen:*** DLC.

BELOUSOV, V. V., *see* Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet. Mezhdunarodnyĭ geofizicheskiĭ god. Informatsionnyĭ biulleten' . . . *1957.* No. 49182.

49639. BELOV, I. Fermy serebristochernykh lisits i golubykh pestsov. (Sel'skoe khoziaĭstvo Sibiri, 1958, no. 8, p. 114.) Text in Russian. ***Title tr.:*** Silver fox and arctic blue fox farms.

Notes development of fur farming by the kolkhozes of Tyumen' Province; several are remarkably successful, the pelts yielding up to 200,000 rubles annually. ***Copy seen:*** DLC.

49640. BELOV, MIKHAIL IVANOVICH. Russkie pokhody na Kamchatku do Atlasova. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Jan.–Feb. 1957. t. 89, vyp. 1, p. 25–35.) 26 refs. Text in Russian. ***Title tr.:*** Russian expeditions to Kamchatka before Atlasov.

Account of an expedition by Ivan Golygin and Luka Morozko to "Koryak Land," 1691–92, based on a manuscript found in archives. The travelers are said to have penetrated deep into Kamchatka. Other expeditions, among them Golygin's in 1686–89, and his with Morozko in 1695–96, all forerunners of V. V. Atlasov's conquest of Kamchatka in 1697–99, are noted. An excerpt from the ms. book on the 1691–92 expedition is appended.

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49641. BELOV, MIKHAIL IVANOVICH. Semen Dezhnev i amerikanskaia literatura. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Sept.–Oct. 1957. t. 89, no. 5, p. 482–84.) 8 refs. Text in Russian. ***Title tr.:*** Semen Dezhnev and American literature.

Frank Golder in his *Russian expansion on the Pacific, 1641–1850,* raised a question about Dezhnev's veracity, and expressed doubts about his rounding the cape which now bears his name. R. H. Fisher's criticism of these views published in the *Pacific historical review,* Aug. 1956, is summarized and Fisher's conclusion that Golder's opinion was based on misunderstanding, misinterpretation and lack of information is stressed. The influence of Russian literature (L. S. Berg, and others) on Fisher's views is noted.

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49642. BELOV, MIKHAIL IVANOVICH. Severnyĭ morskoĭ put'; k 40-letiiu osvoeniia Sovetskoĭ Arktiki. Leningrad, Izd-vo "Morskoĭ transport," 1957. 123 p. illus., ports., maps. 14 refs. Text in Russian. ***Title tr.:*** The Northern Sea Route; the 40th anniversary of the exploration of the Soviet Arctic.

Reviews the main events of Soviet expansion in the Arctic: early search for a Northeast Passage and first coastwise

expeditions to Siberia, the Soviet Kara Sea expeditions starting in 1920, and penetration to the Northern Sea Route from the east by the Kolyma expeditions (p. 4–32); beginning of systematic exploration by scientific research organizations, use of aircraft and ice-breakers, development of the polar station network (p. 32–42); passage of the Northern Sea Route by ice-breaker *Sibiriakov* and organization of the Main Administration of the N.S.R. in 1932 (p. 42–50); the *Chelûskin* expedition in 1933 and *Litke* in 1934, development of the Route until World War II (p. 50–73). Scientific research in the Arctic Basin, transarctic flights in 1937, work of drifting station North Pole, 1937–38 (p. 73–82), and operation of the Route during World War II (p. 82–91) are outlined. Industry of the Soviet Arctic, post-war development of the Route (p. 91–100), and recent explorations (p. 100–121) are sketched; achievements of various explorers, scientists, navigators, etc., are noted. Several little-known expeditions are cited, including: transfer of 15 river boats from Nar'yan-Mar to Obskaya Bay in 1943 (p. 85); passage of the destroyers *Stalin* and *Voĭkov* in 1936 (p. 65); high latitude oceanographic expeditions of the ice-breakers *Severnyĭ Polûs* in 1946 and *Litke* in 1948 (p. 101–103); transfer of 53 fishing vessels from Murmansk to the Pacific in 1951 (p. 95–96); round-trip (Arkhangel'sk-Provideniya Bay-Arkhangel'sk) of the diesel-electric ice-breaker *Lena*, July 31–Oct. 29, 1954 (p. 97); a fall traverse of the Route (Sept. 30–Oct. 17, 1954) by the diesel-electric ice-breaker *Enisej* (p. 98–99); high latitude oceanographic expedition on the ice-breaker *Litke* in 1955, when the record latitude for a free-sailing ship, 83°03′ N. was attained (p. 104–105); Kara Sea oceanographic expedition of the *Litke* in 1956 (p. 107); high latitude oceanographic expedition to Nordaustlandet on the diesel-electric ice-breaker *Ob'* in 1956, with participation of Scandinavian scientists (p. 105–106). ***Copy seen:*** DLC.

49643. BELOV, N. A. K voprosu o metodike mekhanicheskogo analiza donnykh otlozheniĭ. (Problemy Arktiki, sbornik stateĭ, 1957, vyp. 1, p. 51–57, tables.) 4 refs. Text in Russian. ***Title tr.:*** Methods of mechanical analysis of bottom sediments.

Various methods used by M.V. Klenova and V. P. Zenkovich working with samples from the continental shelf are outlined, and their applicability to deep-water sediments was tested in analyses (68) of samples from 2,000–4,000 m. depths in the Arctic Basin, with favorable results. The methods are also examined to see if their efficacy was affected by the moisture content of deep-water sediments, and the effect found negligible. The data are tabulated and the procedures and results of the analyses are discussed.

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49644. BELOV, N. A., *and* **N. N. LAPINA.** Novye dannye o stratifikatsii donnykh otlozheniĭ Arkticheskogo basseĭna Severnogo Ledovitogo okeana. (Akademiia nauk SSSR. Doklady, Sept. 1, 1958. t. 122, no. 1, p. 115–18, cross-section.) 7 refs. Text in Russian. ***Title tr.:*** New data on the stratification of bottom sediments of the Arctic Basin.

Presents results of investigation of a bottom core taken at 3044 m. depth north of Svalbard and Franz Joseph Land by the ice-breaker *F. Litke*, in 1955. Whereas previous (1948–1954) investigations were based on a 90 cm. core, this core was 412 cm. long in wet condition, 352 cm. long when dry. Granular measurements and chemical, mineralogic, and micro-faunal composition of the sediments were studied; thermal, radiochemical, X-ray structural, and electromiscopic analyses were made. Stratification and age determination of sediment layers are described and the development of the Arctic Basin and conditions of its waters outlined. Data from this core are said to disclose the last 160,000–170,000 years' history of this Arctic Basin—Atlantic border region.

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49645. BENDEBERI, V. Aėroport Iakutsk. (Grazhdanskaia aviatsiia. March 1957. god 14, no. 3, p. 23, illus.) Text in Russian. ***Title tr.:*** The Yakutsk airport.

Photograph of the main building of this airport. The importance of air transportation for the northern areas and the arrival of the jet-airliner Tu–104 at Yakutsk on Mar. 29, 1957, are noted.

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BENDER, JAMES A., *see* Bader, H., *and others.* Excavations and installations . . . *1957.* No. 49471.

49646. BENDER, THOMAS A., *and others.* Bibliography on the climate of

Greenland. Washington, D.C., Aug. 1957. 473 p. U.S. Weather Bureau, Office of Climatology, Foreign Area Section. 120 sources. *Other authors:* D. M. Carraway, A. E. Grimes, P. H. Putnins, A. F. Spano, C. S. Vitale, *and* J. A. Wallace.

Lists with abstracts 469 selected works, arranged in ten-year groups to 1900, with 46 titles published earlier. Some 25 expeditions are included. Précis of sources surveyed, subject keys and author index are provided.

Copy seen: DWB.

49647. BENESH, BERNARD. A systematic revision of the holarctic genus *Platycerus* Geoffroy; Coleoptera; Lucanidae. (American Entomological Society. Transactions, Sept. 1946. v. 72, no. 3, p. 139–202, plates 4–9.)

Revision of *Platycerus* and two other, new, genera of stag bettles with keys and a systematic annotated list of 13 species, synonyms, critical notes and lists of specimens. *Platycerus piceus* is recorded from the Hudson Bay region and Newfoundland. ***Copy seen:*** DA.

BENIOFF, HUGO, 1899– , *see* Bâth, M., *and* H. Benioff. Aftershock sequence . . . November 4, 1952. *1957.* No. 49460.

49648. BÉNITTE, A. C. Les accidents généraux dus au froid; traitement et prophylaxie. (Revue du Corps de Santé militaire, 1950. t. 6, no. 4, p. 347–64.) 71 refs. Text in French. ***Title tr.:*** General injuries due to cold; treatment and prevention.

A comprehensive account on symptomatology and types of general hypothermia, its pathology and causes of death; therapy, its history and recent views; prophylaxis: question of age and morale; the effect of diet on resistance to cold; role of vitamins; the effects of alcohol and tobacco; clothing.

Copy seen: DNLM.

BENKÖ, K., *see* Szilágyi, T., *and others.* Effect . . . electric shock . . . hypothermia. *1958.* No. 55304.

BENKÖ, K, *see* Szilágyi, T., *and others.* Untersuchung elektrischer Stromstösse . . . *1958.* No. 55305.

BENNINGHOFF, WILLIAM SHIFFER, 1918– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

49649. BENSON, CARL SIDNEY, 1927– . Operations and logistics of ice-cap Party Crystal, 1954. Wilmette, Ill., Apr. 1955. 21 p. diagrs., graphs, tables. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954. v. 1, *pub.* 1957.) SIPRE report 25.

Personnel, equipment, clothing, rations, fuels and lubricants, maintenance and safety arrangements are reported. Performance records are cited. Over-all rate of travel was slow, much time was spent at test stations en route. Wannigans were used for living quarters for the six-man party; weasels hauled the wannigans and the scientific equipment. Fuel consumption averaged 1.8 mi./gal. The 5-in-1 and C-rations, bulk of the food supply, were not satisfactory because of weight. Sleds, weasels, temporary shelters, rations and fuel consumption are evaluated; improvements recommended.

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49650. BENSON, CARL SIDNEY, 1927– , *and* **R. H. RAGLE.** Project "Jello"; SIPRE Greenland Expedition. (U.S. Quartermaster Food and Container Institute for the Armed Forces, *Chicago.* Activities report Mar. 1957. v. 9, no. 1, p. 8–23, illus., tables, map.) 4 refs.

Information is given on composition and itinerary of the Expedition (spring and summer 1955); temperatures, winds, elevation, etc.; logistics, food problems and consumption, rations, living quarters, cooking. An evaluation of frozen versus dehydrated foods provided by the Quartermaster Food and Container Institute concludes the account. Appendices contain a list of food provided and comment on the individual food items by Expedition members. ***Copy seen:*** DNLM.

49651. BENSON, CARL SIDNEY, 1927– . Scientific work of Party Crystal, 1954; preliminary report. Wilmette, Ill., Apr. 1955. 10 p. diagr., map. (U.S. Army. Corps of Engineers. Greenland ice cap research program, v. 1, *pub.* 1957.) SIPRE report 24.

Party Crystal, a small mobile group based on Thule, conducted snow studies during period May 25–Aug. 21, 1954, on the Greenland ice cap at 68 stations, spaced 2.4 mi, and 5.0 mi. apart. Work included measurements of elevation, snow accumulation, summer melting, and snow properties. ***Copy seen:*** CaMAI.

49652. BENSON, LYMAN DAVID, 1909– . North American Ranunculi,

I–V. (Torrey Botanical Club, Bulletin, Mar., Oct., Dec. 1941; Apr., May 1942. v. 68, no. 3, p. 157–72, table; no. 7, p. 477–90, 3 tables; no. 9, p. 640–59; v. 69, no. 4, p. 298–316; no. 5, p. 373–86.)

Contains a taxonomic list of 78 species (one new) and some sixty varieties of the genus *Ranunculus*, with keys, detailed geographical range, determination of type specimens, new names and new combinations, also descriptions of varieties not included in Abrams' *Illustrated Flora of the Pacific States*, v. 2, 1940. Differential characteristics of the typical species, and citations of a few significant specimens for misunderstood or rare species are included. At least thirty of the species and varieties are native to Alaska, Aleutian Islands, northern Canada, Greenland and Baffin Island. Additional distributional data and criticism were offered by N. Polunin in No. 54066.
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49653. BENSON, LYMAN DAVID, 1909– . The North American subdivisions of *Ranunculus*. (American journal of botany, Nov. 1940. v. 27, no. 9, p. 799–807, 17 illus.) 11 refs.

Contains a discussion of six types of nectary-scales and their importance for the delimitation of subgenera and sections of *Ranunculus* (crowfoot); a generic description; keys to subgenera and sections, followed by descriptions of nine subgenera. *R. eastwoodianus* n. sp. known only from the type location, Skagway, Alaska (L. Huffine, summer, 1925) is included. A list of North American species is given for each subgenus. ***Copy seen:*** DLC.

49654. BENSON, LYMAN DAVID, 1909– . Pacific states Ranunculi, I–II. (American journal of botany, Jan.–Mar. 1936, v. 23, no. 1, p. 26–33; no. 3, p. 169–76.)

Contains a discussion and description of the genus *Ranunculus* and a systematic list of 35 species and 27 varieties with keys to subgenera, species and varieties, descriptions, critical notes, data on distribution and lists of specimens. Ten species and varieties are recorded in Alaska, southern Alaska and northern Canada. ***Copy seen:*** DLC.

49655. BENSON, LYMAN DAVID, 1909– . A reply to Dr. Polunin. (Torrey Botanical Club. Bulletin, May 1944. v. 71, no. 3, p. 254–57.)

Answers criticism in No. 54066 for not using published data on Eastern Canadian Arctic, by the statement that assigning ranges of all species "should be based upon the specimens or living plants the author has been able to examine himself." A few examples are cited.
Copy seen: DLC.

BENSON, S. E., *see* Strong, E. M., *and others*. Microwave radio . . . *1957*. No. 55205.

49656. BENT, ARTHUR CLEVELAND, 1866–1954. Life histories of North American blackbirds, orioles, tanagers and allies; order Passeriformes: families Ploceidae, Icteridae, and Thraupidae. Washington, D. C., Smithsonian Institution, 1958. 549 p. illus. (U.S. National Museum. Bulletin 211.) About 500 refs.

A comprehensive study of the groups listed with information on behavior, courtship, nesting, young and their growth, plumage, enemies, value to man, migration and range. Included are several species ranging into the southern areas of the American Arctic, e.g. the English sparrow (p. 1–24); the continental and Newfoundland rusty blackbirds (p. 282–301); the western tanager (p. 466–79), etc. Previous volumes in this series are listed in No. 1341. ***Copy seen:*** DSI.

49657. BENTKE, KAZIMIERZ, *and others*. Badania czynnościowe nerek u psów w czasie sztucznej podciepłoty. (Polski tygodnik lekarski, 1957. rok 12, no. 19, p. 704–706, illus.) 16 refs. Text in Polish. Summary in English. *Other authors:* K. Stengert *and* W. Jurczyk. ***Title tr.:*** Investigations of renal function in dogs during artificial hypothermia.

Account of half-period determinations of sodium thiosulphate and para-aminohippuric acid elimination, in normal and hypothermic (25° to 27° C.) dogs. A decreased blood supply to the kidneys and lowered glomerural filtration were observed during hypothermia. Conditions reverted to normal after recovery from hypothermia. ***Copy seen:*** DNLM.

BENTKE, KAZIMIERZ, *see also* Stengert, K., *and others*. Zmiany składu krwi . . . *1957*. No. 55149.

49658. BENTLEY, CHARLES R., *and others*. Seismic measurements on the Greenland ice cap; part I, studies at 76°59′ N. 56°05′ W., part II, reflection studies. (Annales de géophysique, Oct.–Dec. 1957. t. 13, fasc. 4, p. 253–85, plates, maps, table, graphs.) 12 refs. Summary in French. Contrib. no. 270,

Lamont Geological Observatory. *Other authors:* P. W. Pomeroy *and* H. J. Dorman.

Describes results of a detailed refraction profile made along a ten-mile, north-south line about half way between the western edge and the center of the icecap July–Aug. 1955. Velocity variations in the snow and ice were determined; a layer approx. 100 m. thick, probably not composed of liquid, lies between the ice and the reflecting layer. Dispersive surface waves were recorded and a dispersion curve constructed. Similar reflection profiles (p. 276–85) were shot at three other sites on the icecap, all near Thule. Ice thickness varied from 41 to 191 m. at Red Rock, 280–400 m. at Blue Ice, and from 124–409 m. at Blue Ice-Thule Take Off (TUTO). Subglacial topography was gently undulating at Red Rock but showed large relief at Blue Ice. Selected records are shown (plates) and location of profiles appears on maps; wave velocities are graphed. Work was sponsored by U.S. Air Force Cambridge Research Center and U.S. Army, Corps of Engineers, Snow, Ice and Permafrost Research Establishment. ***Copy seen:*** DLC.

BENTOR, VICTORIA, *see* Wertheimer, E., *and* V. Bentor. Adaptation of young and old rats . . . cold . . . *1957*. No. 55992.

49659. BENZING, JOHANNES. A. I. Lopatin's "Material on the Orochee language, the Goldi (Nanai) language and the Olchi (Nani) language." (Anthropos, 1958. v. 53, fasc. 3–4, p. 597–603.) Ref. Text in German.

A critical, but favorable review of Lopatin's monograph pub. in Micro-Bibliotheca Anthropos, Freiburg, Switzerland 1957, v. 26, xi+109 p. (copy not seen). Its contents table and excerpts from cited Orochi fairy-tales are given in German translation.

Copy seen: DLC.

49660. BENZING, JOHANNES. Die tungusischen Sprachen; Versuch einer vergleichenden Grammatik. (Akademie der Wissenschaften und Literatur in Mainz. Geistes- und sozialwissenschaftliche Klasse. Abhandlungen, Jahrg. 1955 *pub.* 1956. Nr. 11, p. 949–1099, tables.) Refs. in text. Text in German. ***Title tr.:*** Tungus languages; an experiment in comparative grammar.

A study of the phonetics, morphology and syntax of Tungus languages and dialects, including Gold and Lamut, based on Soviet textbooks for Tungus schools and T͡Sint͡sius' study on comparative linguistics, q.v. ***Copy seen:*** DLC.

49661. BEQUAERT, JOSEPH CHARLES, 1886– . Additions and corrections to the revision of North American Vespinae, Entomologica americana, 1932, second paper. (Brooklyn Entomological Society. Bulletin, June 1941. new ser., v. 36, no. 3, p. 111–17.) 39 refs.

Contains additional records and observations on 18 wasps and hornets described in *Entomologica americana*, 1932, which did not include arctic material, nor did the first series of *Additions*, 1935; but at least six species and varieties in the present paper are native to Northwest Territories and Laborador.

Copy seen: DLC.

49662. BEQUAERT, JOSEPH CHARLES, 1886– . The genus *Eumenes* in the Dominion of Canada; Hymenoptera, Vespidae. (Naturaliste canadien, Mar.–Apr. 1944. v. 71, no. 3–4, p. 75–88.)

Contains a key (based on structural characters only) and descriptions of eight species and subspecies of this wasp (three new subspecies), including *E. coloradensis* var. (or subsp.) *nearcticus* new name, recorded in the Northwest Territories, 61°30′–63° N.

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49663. BÉRARD, JEAN. Preliminary report on Bones Lake area, New Quebec. Quebec, 1957. 7 p., fold. map, table. (Quebec. Dept of Mines. Geological Surveys Branch. Preliminary report, no. 342.)

Presents map (1 in.:1 mi.) of an approx. 160 sq. mi. area (58°00′–15′ N. 70°00′–15′W.) about 65 mi. west of Fort Chimo, outlines the stratigraphic, structural and glacial geology. Proterozoic sedimentary rocks, resting unconformably on Archean granitic gneisses, include, from bottom to top: quartzites, iron formations, clastic rocks, and dolomite with layers of quartzite and argillite. In the east, volcanic rocks are intruded by gabbro sills. Two prominent valleys divide the area. Shear zones are present in the lavas, and there is a system of joints of unusually strong development and regularity. Observations of pyrite, chalcopyrite and pyrrhotite, and iron formations west of Bones Lake are noted.

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49664. BÉRARD, JEAN. Preliminary report on Finger Lake area, New Quebec. Quebec, 1958. 6 p., fold. map (Quebec. Dept. of Mines. Geological Surveys Branch. Preliminary report, no. 360.) 2 refs.

Presents map (1 in.:1 mi.) and outlines geology of an approx. 156 sq. mi. area (58°15′–30′ N., 70°00′–15′ W.) about 70 mi. northwest of Fort Chimo on the geological contact between Archean and Proterozoic rocks. The latter generally rest unconformably upon the former, but in some places are thrust over it. Rock types include Archean granitic gneiss, quartzite, iron formation, clastic sedimentary rocks, dolomite, argillite, lavas, and in the eastern part, volcanic rocks containing gabbro sills. The area is faulted, with various joint systems recorded in different formations. Quartz and calcite veins in the northeastern section contain lead, zinc, silver, gold and copper of possible economic value. Zones of pyrite, pyrrhotite and chalcopyrite, massive pyrite veins and several iron formations, some containing between 30 to 40% iron in the form of hematite-magnetite-siderite are noted. The iron formations have been studied in detail by Consolidated Fenimore Iron Mines, Ltd. ***Copy seen:*** DGS.

49665. BERDICHEVSKAĬA, M. E. O nekotorykh novoobrazovaniĭakh v nizakh mezozoĭskogo kompleksa ŭgo-zapadnoĭ chasti Vilŭŭĭskoĭ vpadiny. (Akademiĭa nauk SSSR. Geologicheskiĭ institut. Trudy, 1956. vyp. 5, p. 201–206, table, plates.) 9 refs. Text in Russian. ***Title tr.:*** Some new formations in the lower strata of the Mesozoic complex in the southwestern part of the Vilyuy depression.

On the middle Vilyuy and its tributaries the Malaya Botuobuya, Vilyuchan and Ygyatta, in recent years, light-colored, fine- and medium-grain sands and porous sandstones have been found which differ in mineralic composition from the overlying conglomerates and sandstones. This entire stratum was unseparated and was considered of Lower Jurassic age. Now the author divides the stratum into two horizons and outlines their lithologic and mineralic composition and conditions for development of various minerals. Special attention is given to zeolites' development, its causes and processes; crystals and chemical composition are described. Thermal metamorphic processes are discussed. ***Copy seen:*** DLC.

49666. BERDICHEVSKAĬA, T. M., *and others.* Temperaturnyĭ ėffekt v sezonnykh i sutochnykh variat͡siĭakh mezonnoĭ intensivnosti kosmicheskikh luchei na Myse Shmidta. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 4, p. 51–64, graphs, tables.) 9 refs. Text in Russian. *Other authors:* L. A. Fuks *and* B. F. Shvart͡sman. ***Title tr.:*** The temperature effect in seasonal and diurnal variations of meson intensity in cosmic radiation at Cape Shmidt.

Analyzes continuous recordings of meson intensity made for one year 1954–1955 with an ASK–2 chamber at Cape Shmidt (68°55′ N. 179°29′ W.), and repeated temperature observations by radiosondes during the same period. Definite influence on the amplitudes of diurnal variations in meson intensity was found when applying the temperature corrections. Phase displacement in the seasonal variation of the diurnal course was considerably reduced by application of the temperature corrections.

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49667. BERDICHEVSKIĬ, L. S. Nauchnye problemy okeanicheskogo rybolovstva. (Rybnoe khozĭaĭstvo, June 1958. god 34, no. 6, p. 7–10.) Text in Russian. ***Title tr.:*** Scientific problems of oceanic fishing.

Account of the all-Soviet conference on the biological basis of high-sea fishing. Data are presented on catches in the arctic and Far Eastern waters; areas not yet utilized by Russians: Greenland and Iceland waters, northwest Pacific, West African and Chinese waters; Soviet research in some of these areas and in the southern Pacific; problems of further research; international measures and agreements; expeditions. About 200 delegates attended. ***Copy seen:*** DLC.

49668. BEREGOVAĬA, N. A. Nakhodki doėskimosskikh poseleniĭ na Alĭaske i v prilegaŭshchikh oblastĭakh, po rabotam 1945–1954 gg.; k voprosu o zaselenii Ameriki. (Sovetskaĭa ėtnografiĭa, 1957, no. 2, p. 15–39, illus., maps incl. fold., graph.) Approx. 90 refs. Text in Russian. ***Title tr.:*** Discoveries of pre-Eskimo sites on Alaska and adjacent regions, 1945–1954 field work; the problem of the settlement of America.

Reviews theories on the prehistoric settlement of America based on radiocarbon dating of the archeological finds and discusses recent excavations (shown on maps) made in Alaska, northern

Canada, Greenland and northern Siberia. The similarity of the stone artifacts, pointing to a closely related cultural complex spread over the entire Eskimo area, is stressed; and the settling of America linked with the appearance of the Eskimos. The author favors the theory of periodic invasions by Siberian hunter groups migrating along the coasts of the North Pacific and Arctic Oceans and using both the Bering Strait and Aleutian chain routes. The close linguistic affinities between Aleut and proto-Eskimo make the Aleutian route appear the older of the two, the Eskimos moving slowly north and spreading west across Bering Strait to Asia again, also east to Canada and Greenland. The continuance of mesolithic and neolithic characteristics in Alaskan sites may be due to the conservatism of the Eskimos preserving their stone-age culture almost till the present, and to the cul-de-sac position of the Arctic lying on the periphery of higher developed regions of the Old and New Worlds.

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BEREGOVAĬA, N. A., *see also* Efimenko, P. P., *and* N. A. Beregovaĭa. Paleoliticheskie mestonakhozhdeniĭa SSSR. *1941.* No. 50693.

49669. BEREZANTSEV, V. G. Predel'noe ravnovesie gruntov pri vdavlivanii sfericheskikh shtampov. (*In:* Materialy po laboratornym issledovaniĭam merzlykh gruntov, sbornik 3, 1957. p. 289–95, tables, graphs.) 4 refs. Text in Russian. ***Title tr.:*** Soil stress limit under pressure of a spherical die.

"The problem is mathematically analyzed in relation to the cohesive and friction forces acting on a sphere pressed into frozen ground. A theory developed for loose-structured media is used to evaluate the problem, and equations for calculating the pressure limit as a function of cohesive forces and internal friction are given. Parameters calculated determine conditions for the accurate application of the ball method. The sphere should be pressed in quickly to obtain data unaffected by delayed-action structural deformations that occur in frozen ground."—SIPRE. ***Copy seen:*** DLC.

49670. BEREZKIN, VSEVOLOD ALEKSANDROVICH, 1898–1946. O kotidal'nykh kartakh Barentsova moriĭa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa moreĭ SSSR, 1931. vyp. 14, p. 5–18, illus., tables.) 2 refs. Text in Russian. Summary in German. ***Title tr.:*** On cotidal charts of the Barents Sea.

The author submits to a critical evaluation earlier cotidal charts which differed very much from each other and from shore observations. He presents his own chart for the Barents Sea based on Shuleĭkin's method and the Huygens principle. A close agreement between observations and the charted values was observed. The first such chart prepared by F. P. Litke in 1848 proved the most accurate of the earlier ones. ***Copy seen:*** DLC.

49671. BEREZKIN, VSEVOLOD ALEKSANDROVICH, 1898–1946. Teoreticheskoe opredelenie ėlementov prilivootlivnykh techeniĭ u mysa Zhelaniĭa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa moreĭ SSSR, 1931. vyp. 14, p. 27–30, illus.) Text in Russian. Summary in German. ***Title tr.:*** Theoretical determination of tidal elements at Cape Zhelaniya.

Report of observations on changes in water level, conducted for 13 hrs. on Aug. 27, 1930, at the northern end of Novaya Zemlya. Tidal amplitude was found to be 0.5 m. Moon intervals, beginning of the tide, etc., were also determined, as well as the speed of the currents calculated. ***Copy seen:*** DLC.

BERG, H. C., *see* Lathram, E. H., *and others.* Progress . . . geologic mapping . . . *1958.* No. 52673.

49672. BERG, LEV SEMENOVICH, 1876–1950. Die geographischen Zonen der Sowjetunion. Leipzig, B. G. Teubner, 1958. 437 p. illus., maps (2 fold. col. in pocket). Text in German. ***Title tr.:*** The geographic zones of the Soviet Union.

German translation of the third edition (No. 1384) of this basic work with some condensation and additions from *Priroda SSSR,* 1955. A sketch of Berg's life and index of places, plants, etc., are included. The illustrative material is almost completely new; the cartographic material also is very much improved, and the two main maps are enlarged, and printed in color. Scientific editing was done by Dr. Hans Richter and Marianne Stamp. ***Copy seen:*** DLC.

49673. BERG, MAGNUS. Merking av sjøaure og sjørøye i Varneselva. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4), p. 38–40,

map.) Text in Norwegian. ***Title tr.:*** Tagging sea trout and red char in Varneselva.

Reports tagging carried out in June-July 1956 at Varneselva (approx. 69°20′ N. 17°30′ E.) on the island of Senja, North Norway: 140 trout going downstream (25 recaught) and 11 (none recaught) going upstream; also 18 (3 recaught) char going downstream and 88 going upstream. It was the first trout tagging and the second for char in North Norway. ***Copy seen:*** DLC.

49674. BERGE, GRIM. The primary production in the Norwegian Sea in June 1954, measured by an adapted ^{14}C technique. (*In:* Plankton symposium 1957, *pub as:* International Council for the Exploration of the Sea. Rapports et procès-verbaux, Apr. 1958. v. 144, p. 85–91, illus., maps.) 7 refs.

Account of observations made from the *G. O. Sars,* including determination at various depths of light intensities, of P and of K. The most productive area was found in the middle of the ocean, extending band-like through the Norwegian Sea up to Spitsbergen. The origin of the water of this area is discussed and the relation of the herring feeding area to the productive area outlined.

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49675. BERGE, SAMSON, 1895– . Hår og hårlag hos rein. (Naturen, 1949. årg. 73, nr. 10, p. 289–302, 8 illus., diagr., 3 tables.) 6 refs. Text in Norwegian. ***Title tr.:*** Reindeer hair and hair structure.

Hair from *Dama dama, Capreolus capreolus, Cervus elaphus, Rangifer tarandus,* and *Alces alces* is described with comparative measurements and microscopic illus. The long hair of reindeer, except for root and tip, is of uniform size throughout its length. It is regularly undulating and protrudes from the skin at an angle. Its outer cover is about ½₀ of the thickness, the remainder being marrow cells containing a large volume of air, which increases the animal's insulation and buoyancy. The underlying wool hair is finer, shorter, and marrowless. ***Copy seen:*** DGS.

BERGER, STEINAR, *see* Vegard, L., *and others.* Results of auroral observations at Tromsø . . . 1953–1957. *1958.* No. 55774.

49676. BERGERON, ROBERT. Important low grade iron deposits in the province of Quebec. (Canadian mining journal, Apr. 1957. v. 78, no. 4, p. 105–108, map.) 17 refs. Paper presented at the 25th annual convention of the (Canadian) Prospectors and Developers Association, Toronto, 1957.

Contains description of the rocks and ore zones of low grade iron deposits in the Lake Mistassini (51° N. 73°30′ W.), Mount Wright (approx. 52°45′ N. 67°21′ W.)—Mount Reed (approx. 52°04′ N. 68°08′ W.), and the Ungava Bay (approx. 60° N. 67°30′ W.) areas. The principal formations, rock types, rocks of economic interest, companies searching, and problems of transportation, production, etc. are outlined. Other low grade iron ore deposits in Quebec are mentioned, one of them near Duncan Lake southeast of Fort George on James Bay. Most of the deposits described are shown on map. Large tonnages of such ores are necessary for profitable exploitation, since most of the metallurgical problems of beneficiation have been solved.

Copy seen: DGS.

49677. BERGERON, ROBERT. Preliminary report on Brochant-De Bonnard area, New Quebec. Quebec, 1957. 6 p. fold. map. (Quebec. Dept. of Mines. Geological Surveys Branch. Preliminary report, no. 348.)

Presents map (1 in.: 1 mi.) of an approx. 400 sq. mi. area bounded on the north by Payne River (60° N.) and the east by Ungava Bay, and outlines the geology. The rock formations consist of Precambrian gneisses, divided into western and eastern complexes differing in characteristics; and four Upper Precambrian formations of the Labrador Trough, including an iron formation equivalent to the Sokoman of the Schefferville area. All of the formations, including the gneisses, have been folded and metamorphosed. A north-south-striking thrust fault divides the area almost equally. Premium Iron Ore Ltd. holdings, also holdings and working of low grade deposits by Oceanic Iron Ore (Quebec) Ltd. are noted.

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49678. BERGERON, ROBERT. Preliminary report on Cape Smith-Wakeham Bay belt, New Quebec. Quebec, 1957. 8 p. 2 fold. maps, table. (Quebec. Dept. of Mines. Geological Surveys Branch. Preliminary report no. 355.)

Deposits containing nickel, copper, lead and zinc have been discovered in this area (approx. 61°–61°30′ N. 72°–78°

W.); 32 companies granted exploration licenses in 1957, and a reconnaissance of the belt and region to the north was carried out by the Quebec Dept. of Mines, including mapping and prospecting in summer 1957. Location, topography and climate are described. Rocks are late Precambrian sedimentary, volcanic and intrusive formations. Glacial sand, gravel and erratics cover much of the surface. A preliminary geologic map (1 in.: 16 mi.) of the Cape Smith-Wakeham Bay belt, and a more detailed map (1 in.: 4 mi.) of the Bilson Lake (61°30′ N. 77° W.) area, are folded into the report. Preliminary examination of the mineralized rocks showed chief nickel mineral to be pentlandite; chief copper mineral appears to be chalcopyrite. Most ore zones graded 1–3% (but some up to 7%) nickel and about 2% copper; zones rich in sphalerite and galena occur west of Nuvilik Lake (approx. 61°30′ N. 74°50′ W.). ***Copy seen:*** DGS.

49679. BERGERON, ROBERT. Ungava Bay—Ungava Peninsula. (Canadian geographical journal, July 1958. v. 57, no. 1, p. 20–29, illus., maps.)

Reviews area south and west of Ungava Bay, northern Quebec, especially its mineral resources. Copper is noted at Gérido Lake, nickel and copper in the Cape Smith-Wakeham Bay belt. Large low-grade iron deposits west of Hopes Advance Bay and south of Payne River are being considered for development by Ungava Iron Ore Ltd. and Ocean Iron Ore Ltd. Mineral exploration is summarized; but only about 5% of the area has been covered adequately; other important finds are anticipated

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BERGERON, ROBERT, *see also* Gilbert, J. E. J., *and* R. Bergeron. Northern Quebec. *1957.* No. 51184.

49680. BERGMAN, BENGT. Zur Kenntnis der Zytologie der skandinavischen *Antennaria*-Arten. (Hereditas, 1935. bd. 20, häfte 1–2, p. 214–26, 19 illus., table.) 12 refs. Text in German. ***Title tr.:*** A contribution to the knowledge of the cytology of Scandinavian *Antennaria* species.

Contains results of study of four species, of which *A. carpathica* and *A. alpina* were collected in the Abisko region in Torne Lappmark; their chromosome numbers are 2n = 40–42, and 84, respectively. ***Copy seen:*** DLC.

BERGQUIST, HARLAN RICHARD, 1908– , *see* Collins, F. R., *and* H. R. Bergquist. Test wells, Meade and Kaolak . . . *1958.* No. 50306.

BERGQUIST, HARLAN RICHARD, 1908– , *see* Collins, F. R., *and* H. R. Bergquist. Test wells Topagoruk . . . *1958.* No. 50307.

BERGQUIST, HARLAN RICHARD, 1908– , *see* Collins, F. R., *and others.* Test wells, Umiat . . . *1958.* No. 50308.

BERGQUIST, HARLAN RICHARD, 1908– , *see* Robinson, F. M., *and* H. R. Bergquist. Test well Grandstand . . . *1958.* No. 54345.

BERGQUIST, HARLAN RICHARD, 1908– , *see* Robinson, F. M., *and* H. R. Bergquist. Test wells, Gubik . . . *1958.* No. 54346.

49681. BERGSJÖ, NILS, 1898– . Nya signaler i Norrlands skogbruk. (Skogen, *Stockholm,* Oct. 15, 1954. årg. 41, nr. 20, p. 322–23.) Text in Swedish. ***Title tr.:*** New signals in Norrland forestry.

Norrland forest production can be doubled, by revolutionary changes: hundred percent increase of reforestation areas, with planting rather than sowing, sufficient seed is available; replacement of virgin forests now degenerated; better housing, wages, pensions, etc. for permanent forest workers; regulation of forest lots through exchange or sale to provide larger and continuous sites. Cooperation of local and state authorities with owners is essential to such a program. ***Copy seen:*** DA.

49682. BERGSLAND, KNUT, 1914– . Aleut and proto-Eskimo. (International Congress of Americanists, 32nd. *Copenhagen,* 1956. Proceedings, 1958. p. 624–31.) 17 refs.

Discusses and compares Aleut and Eskimo cognates and considers the possibility of Indian influence on Aleut phonology and lexic content. The close relationship of Aleut and Eskimo is noted and their common origin traced to Eskimo-Uralic rather than Eskimo-Indo-european. ***Copy seen:*** DSI.

49683. BERGSLAND, KNUT, 1914– . Is lexico-statistic dating valid? (International Congress of Americanists, 32nd. *Copenhagen,* 1956. Proceedings, 1958, p. 654–57.) 5 refs.

Discusses linguistic time depth calculations, including the date of separation of

East Greenlandic from West Greenlandic, Greenlandic from East Eskimo, Eskimo from Aleut. The unavoidable inexactitude of glottochronology is stressed and its use as means to reliable dating criticized. ***Copy seen:*** DSI.

49684. BERGSTEN, FOLKE, 1889– . Nederbörden i Sverige, medelvärden 1921–1950. Stockholm, 1954. 21 p. incl. tables, maps. (Sweden. Meteorologiska och hydrologiska institutet. Meddelanden, ser. C, nr. 5.) 6 refs. Text in Swedish. Summary in English. ***Title tr:*** Precipitation in Sweden; mean values 1921–1950.

The investigation is worked out for hydrological use, particularly to indicate the influence of the screen on precipitation gage measurements. It treats mean annual precipitation only, and is based on records from stations which have been observing with screened gages during at least ten years of the period, several of them in the North (Torne, Lule, etc. river systems); all are tabulated. Total change in measured precipitation from the period 1901–30 to the period 1921–50 is tabulated and the distribution of the annual evaporation in Sweden is shown. Conclusion is offered that there probably has been an increase in fallen precipitation in the woodlands and coastal districts of Norrland of about the same magnitude as in the central and southern parts of Sweden.

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49685. BERGSTEN, FOLKE, 1889– . The seiches of Lake Vetter and of Lake Torneträsk. Stockholm, Norstedt, 1930. 23 p. illus., graphs, tables. (Sweden. Meteorologiska och hydrologiska institutet. Publikation, nr. 281.)

Contains results of completed investigations of standing waves in Lake Vetter, central Sweden, and preliminary results of investigations underway in Torneträsk, northern Sweden. Limnographic observations in Torneträsk were made at Abisko (68°21′ N. 18°50′ E.) and Pålnoviken, further north. Theoretical investigations were made by means of the method of rests. Position of the nodes and ventral-lines as well as shape of the wave over the lake as a whole are derived. Examples of seiches registered at Abisko are presented. The amplitudes of waves of first and second order reach a maximum of about 2 cm. An oscillation with a period of about 22 min., appears frequently in the Abisko linograms, but not at all in the Pålnoviken; undulations in the latter of about 27 min. period are lacking in the Abisko records. The character of these waves has not as yet been fixed. ***Copy seen:*** DLC.

BERKELEY, CYRIL, *see* Berkeley, E., *and* C. Berkeley. On . . . pelagic Polychaeta . . . northeast Pacific . . . *1957.* No. 49686.

BERKELEY, CYRIL, *see* Berkeley, E., *and* C. Berkeley. Polychaeta . . . Western Canadian Arctic. *1958.* No. 49687.

49686. BERKELEY, EDITH, *and* **C. BERKELEY.** On some pelagic Polychaeta from the northeast Pacific north of latitude 40° N. and east of longitude 175° W. (Canadian journal of zoology, Aug. 1957. v. 35, no. 4, p. 573–78, illus., tables, map.) 20 refs.

Record of ten species collected with plankton in Alaskan waters during 1955–1956. Two species *Otopsis longipes* Ditlevsen, and *Epidiopatra hupferiana* Augener, are new to the Pacific; four are new to the area north of 40° N.

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49687. BERKELEY, EDITH, *and* **C. BERKELEY.** Polychaeta of the Western Canadian Arctic. (Canada. Fisheries Research Board. Journal, Sept. 1958. v. 15, no. 5, p. 801–804, tables.) 13 refs.

A summary of species hitherto recorded from this area is presented. An analysis of occurrence of these species to the west, including the Chukchi Sea, and to the east as far as Greenland shows "an almost complete balance" in occurrence in both directions, suggesting their circumpolar distribution. ***Copy seen:*** DI.

BERKELEY, MILES JOSEPH, 1803–1889., *see* Hooker, J. D. An account . . . plants . . . Walker . . . *1861.* No. 51803.

49688. BERLAND, BJÖRN. The hood of the hooded seal, *Cystophora cristata* Erxl. (Nature, Aug. 9, 1958. v. 182, no. 4632, p. 408–409.) 2 refs.

Report on field observations indicating that males of this species extrude only one red "bladder" through the snout. It is speculated that this bladder is the inflated nasal septum. The phenomenon is observed in the mating and breeding season. ***Copy seen:*** DLC.

49689. BERLINER, FRANZ. Hverdag i Angmagssalik. (Grønland, Feb. 1957.

nr 2, p. 65–72, illus.) Text in Danish. ***Title tr.:*** Everyday life at Angmagssalik.

Comments on this East Greenland settlement (65°36′ N. 37°38′ W.) with emphasis on fishing, housing, education problems, relations between Greenlanders and Danes, etc. ***Copy seen:*** DLC.

49690. BERLINER, FRANZ. Magdalene; en østgrønlandsk skaebne. (Grønland, June 1957, nr. 6, p. 210–15, illus.) Text in Danish. ***Title tr.:*** Magdalene; an East Greenland destiny.

Sketches the life of an old woman at Angmagssalik who died in 1930.

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49691. BERLINER, FRANZ. Pitarak over Angmagssalik. (Danish Foreign Office journal, Dec. 1957. no. 25, p. 19–21, 3 illus.)

General description of "pitarak," the strong dry wind blowing off the Greenland inland ice, warm (similar to Alpine föhn) or cold. Relative humidity may drop to 30. Wind force of 90 knots has been registered at Angmagssalik, East Greenland (max. force on the Beaufort scale is 12, approx. 68 knots). At onset of this wind, barometer may rise abruptly after a steady fall of several hours; other wind warnings are noted. Author's experiences during several "pitaraks" at Angmagssalik are described. ***Copy seen:*** DLC.

49692. BERMAN, EDWARD J., *and others.* Experimental prevention of ventricular fibrillation following hypothermia and induced cardiac arrest. (Journal of thoracic surgery, Apr. 1958. v. 35, no. 4, p. 483–91, illus., tables.) 15 refs. *Other authors:* M. T. Taylor *and* C. Fisch.

Report on cardiac arrest produced in hypothermic dogs with acetylcholine, alone or in combination with magnesium sulphate, quinidine, or Histadyl. Incidence of ventricular fibrillation was not reduced by the use of magnesium; quinidine protected the heart and reduced complications from hypothermia. Histadyl also protected the heart.

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BERMAN, LAWRENCE, *see* Stulberg, C. S., *and others.* Preservation of human . . . cell strains at low temperatures. *1958.* No. 55208.

49693. BERNE, ROBERT MATTHEW, 1918– , *and others.* Myocardial hypothermia in elective cardiac arrest. (Journal of applied physiology, May 1958. v. 12, no. 3, p. 431–36, illus., table.) 12 refs. *Other authors:* R. D. Jones *and* F. S. Cross.

Report on elective cardiac arrest in normo- and hypothermic (±20° C.) dogs, produced by intracoronary injection of potassium citrate or acetylcholine. Potassium produced high incidence of ventricular fibrillation and poor recovery. Acetylcholine did not maintain cardiac arrest, with or without hypothermia, but produced ventricular fibrillation in four out of five dogs. The effects of blood infusion into the coronary arteries are also discussed. ***Copy seen:*** DLC.

49694. BERNE, ROBERT MATTHEW, 1918– , *and others.* Oxygen consumption of the hypothermic potassium arrested heart. (Society for Experimental Biology and Medicine. Proceedings, Oct. 1958. v. 99, no. 1, p. 84–86, table.) 10 refs. *Other authors:* R. D. Jones *and* F. S. Cross.

Report on 15 experiments with dogs. O_2-consumption of the potassium arrested, perfused heart at 25° to 21.5° C. amounted to 0.66 ml/min/100g against 2.1 ml/min/100g in normothermic controls. ***Copy seen:*** DNLM.

BERNE, ROBERT MATTHEW, 1918– , *see also* Cross, F. S., *and others.* Localized cardiac hypothermia . . . arrest. *1958.* No. 50394.

BERNHARDT, SV. AAGE, *see* Stein, K. S., *and* S. Aa. Bernhardt. Dronning Ingrids sanatorium . . . *1957.* No. 55143.

BERNHARDT, SV. AAGE, *see* Stein, K. S., *and* S. Aa. Bernhardt. Røntgenskibet . . . *1957.* No. 55144.

49695. BERNHOFT-OSA, A. Litt om Norges hvirveldyr i de siste ti årene. (Sveriges natur. Årsbok, 1950. årg. 41, nr. 1A, p. 107–116, illus.) Text in Norwegian. ***Title tr.:*** Notes on Norwegian vertebrates in the past ten years.

Roedeer, wolverine, eider, titmice, three-toed gull and rosy gull have been reported as new to arctic Norway. National parks proposed include one in Pasvik, Sør-Varanger, ca. 69° N., a primeval forest area. ***Copy seen:*** DLC.

49696. BERNHOFT-OSA, A. Ringmerkingsresultater fra Revtangen på Jaeren i 1957. (Stavanger, Norway. Museet. Sterna, Nov. 1958. bd. 3, hefte 4, p. 178–84.) Text in Norwegian. Summary in English. ***Title tr.:*** Bird-

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banding results from Revtangen in Jaeren in 1957.

Presents data on recoveries of birds ringed at Revtangen station (58°45′ N. 05°30′ E.); includes *Tringa totanus* recovered at Dvergberg, Vesterålen (69°01′ N. 15°47′ E.). ***Copy seen:*** MH–Z.

BERNSTEIN, P., *see* Bartlett, R. G., *and others.* Core to surface thermal gradients . . . rat . . . *1958.* No. 49562.

BERNSTEIN, P., *see* Bartlett, R. G., *and* P. Bernstein. Effect of clipping . . . rats . . . cold. *1957.* No. 49563.

BERNSTEIN, RALPH E., *see* Kaminer, B., *and* R. E. Bernstein. Electrocardiographic . . . responses . . . cooling the chest . . . *1957.* No. 52142.

49697. BERSAQUES, J. de. Acide ascorbique et cholestérol surrénaliens chez le rat hypothermique. (Annales d'endocrinologie, Sept.-Oct. 1957. t. 18, no. 5, p. 789–91, table.) 6 refs. Text in French. ***Title tr.:*** Ascorbic acid and adrenal cholesterol in the hypothermic rat.

Report on animals made hypothermic to 20–15° C. by the method of Giaja (cooling in hermetically closed vessels). The Sayers test does not cause an additional reduction of ascorbic acid and of adrenal cholesterol, in contrast to animals exposed to cold but not made hypothermic. ***Copy seen:*** DNLM.

49698. BERSON, F. A. On the rôle of long-wave instability in the general circulation; a study of five-day means in November 1948. Stockholm, 1950. 13 p. diagrs. (Sweden. Meteorologiska och hydrologiska institutet. Meddelanden, ser. A, nr. 3.) 16 refs.

Five-day mean circulation patterns between longitude 120°W. and 60°E. and latitude of approx. 37°N. and 77°N. are constructed for the 500 mb level. An analysis of the variations during Nov. 1948 verified the theoretical observation that establishment of positive vertical shear of zonal wind concurrent with marked surface easterlies in subpolar latitudes favors development of large amplitudes of planetary waves generated in the zonal current system. The analysis also indicates a relationship between this growth of planetary waves and the formation of jet streams to the south. The data also indicate a southward shift of successive westwind maxima and the existence of distinct poleward and equatorward pressure surges.

Copy seen: DWB.

49699. BERTHELSEN, ASGER. The structural evolution of an ultra- and polymetamorphic gneiss-complex, West Greenland. (Geologische Rundschau, 1957. Bd. 46, Heft 1, p. 173–85, 6 illus., 3 text maps, diagrs., cross-section.) 18 refs. *Also issued as:* København, Universitet. Mineralogisk-geologiske museum. Communications géologiques no. 84.

Contains results of author's investigations on Tovqussaq Peninsula (64°51′N. 52°05′W.) in 1949, 1953 and 1954 as part of a Grønlands Geologiske Undersøgelse program (1949 work: No. 20637). Regional geology of the west coast 64°–67°N. is briefly described. Structural evolution of the Tovqussaq region involves an orogenic period and subsequent cratogenic period. During the first main cycle of the orogenic period, complicated nappe structures were formed. As metamorphism reached granulite facies conditions, almost complete recrystallization of the rocks took place, and the nappes became refolded. In the second main cycle, under amphibolite facies conditions, the old granulite facies complex became exposed to retrograde metamorphism and granitization. All major fold structures belong to the older cycle. The cratogenic period involved two periods of dyke instrusion separated by formation of the important Fiskefjord faults. Genesis of the gabbro-anorthosites, diorites and "genuine" anorthosites is discussed.

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49700. BERTHELSEN, CHR. Det grønlandske forlag. (Atuagagdliutit: Grønlandsposten, Aug. 1, 1957. Ukiut 97-iat, nr. 16, p. 4–5.) Text in Danish. ***Title tr.:*** The Greenland Publishing House.

Describes the activities of this business set up in 1957 and run by the Provincial Council. Eight to ten general books (translations and Greenlandic originals), a couple of textbooks and some pamphlets are to be produced each year. Previously publishing was carried on by various bodies, such as the Provincial Council, the Greenland department, the Society for Furtherance of General Education, etc.

Copy seen: DLC.

49701. BERTRAM, GEORGE COLIN LAWDER. Arctic and Antarctic; a prospect of the polar regions. Cambridge, Eng., Heffer, 1958. ix, 123 p. illus., plates, maps incl. 1 fold.

New ed. of No. 1490, mostly rewritten to present post-war practice in polar living, transportation, communication, etc. The purpose and technique of polar work and travel are distinguished in three stages: before World War I, 1919-1939, and post-war. Polar animals, cold effects, clothing, sled dogs, transport, food, are dealt with. Problems of expeditionary organization and leadership are discussed, private and government ventures characterized. Polar enterprises are noted as instruments of national policy, and consideration is given to economic, political and strategic as well as scientific aspects of present-day activities in Arctic and Antarctic. IGY stations (56) are shown on antarctic map. A final chapter "Memories" offers vignettes from author's experience in polar life. ***Copy seen:*** DLC.

BÉRUBÉ, E. E., *see* Quebec. Dept. of Mines. The mining industry . . . *1956, 1957, 1958, 1959.* No. 54180.

49702. BESCHEL, ROLAND E. Lichenometrical studies in West Greenland. (Arctic, 1958. v. 11, no. 4, p. 254.)

Describes field studies in the Søndre Strømfjord area using the growth rate of lichens to obtain criteria of the micro- and macro-climate, and to date glacier advances. Dated gravestones served as a basis for determining the speed of lichen growth. A Recent advance period from 1600 to 1880 was indicated.
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49703. BESCHEL, ROLAND E. A project to use lichens as indicators of climate and time. (Arctic, 1957. v. 10, no. 1, p. 60.)

Describes method, termed lichenometry, of using rates of lichen growth to obtain the climatic mean in a given region and period, and to date moraines of the last glacier advances, human monuments, lava flows and mountain slides. The method which works for the last thousand years under alpine conditions should be useful for twice as long in polar regions. Rate of growth is measured by comparison of photographs taken over a span of years (methods described). Photographs of crustaceous and foliaceous lichens should be deposited with the Arctic Institute of North America.
Copy seen: CaMAI.

BESKOW, HANS, 1909– , *see* Grönlund, M. En äventyrlig tingsresa . . . *1958.* No. 51383.

49704. BESKROVNYĬ, N. S. Nefteproîâvleniîâ v vulkanicheskikh trubkakh Sibirskoĭ platformy. (Akademiîâ nauk SSSR. Doklady, Sept. 1, 1958. t. 122, no. 1, p. 119–22, plate.) 13 refs. Text in Russian. ***Title tr.:*** Evidence of oil in the volcanic pipes of the Siberian platform.

Reports an appearance of oil in volcanic pipes in the Nizhne-Ilim (approx. 57°15′ N. 103°20′ E.) region and in the Vilyuy basin. In the former, Zheldon III, Zheldon II, Zheldon I, Tat'yanka and Pasmurnyy pipes were investigated and in the Vilyuy region, Mir, Udachnaya and Zarnitsa. The appearance of fluid oil and solid bitumen were investigated in different cross-sections in the pipes themselves and near them. The substance of the oil and bitumen and their mixtures was studied and their chemical compositions are tabulated. Origin and migration of oil are discussed. Its occurrence is evident also in kimberlite pipes of the Olenek region. It is concluded that this oil occurrence in volcanic pipes follows the pattern known in France, Germany, South Africa and elsewhere.
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49705. BEST, G. N. Remarks on the group Cinnamomeae of the North American roses. (Torrey Botanical Club. Bulletin, June 9, 1890. v. 17, no. 6, p. 141–49.)

Contains a key to the species of the genus *Rosa,* and critical notes on eight, including *R. pisocarpa* which extends to Alaska. ***Copy seen:*** DLC.

49706. BESTELINK, P. N., *and* **S. TURNER.** The low-temperature brittleness testing of polyethylene. (American Society for Testing Materials. Bulletin, July 1958. no. 231, p. 68–73, illus., diagrs., graphs, tables.) 4 refs.

Describes brittleness testing apparatus and automatic brittleness specimen notcher and cutter designed and developed in the laboratories of Imperial Chemical Industries Ltd. The latter machine prepared 2 x 0.25 cm. specimens from 0.16 cm. sheets at the rate 1/sec.; the testing machine comprises 160 specimens, 20 tested at a time. Test results

on some polyethylene samples are tabulated, and computing methods for graphical interpretation indicated. The need for standardization of specimen preparation is stressed. ***Copy seen:*** DI.

BETANOV, I., *see Radio.* V Arktike . . . *1957.* No. 54194.

49707. *BETEN, VALLAR, MOSSAR.* Övre Norrlands jordbruk i stöpsleven. (Beten, vallar, mossar, Oct. 1952. årg. 4, nr. 8, p. 97–98, illus.) Text in Swedish. ***Title tr.:*** Upper Norrland's agriculture in the melting pot.

Agricultural population and area decrease in northernmost Sweden as industrial activities increase. Poor land is abandoned; only the better land is kept under cultivation or, in favored locations, increased in area; higher production is required of the south Swedish farmer. The opportunity exists for putting agricultural production on an economic basis. ***Copy seen:*** DLC.

BEVACQUA, R. B., *see* Maggi, G. C., *and others.* Modificazioni dell'equilibrio acido-base . . . *1957.* No. 53044.

BEVACQUA, R. B., *see* Noli, S., *and others.* Comportamento del quadro elettrolitico . . . *1957.* No. 53620.

BEVANS, J. T., *see* Dunkle, R. V., *and others.* Emissivity of ice, snow . . . *1957.* No. 50657.

BEYNON, WILLIAM, *see* Barbeau, C. M. Medicine-men . . . North Pacific Coast. *1958.* No. 49537.

49708. BEZRUKOV, P. L. Novelshie issledovaniîa donnykh otlozheniĭ dal'nevostochnykh morei i severo-zapadnoĭ chasti Tikhogo okeana. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 32–36.) Text in Russian. ***Title tr.:*** Recent investigations on bottom deposits of the Far-Eastern seas and the northwest part of the Pacific.

Review of investigations carried out by the *Vitîaz'*, during 1949–1954, covering the Okhotsk Sea, a great part of the Bering Sea, the Kuril narrows, etc. Bottom relief and the composition, distribution and origin of sediments are considered. Faunistic, seismic and other problems are included; and new or unusual features of the area and its seas are discussed. Methods of study are noted. ***Copy seen:*** DLC.

49709. BEZRUKOV, P. L., *and others.* Novye dannye o zakonomernostîakh stroeniîa podvodnogo rel'efa. (Akademiîa nauk SSSR. Doklady, Oct. 11, 1957. t. 116, no. 5, p. 841–44.) 7 refs. Text in Russian. *Other authors:* I. G. Bolchenko, A. V. Zhivago, N. L. Zenkevich, V. F. Kanaev *and* G. B. Udintsev. ***Title tr.:*** New data on the regularities in structure of the submarine relief.

Contains a generalization of data collected by various expeditions (especially by the R/V *Vitîaz'*), including those to the Arctic Ocean, and Okhotsk and Bering Seas. The apparent connection between the main forms of the sea bottom and those of the continental shelf and slope is pointed out. The accumulation of secondary bottom deposits as influenced by wave action, currents, volcanism and tectonic movements is also noted. ***Copy seen:*** DLC.

49710. BEZRUKOV, P. L., *and* **A. P. LISITSYN.** Osadkoobrazovanie v dal'nevostochnykh morîakh v chetvertichnoe vremîa. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Trudy, 1957. t. 13, p. 377–85.) Text in Russian. ***Title tr.:*** Development of sediments in the seas of the Far East during the Quaternary period.

Outlines study of Quaternary sediments based on recent investigations carried out by the Institute of Oceanology of the Academy of Sciences U.S.S.R. New methods are summarized. Factors influencing bottom sedimentation are considered in turn: geologic structure, relief climate, water dynamics and chemical composition. Several types of sediments are characterized: gravel-conglomerate, sands, and siltstones, biological-diatomaceous deposits, corals, etc. Some data are given on sediments of the Bering, Okhotsk and Japanese Seas. Distribution of calcium carbonate, iron, manganese and other particles in sea water is reviewed. ***Copy seen:*** DLC.

49711. BEZRUKOV, P. L. Sediments of the trenches in the north-eastern regions of the Pacific Ocean. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 177–78.)

Reports studies of sediment samples from six trenches, including the western part of the Aleutian and the Kuril-Kamchatka, undertaken on the *Vitîaz'*, 1953–1955, by an expedition of the Institute of Oceanology, Academy of Sciences, U.S.S.R. Findings are de-

scribed, including differences due to climate. ***Copy seen:*** DLC.

49712. BEZRUKOVA, T. I. Izdatel'skaîa deîatel'nost' ĪAkutskogo filiala AN SSSR. (Akademiîa nauk SSSR. Izvestiîa vostochnykh filialov, 1957, no. 9, p. 140–41.) Text in Russian. ***Title tr.:*** Publishing activities of the Yakut Branch of the Academy of Sciences, U.S.S.R.

During 1954–1956, scientists of the Yakut Branch published 25 monographs and collections of papers, 24 small books and 59 papers in journals, relating to the history, language, literature, economy, flora and fauna of Yakutia. Publication plans for 1957 and 1958 are noted, including a bulletin "Nauchnye soobshcheniîa" (Scientific information).

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BIANCHI, MICHEL, *see* Malmejac, J., *and others.* Diabète rénal en "hypothermie provoquée." 1958. No. 53082.

49713. BIBLIOGRAPHIE GÉOGRAPHIQUE INTERNATIONALE, t. 61, 1954–1955, t. 62, 1956. Paris, A. Colin, 1957, 1958. 2 v. Text in French.

Coverage and arrangement are similar to previous issues (cf. No. 38839, 44020). Parts 1 and 2 contain scattered arctic listings under pertinent subjects and countries. Part 2 includes a section on polar regions assembled by J. N. Malaurie. In the 1954–55 issue, this section has 686 refs. and, in the 1956 issue, 751 refs. Most references are accompanied by brief annotations (5 to 50 words).

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49714. BICKEL, ROBERT S., *and* **W. W. PATTON,** *Jr.* Preliminary geologic map of the Nulato and Kateel Rivers area, Alaska. Washington, D. C., 1957. Map sheet, 30 x 47 in. (U.S. Geological Survey. Miscellaneous geologic investigations. Map I–249.) 4 refs.

Map (1:125,000) covers oval-shaped area 64°15′–65°40′ N. 157°30′–160° W., in the Koyukuk Cretaceous basin. Legend identifies Cretaceous sandstones, shales and siltstones, and unconsolidated Quaternary silts, sands and gravels; other geologic features are also shown. Index map shows location of this and other reports on the Koyukuk basin; inset map shows areas covered by field traverses, 1955, and by interpretation of 1:40,000 vertical aerial photographs.

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49715. BICKNELL, EUGENE P. Studies in Sisyrinchium, IV: *S. angustifolium* and related species of the West and Northwest; VII: the species of British America. (Torrey Botanical Club. Bulletin, Aug. 1899, v. 26, no. 8, p. 445–57; May 1900, v. 27, no. 5, p. 237–46.)

Parts IV and VII only of these studies include northern species of blue-eyed grass (iris family), viz.: *Sisyrinchium littorale* (Alaska), and *S. angustifolium* (Fort Wrigley on the Mackenzie River, 63° N.). ***Copy seen:*** DLC.

49716. BIEBER, GIORGINA. La termoregolazione nell'immaturo; osservazioni cliniche. (Rivista di clinica pediatrica, Oct. 1957. v. 60, fasc. 4, p. 302–307.) 26 refs. Text in Italian. Summary in English. ***Title tr.:*** Thermoregulation in the immature infant; clinical observations.

Analysis and discussion based on observations of 650 premature infants. Conclusion is offered that the infant of small weight and high immaturity derives the highest benefit from an air-conditioned, even environment during its early period of highest temperature fluctuation. As soon as thermoregulation and a stable body temperature become evident, the baby is transferred into a semi-open incubator.

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49717. BIGELOW, HENRY BRYANT, 1879– , *and* W. C. SCHROEDER. A study of the sharks of the suborder Squaloidea. Cambridge, 1957. 150 p. 16 illus. (Harvard University. Museum of Comparative Zoology. Bulletin, v. 117, no. 1.) 89 refs.

Contains a systematic treatment summarizing the present status of the group, with a discussion of Squaloidea, keys to the families, subfamilies, genera and species. All known genera and species are listed, with synonyms, generic descriptions, critical and descriptive notes on species, and data on geographic and vertical distribution. One species (*Etmopterus bullisi*) is described as new. Two occur in arctic regions: *Squalus microcephalus,* from the White Sea, Bjørnøya, Spitsbergen and East and West Greenland, southward to North Sea in the east, to the Gulf of Maine in the west; and *Somniosus pacificus,* northeastern Asia and Pacific Coast from Bering Sea south to Puget Sound.

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49718. BIGELOW, WILLIAM G. Hypothermia. (Surgery, Apr 1958. v. 43, no. 4, p. 683–87.)

A review of temperature limits for safe hypothermia in man, heart and brain tolerance of hypothermia, its uses in vascular surgery, techniques, rewarming risks and other complications, experimental total freezing, hibernation, etc.

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49719. BIGGERS, J. D. The growth of cartilaginous embryonic chick bones after freezing. (Experientia, Dec. 15, 1957. v. 13, fasc. 12, p. 483–84, illus., tables.) 6 refs. Summary in German.

Preliminary report on the effects of freezing to a temperature of −79° C. Tibiae of six-day old material survived such exposure, provided glycerol was present in the freezing medium. In seven-day old embryos, the treatment caused destruction of the hypertrophic cells in the diaphysis and survival of the remaining rudiment. ***Copy seen:*** DLC.

49720. BIJL, W. VAN DER. Meteorologische waarnemingen bij de Noordpool. (Hemel en dampkring, 1956. Jaarg. 54, p. 45–53, 72–77, illus., tables, map, graph.) Refs. in text. Text in Dutch. ***Title tr.:*** Meteorological observations near the North Pole.

Norwegian (*Fram*, *Maud*) and Soviet (*Sedov*, and North Pole 1–5) drifts in the Arctic Basin are reviewed, and meteorological observations from North Pole 3–5 are discussed for each month Aug. 1954–Aug. 1955, with corresponding tabulation of mean and extreme temperatures. Comparative data on air temperature and pressure are tabulated for the period 1893–1956 (1937–data from North Pole 1, Papanin expedition), also mean monthly temperature along the 60°, 75°, 80°, 85°, 90° parallel and at Eureka (1947–50) and Isachsen (1948–50) on Ellesmere and Ellef Ringnes. Records of the lowest measured temperatures are reviewed, the trend toward a warmer climate is noted.

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49721. BILELLO, MICHAEL A. A survey of arctic snow-cover properties as related to climatic conditions. Wilmette, Ill., Dec. 1957. 9 p. tables, graphs. (U.S. Army. Corps of Engineers. Snow, Ice, and Permafrost Research Establishment. Research report 39.) 3 refs.

"Data collected over 2–4 yr. in Alaska (five stations) and at seven stations in Baffin and the Queen Elizabeth Islands are analyzed for regional variations in snow-cover density, temperature, and hardness as related to climate. Snow temperatures from Nov.–March averaged 4°–9° C. higher than air temperatures in Alaska and 4.5° C. higher in Canada. Density in Alaska was 0.13–0.20 in Nov. and 0.23–0.27 in March, while in Canada the values ranged from 0.30–0.36 in Nov. and 0.33–0.39 in March. Regional hardness variations resembled those for density. Snow hardness during the period of no melting was found to be related to densities from 0.15–0.36. Nomographs were developed for estimating average monthly snow-cover density from mean air temperature and wind velocity for November–March for the area N. of 62° N. lat. and elevations below 1500 ft. A comparison between observed and derived values indicates that the method provides a reliable regional estimate of snow-cover densities."—SIPRE.

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49722. BILELLO, MICHAEL A. A survey of arctic snow-cover properties as related to climatic conditions. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Toronto, 1957. Report, v. 4, *pub.* 1958, p. 63–77, text map, 10 diagrs., 4 tables.) 3 refs.

Analysis of snow-cover density, temperature, and hardness data, obtained over a two- to four-year period at five stations in Alaska and six stations in the Canadian Arctic, shows the snow cover in the Canadian Arctic Islands to be colder, denser and harder than in the interior of Alaska. This paper, a progress report on Project 22.5–1 Snow Cover Studies, SIPRE, also discusses methods used to forecast snow cover characteristics from meteorological conditions, to facilitate military operations or civilian activities in areas dominated by snow cover and low temperatures.

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49723. BILIBINA, T. V., *and* **A. D. DASHKOVA.** K kharakteristike nekotorykh dokembriĭskikh granitov Severnoĭ Karelii: intruzivnyĭ kompleks Nuorunen. (Leningrad. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Materialy, nov. ser., petrografiĭa, 1957. vyp. 21, no. 2, p. 39–47, illus., tables, plates.) 2 refs. Text in Russian. ***Title tr.:*** On characteristics of some

Precambrian granites of northern Karelia: the Nuorunen intrusive complex.

Describes the Nuorunen mountain (approx. 66°05′N. 30°20′E.) type of intrusion and outlines petrographic and mineralogic characteristics of Archean and Proterozoic granites. Micro-pegmatite-, pegmatite-, and porphyritic-granites, aplite, quartzitic porphyres, and micro-pegmatite granite-porphyres are identified and briefly characterized; analyses of their heavy mineral fractions are presented. The Nuorunen granites are considered to belong to a zircon-fluorite group. Chemical analyses are presented; metallic ore possibilities are discussed.

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49724. BILLING, GILLIS. Grönländska alper. (Till fjälls, 1957. årg. 29, p. 20–33, illus.) Text in Swedish. ***Title tr.:*** Greenland alps.

Account of Österreichische Grönlands-expedition, a party of eight including the author, with Hans Gsellman as leader, to climb in the Staunings Alper (72° N. 25°20′ W.) East Greenland in July–Aug. 1957. Several ascents were made to 2,000–2,500 m. ***Copy seen:*** DLC.

49725. BILLINGHAM, R. E. Bubbles in thawed cornea. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 530–31.)

Author reports to have observed minute bubbles in corneas during quick rewarming from a temperature of −79° C. of slowly frozen human eyes. The bubbles disappeared quickly and had no adverse effect on the transplant. Circumstances of their formation and nature of bubbles are discussed.

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49726. BILLINGHAM, R. E. Spread of bacteria during hypothermia. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 550.)

Trying to explain deaths after full recovery from hypothermia, the author draws attention to possible bacterial infections from the gut and depressed immunological defense, due to hypothermia.

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BIÖRCK, GUNNAR, *see* No. 49797.

49727. BIOLOGY COLLOQUIUM. 18th, *Oregon State College*, Apr. 19–20, 1957. Arctic biology ed. by H.P. Hansen. Corvallis, Ore., 1957. 134 p. illus., maps, graphs, tables. Refs.

Papers presented on biological research problems in the American Arctic and subarctic, especially Alaska, are listed in this Bibliography under their authors' names, viz:

WIGGINS, I. L. The Arctic, its discovery and past development.

PÉWÉ, T. L. Permafrost and its effect on life in the North.

BRITTON, M. E. Vegetation of the arctic tundra.

HEUSSER, C. J. Pleistocene and postglacial vegetation of Alaska and the Yukon Territory.

PITELKA, F. A. Some characteristics of microtine cycles in the Arctic.

BUCKLEY, J. L. Wildlife in arctic and subarctic Alaska.

MICK, A. H. Arctic and subarctic agriculture.

ALTER, A. J. Health and sanitation problems in the Arctic.

LANTIS, M. L. American arctic populations: their survival problems.

WIGGINS, I. L. Potentialities for the future development of the American Arctic. ***Copy seen:*** DGS.

49728. BIRCHER, RALPH. Zur Ernährung am Himalaya. (Alpen, Jan. 1954. Jahrg. 30, no. 1, p. 15–21, table.) 3 refs. Text in German. ***Title tr.:*** Nutrition in the Himalayas.

Contains general directives about food on arctic and alpine expeditions, viz.: light weight, high concentration, easy digestibility and good keeping qualities; evaluation of native, natural and concentrated food items. Discussion and analysis follows, of a proposed diet of 3120 calories, weighing 780 g. (net) and costing about $1.08. Reduction of protein intake in high altitude is recommended. ***Copy seen:*** DLC.

BIRD, GORDON SAMUEL, 1929– , *see* Baugh, C. W., *and others.* Blood volumes of Eskimos and white men . . . *1958.* No. 49581.

49729. BIRD, JOHN BRIAN, 1923– , *and* **M. B. BIRD.** Notes on potential building sites in the Bathurst Inlet area, N. W. T. Ottawa, Queen's Printer, 1957. 14 p. text map, table. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Miscellaneous papers series. Geographical paper no. 8.)

Contains results of part of a general survey of this region (67°30′ N. 108° W.) by a Geographical Branch party in 1954. Physical geography, exploration, present trading post, mission and radio station of the area are noted. Navigability of the

Inlet, tidal range, ice conditions, and types of terrain close to sea level are briefly described. Eight building sites in the northern, and five in the central and southern parts of the Inlet region are evaluated. ***Copy seen:*** DGS.

BIRD, M. BERYL, *see* Bird, J. B., *and* M. B. Bird. Notes . . . building sites . . . Bathurst Inlet . . . *1957*. No. 49729.

49730. BIRKENMAJER, K. Preliminary report on the raised marine features in Hornsund, Vestspitsbergen. (Polska Akademia Nauk. Bulletin, série des sciences chimiques, géologiques et géographiques, 1958. v. 6, no. 2, p. 151–57.) 9 refs. Summary in Russian.

Reports scattered observations in 1956 and 1957 along the coast of Hornsund (76°30′ N. 15°30′ E.) noting the links between raised marine features and the Hologene history of the Arctic, and isostatic movements depending on stages of glaciation. A table of the main coast features (four terraces) is presented and compared with similar features of central Spitsbergen, described by others. The differences of raised marine terraces, according to the author, are caused by a different rate of postglacial uplift. He proposes a new so-called "whale" method for systematic observations of the Spitsbergen isostatic movements, based on the situation of about a hundred whales' bones, scattered along the Hornsund coast. ***Copy seen:*** DGS.

49731. BIRKENMAJER, K. Preliminary report on the stratigraphy of the Hecla Hoek formation in Wedel-Jarlsberg Land, Vestspitsbergen. (Polska Akademia Nauk. Bulletin, série des sciences chimiques, géologiques et géographiques, 1958. v. 6, no. 2, p. 145–50.) 10 refs. Summary in Russian.

The area (approx. 77° N. 14° E.) between Werenskioldbre, Austre Torellbre, Mühlbaherbre, Hornsund and Dunöysund, in the southern part of Vestspitsbergen, was investigated in summer 1957 by the Polish IGY Spitsbergen Expedition under Dr. S. Siedlecki. It purposes to continue the geologic mapping started by Dr. S. Z. Rożycki in 1934. Discoveries of a new inarticulate brachiopod and trilobite fauna are claimed. A new stratigraphic division is proposed (table). The Hecla Hoek formation consists of Precambrian and Lower Paleozoic rocks with the degree of metamorphosis visibly stronger toward the base. The main orogenic movements are stated to have taken place after deposition of the Ordovician. The geosyncline was of long duration and lasted with some interruption from Precambrian to Lower Paleozoic time. ***Copy seen:*** DGS.

49732. BIRKENMAJER, K. Remarks on the pumice drift, land-uplift and the recent volcanic activity in the Arctic Basin. (Polska Akademia Nauk. Bulletin, série des sciences chimiques, géologiques, et géographiques, 1958. v. 6, no. 8, p. 545–49, map.) 14 refs.

Reviews occurrence and position of pumice fragments in Hornsund, Vestspitsbergen and other places observed by various explorers including the author. He agrees with Kulling's opinion that submarine volcanoes should be regarded as a possible source of the pumice in the arctic marine basin. An attempt is made to date the pumice-lava eruptions at late 15th and mid-18th centuries. A new, (so-called "whale,") method is proposed for calculating the rate of uplift in the Svalbard archipelago. Tentative isobases are drawn for the last 350 years showing the land uplift. Maximum recent uplift is considered to lie in the central part of the Barents Sea shelf. ***Copy seen:*** DGS.

49733. BIRKET-SMITH, KAJ, 1893– . Boulder-chip scrapers in the Eastern Arctic. (Man, July 1958. p. 113–14, illus.) 22 refs.

Discusses the uneven distribution of boulder chips used as skin-scrapers which, while common to Athapaskan and Eskimo sites in Alaska, are rare outside of this area. Only occasional finds of the implement have been made in Prince William Sound and on Chetyrekhstolbovoy Island off the Kolyma River mouth (Siberia). The boulder-chip scrapers are even rarer in the Eastern Arctic, though a few have been discovered in Labrador, in Dorset sites of Newfoundland and as far east as West Greenland where author found them still in use in 1918. ***Copy seen:*** DLC.

49734. BIRKET-SMITH, KAJ, 1893– . Danish activities in Eskimo research, 1949–1954. (International Congress of Americanists, 31st, *São Paolo*, 1954. Proceedings, 1955. v. 2, p. 1119–28.) 22 refs.

Discusses research and recent publications in the fields of physical anthro-

pology, linguistics and prehistory. The ethnological and archeological results of the Fifth Thule and Danish Peary Land Expeditions in Arctic Canada and Greenland, H. Larsen's and J. Meldgaard's excavations in Alaska, etc., are summarized. A Paleo- and a Neo-Eskimo stage in Eskimo prehistory are postulated and H. B. Collins' view of a pre-Ipiutak dating of the Old Bering Sea culture criticized (No. 21277). ***Copy seen:*** DSI.

49735. BIRMAN, I. B. O rasprostranenii i nerestovykh migratsiiakh gorbushi, *Oncorhynchus gorbuscha* Walb. v severo-zapadnoĭ chasti Tikhogo okeana. (Akademiia nauk SSSR. Doklady, 1958. t. 122, no. 1, p. 146–48, maps.) 6 refs. Text in Russian. ***Title tr.:*** Distribution and spawning migrations of gorbusha *Oncorhynchus gorbuscha* Walb. in the northwestern Pacific.

Report based on a study of this salmon in 1955 and 1957. Areas of wintering, beginnings and progress of shoreward migration, directions of this migration, "herds" of the Kamchatka gorbusha, are outlined. ***Copy seen:*** DLC.

49736. BIRSHTEĬN, IA. A. Drevneĭshiĭ predstavitel' otriada desiatinogikh rakoobraznykh *Protoclytiopsis antiqua* gen. nov. sp. nov. iz permskikh otlozheniĭ Zapadnoĭ Sibiri. (Akademiia nauk SSSR. Doklady, Sept. 21, 1958. t. 122, no. 3, p. 477–80, illus.) 12 refs. Text in Russian. ***Title tr.:*** The earliest representative of Crustacea Decapoda: *Protoclytiopsis antiqua* gen. nov. sp. nov. from Permian deposits of West Siberia.

This fossil crustacean was found in 1953 by L. D. Miroshnikov in a drill core in the Ust'-Yeniseyskiy Port region. It is described in detail: material, measurements, marks, etc., and compared with associated forms. Decapoda are widespread in the Triassic and are known as inhabitants of the sea. Permian *Protoclytiopsis* lived in fresh waters.

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49737. BIRZIS, LUCY, *and* **A. HEMINGWAY.** Nervous control of shivering; shivering as a result of brain stimulation. Ladd Air Force Base, Alaska, June 1957. 14 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–10.) 4 refs.

A study of brain stem pathways for shivering, in the cat. Twenty-one sites along them produced tremors characteristic of natural shivering following electrical stimulation. ***Copy seen:*** DNLM.

49738. BIRZIS, LUCY, *and* **A. HEMINGWAY.** Nervous control of shivering, 6; efferent brain discharge during shivering. Ladd Air Force Base, Alaska, June 1957. 17 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–11.) 9 refs.

Description of action potentials associated with shivering and recorded from the cats' brain stem with large microelectrodes. The range of frequencies from these units was 6 to 26 per second and appeared as a continuous stream of impulses without rhythmic pattern.

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49739. BISCHOF, WALTER. Längs Svalbards västkust, till det geofysiska årets svensk-finsk-schweiziska expedition på Nordostlandet. (Till fjälls, 1957. årg. 29, p. 42–47, illus.) Text in Swedish. ***Title tr.:*** Along the west coast of Svalbard, to the Swedish-Finnish-Swiss Geophysical Year expedition on Nordaustlandet.

Account of voyage aboard the Norsk Polarinstitutt's ship *Sjøvern* from Longyearbyen to the expedition base at Kinnvika (80°03′ N. 18°18′ E.) in Aug. 1957, and some impressions of life at the base. W. Bischof is the expedition's representative in Stockholm.

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49740. BISHOP, BARRY C. Shear moraines in the Thule area, northwest Greenland. Wilmette, Ill., Jan. 1957. 47 p. illus. incl. 6 stereopairs and 2 stereotriplets, 6 maps incl. 1 fold., diagrs. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–56. v. 2. SIPRE research report 17.) 5 refs.

Discusses results of study of an unusual and little-known type of moraine, an ice-cored deposit developed from debris supplied by shear planes at the boundary between the stagnant outer zone and the mobile inner zone of the icecap. It is located on the margin of the inland ice, southeast of Thule, between Moltke and Petowik Glaciers. Physiographic conditions of the study area and structure of the marginal zone of the icecap are treated in some detail; geomorphic processes of ablation, drainage, sorting, sliding and slumping, undermining, and wind action (most striking), and resulting features are described. Recent glacial history of the ice margin indicates at least one complete cycle is represented in the Thule Ramp shear moraine area. Fur-

ther knowledge is needed for determining the age of these moraines.

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BISHOP, BARRY C., *see* Schytt, V. Glaciological investigations . . . Thule . . . *1957*. No. 54640.

49741. BISHOP, SHERMAN CHAUNCEY, 1887– , *and* C. R. CROSBY. Studies in American spiders: genera *Ceratinopsis, Ceratinopsidis* and *Tutaibo*. (New York Entomological Society. Journal, Mar. 1930. v. 38, no. 1, p. 15–33, plates 3–6.) 4 refs.

Describes three genera (one new) and 15 species (one new), with synonyms, critical notes and data on habitats and distribution. *Ceratinopsis labradoriensis*, type locality Cabot Lake in Labrador, is included. ***Copy seen:*** DLC.

49742. BISHOP, YVONNE, *and others.* Index and list of titles, publications of the Fisheries Research Board of Canada, 1901–1954. Ottawa, 1957. 12, 209 p. (Canada. Fisheries Research Board. Bulletin no. 110.) *Other authors:* N. M. Carter, D. Gailus, W. E. Ricker, *and* J. M. Speirs.

Contains a subject-author index to papers published by the Fisheries Research Board and its predecessor the Biological Board (p. 1–78). The papers as published, 1901–1954, in these boards' *Contributions, Journal, Bulletin, Fauna, Studies*, and in two Newfoundland Bulletin series, are listed, volume by volume, as appendix to the index. The major part of the Boards' published work is covered, including that on northern areas, and on fish, birds and other life forms, in arctic and subarctic regions.

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49743. BISKĖ, G. S. K voprosu o roli tektoniki v geomorfologii Severnoĭ Karelii. (Akademiiâ nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiiâ, 1958, no. 3, p. 31–35, illus., map.) 6 refs. Text in Russian. ***Title tr.:*** On the question of the role of tectonics in the geomorphology of northern Karelia.

Outlines tectonic fractures, their mode, extent and directions in the area approx. 66°–66°40′ N. 29°30′–32°30′ E.; and discusses their effects in formation of the present relief. A transverse profile from Kivakka to Lukkulays-vara mountains is presented and dissections in relief interpreted. Tectonic fractures are summarized in map. Geologic and geomorphic signs are cited as proof of tectonic disturbances not only in Paleozoic, but in Quaternary times as well.

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BISKĖ, G. S., *see also* Kratŝ, K. O., *and others.* Professor . . . Borisov. *1958*. No. 52470.

BISKĖ, S. F., *see* Anikeev, N. P., *and others.* Mezhvedomstvennoe stratigraficheskoe soveshchanie . . . *1957*. No. 49330.

BISKĖ, S. F., *see* Baranova, ÍÛ. P., *and others.* Paleogeografiiâ . . . Olenek i Markhi. *1958*. No. 49529.

49744. BITTNER, JOHN J. Survival of the mouse mammary tumor agent (MTA) in frozen tissue. (Cancer research, July 1958. v. 18, no. 6, p. 706–707, table.) 15 refs.

Mouse MTA was demonstrated in extracts of thawed tumor mince which remained frozen at −79° C. for 4¼ yrs. The agent induced tumors in about 40 or 68% of cases, depending on its dilution. No viable cells were found in the thawed suspension. ***Copy seen:*** DNLM.

BITTNER, JOHN J., *see also* Chaudhry, A. P., *and others.* Daily rhythms in rectal temperature . . . mitoses . . . *1958*. No. 50191.

49745. BJARNASON, HÁKON. Planteferda til norske ungdomar til Island sumaren 1949. (Tidsskrift for skogbruk, June 1950. årg. 58, hefte 6, p. 140–45, illus. *Also pub. in:* Skogen, *Oslo*, 1950, årg. 15, hefte 7, p. 89–94.) Text in Norwegian. ***Title tr.:*** The planting trip of young Norwegians to Iceland in the summer of 1949.

Describes trip from Troms county to Iceland to take part in forest planting in many parts of the country. The Norwegians' contribution, especially to cultural exchange between Iceland and Norway, is stressed. ***Copy seen:*** DA.

49746. BJARNASON, HÁKON. Skogkulturen på Island. (Skogbrukeren, Jan. 1, Feb. 15, 1952. årg. 27, nr. 1, p. 1–4; nr. 4, p. 42–43.) Text in Norwegian ***Title tr.:*** Cultivation of forests in Iceland.

Natural forest in Iceland (mainly birch) has been reduced to less than 1,000 sq. km., the trees small, of poor quality, max. height 11 m. Timber used is mostly imported. Conifers of several species

were planted experimentally (1899–1913) but most proved unsuited to the local climate. Various species from Alaska, northern Norway and Siberia have been planted since 1933, and preliminary results are encouraging. ***Copy seen:*** DA.

49747. BIÖRCK, GUNNAR, 1916– , *and* B. JOHANSSON. The influence of anoxia on the hypothermic electrocardiogram of hedgehog and man. (Cardiologia, 1957. v. 30, no. 5, p. 344–48, illus.) 4 refs.

Contains description and discussion of electrocardiograms from hypothermic hedgehogs and men whose hearts were subject to anoxia. In man this was induced by circulatory arrest, in the hedgehog by breathing N. The fact that hypothermic hedgehogs are able to breathe N for two hours without ill effect against only 3–5 minutes in the normothermic state is pointed out and discussed. ***Copy seen:*** DNLM.

49748. BJÖRCK, PEDER, 1891– . En påskfärd till Karesuando. (Svenska turistföreningen. Årsskrift, 1926. p. 249–62, illus.) Text in Swedish. ***Title tr.:*** An Easter journey to Karesuando.

Describes a ten-day visit to Karesuando, in northern Sweden, Apr. 1925: the 140 km. sled journey from Kiruna; Lappish schools, homes, clothing, food, and customs; importance of reindeer migrations, etc. ***Copy seen:*** DGS.

49749. BJÖRKMAN, ERIK, 1912– . Norrländsk tallkräfta (*Dasyscypha fuscosanguinea*) i sådder och planteringer i höjdlägen. (Skogen, *Stockholm*, Aug. 15, 1957. årg. 44, nr. 16, p. 522.) Text in Swedish. ***Title tr.:*** Norrland pine cancer (*Dasyscypha fuscosanguinea*) in seedlings and forest plantings in high altitude areas.

This fungus, known as a parasite in older pine stands, also invades pine seedlings and young trees at 400–700 m. altitude. It invades the collar of a young tree injured by frost heaving; other fungi and insects follow and the tree gradually dies. *Dasycypha fuscosanguinea*, a serious threat to reforestation, should be strictly controlled. ***Copy seen:*** DA.

49750. BLACK, RICHARD BLACKBURN, 1902– . Richard Evelyn Byrd. (Geographical review, Oct. 1957. v. 47, no. 4, p. 579–81, port.)

Obituary of this American explorer, in charge of the United States Antarctic program of the IGY, at his death, Mar. 11, 1957. His pioneering use of aircraft in polar regions, recognition of the advantages of motorized surface transport and use of radio communications for field parties is stressed. In 1925 he led the Navy flying contingent of the MacMillan Expedition and in 1926 flew over the North Pole from a base in Svalbard. His antarctic expeditions from 1928 to 1957 are noted. Another obituary of Byrd by the same author was pub. in *Explorers journal*, Oct. 1957, v. 35, no. 3, p. 1–7. ***Copy seen:*** DGS.

49751. BLACK, ROBERT FOSTER, 1918– . Gubik formation of Quaternary age in northern Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1701.)

Contains abstract of a paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957. Describes unconsolidated formation, largely comprising lenses and admixtures of silt and fine-grained sand with quartz and chert predominating, which mantles rocks of Cretaceous or Tertiary age throughout the Arctic Coastal Plain Province. Three lithologic units are distinguished.

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49752. BLACK, ROBERT FOSTER, 1918– . Permafrost, water-supply and engineering geology of Point Spencer Spit, Seward Peninsula, Alaska. (Arctic, 1958. v. 11, no. 2, p. 102–116, illus., 2 maps, 3 diagrs., table.) Paper read at Geological Society of America meeting Oct.–Nov. 1956, abstract was listed as No. 44040.

Contains results of geologic reconnaissance of the spit, autumn 1945, by author and William P. Brosgé, to determine the character of the permafrost and the availability of potable water for use by a construction group and a service group of the U.S. Army Corps of Engineers. The geography, geology, climate, permafrost conditions, engineering, geology and hydrology of the area are treated in turn. Spits like Point Spencer can be classed among the barrier-bars or offshore bars; supply of fresh water in such areas is always limited; permafrost is the factor which permits its preservation in natural or artificial basins, and this must be considered in planning construction.

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49753. BLACK, ROBERT FOSTER, 1918– . Some problems in engineering

geology caused by permafrost in the Arctic Coastal Plain, northern Alaska. (Arctic, 1957. v. 10, no. 4, p. 230–40, illus.) 40 refs.

Deals with permafrost as the controlling influence on certain engineering projects as observed during field studies, 1945–1951. Its direct and indirect effects on transportation, surface and underground exploration, construction and durability of structures, water supply, sewage disposal, drilling for and production of oil and gas are considered, but no attempt is made to present an overall survey. "Overland transportation is hampered most in the spring breakup and fall freeze-up periods; excavation can be made only in summer in the active layer unless special methods are used. Bench marks can be set properly only in adequately drained backfill to 10 m. depth. Foundation excavations must be kept nearly dry; construction material for roads is lacking except locally. Steel landing mats and concrete can be used safely on gravel beaches for landing strips; small airstrips can be built on sand dunes with little grading and little danger of affecting the permafrost. A frozen runway of pycrete or icecrete utilizing turf and surface soil as the foundation and permafrost as a cold reserve in a heat exchanger is recommended for areas lacking suitable materials."—SIPRE.

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49754. BLACK, ROBERT FOSTER, 1918– , *and* W. L. BARKSDALE. Terrain and permafrost Umiat area, Alaska. Sept. 1948. 23 p. illus, graphs, maps incl. 1 fold. (U.S. Geological Survey. Military Geology Section. Permafrost program progress report no. 5.) 5 refs. In cooperation with Research and Analysis Branch, Engineer Intelligence Division. Chief of Engineers Office.

Contains a brief description of the topography, drainage, climate, vegetation, geology, hydrology and permafrost in this area of the Arctic Plateau (Arctic Slope) of Alaska. Two terrain units, the flood plain of the Colville River, and adjacent bedrock hills are discussed in relation to soils and rock materials, vegetation, permafrost and construction considerations. Umiat (new camp) and the airstrip lie on the north bank of the Colville River at approx. 69°22′ N. 152°08′ W. Areas of coarse-grained material favorable for airfield construction are widely scattered and limited in extent. Damage from frost action (to the 1944 camp and airstrip) and permafrost conditions are described.

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BLACK, ROBERT FOSTER, 1918– , *see also* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958*. No. 50694.

BLACK, ROBERT FOSTER, 1918– , *see also* Wahrhaftig, C. A., *and* R. F. Black. Engineering geology . . . Alaska Railroad. *1958*. No. 55914.

BLACK, ROBERT FOSTER, 1918– , *see also* Williams, H., *and others*. Landscapes of Alaska . . . *1958*. No. 56055.

49755. BLACK, WILLIAM A. Ice conditions: Gulf of St. Lawrence, 1956. (Geographical bulletin, 1957. no. 10, p. 77–83, 14 illus.)

Reports on ice as observed on ten flights over the Gulf, made at regular intervals Feb. 11–Mar. 6, 1956, at 1,000 ft. elevation. Overall ice concentration was light. Fourteen photographs illustrate the types of ice, their local distribution, and development in the 25-day period: soft ice disintegrating into brash; banded patterns resulting from winds; young ice, its rafting; compaction of brash, small floes and sludge into heavy winter ice; etc.

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49756. BLACK, WILLIAM A. Population distribution of the Labrador coast, Newfoundland. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical bulletin, 1956. no. 9, p. 53–74, 6 text maps, 8 tables.) 7 refs.

Report based on field work carried out summer 1950 and autumn 1952, on Newfoundland (1911–1945) and Canada (1951) census data, etc. Population growth and distribution have depended upon the fisheries since 1785, when there were 153 permanent residents along the coast. Establishment of mission and hospital centers, growth of fur-trapping communities in the Lake Melville area, and of settlements of summer and winter fishers, also establishment of Goose Bay air terminal have contributed to population growth and its concentration into fewer centers. Migration, especially among the Eskimo and Indians, continues despite government efforts to reduce it. Seasonal fishing and dwelling are likely to persist. ***Copy seen:*** DLC.

49757. BLACK, WILLIAM A. A report on sea ice conditions in the Eastern Arctic, summer, 1956, 1957. Ottawa. Queen's Printer, 1957, 1958. 2 no.: 32, 32 p. illus., tables, text maps. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical papers, no. 9, 15.) 7 refs. in no. 15.

Reports ice reconnaissance surveys from the northern supply ship CGS. *d'Iberville*, part of the Geographical Branch program to collect data on sea ice conditions and distribution in Canadian waters. Ship-board observations were supplemented by aerial ice reports. General ice and weather conditions are described for August 1956 and Aug. 1–Sept. 6, 1957, en route to Resolute and Eureka; ice distribution and contributing factors are discussed, summarized in tables, shown graphically on maps, and illustrated. Importance of aerial ice reports is stressed. ***Copy seen:*** DGS.

49758. BLACKADAR, ROBERT G. Activities of the Geological Survey of Canada in the Arctic in 1957. (Arctic circular, 1957. *pub.* Jan. 1958. v. 10, no. 2, p. 20–25.)

Describes field-season's work by six Survey officers. *R. Thorsteinsson*, leading a four-man party, continued geological studies begun in 1956 in northern Ellesmere, Axel Heiberg and Meighen Islands, investigated Fosheim Peninsula on Ellesmere. *E. T. Tozer* studied the Norwegian Bay - Belcher Channel - Eureka Sound area (Cornwall, Devon, Axel Heiberg, Exmouth, Table, Hat, and Princess Royal Islands, Grinnell Peninsula). *R. L. Christie* was attached to Operation Hazen in Ellesmere, part of the IGY program. *R. G. Blackadar* completed reconnaissance survey of north Foxe Basin, begun in 1956. *G. A. Gross* investigated iron deposits in Northern Quebec, visiting exploration companies operating on the west shore of Ungava Bay. *W. L. Davison* continued a survey of Quebec north of 58° N. and W. of 71° W.; spot geological observations were made. ***Copy seen:*** CaMAI.

49759. BLACKADAR, ROBERT G. "Operation Mackenzie," 1957. (Arctic circular, 1957. v. 10, no. 1, p. 7–8.)

In summer 1957 a 100,000 sq. mi. area was surveyed from the southern border of Northwest Territories north to 64° N. and west from margin of the Precambrian shield to 126° W., continuing a geological reconnaissance started in 1952. Stratigraphy and structure of the bedrock were studied, oil and gas potentialities assessed, and attention given to Pleistocene deposits. The Operation was supported by two helicopters and Beaver and Otter aircraft; seven bases were occupied successively. The 29-man party was led by Dr. R. J. W. Douglas and included nine members of the Geological Survey of Canada. ***Copy seen:*** DLC.

49760. BLACKADAR, ROBERT G. Patterns resulting from glacier movements north of Foxe Basin, N. W. T. (Arctic, 1958. v. 11, no. 3, p. 157–65, illus., maps.) 4 refs.

Maps and describes features indicating marine transgression and ice movement in the area approx. 64°–71° N. 74°–88° W., viz.: raised beaches, marine shell localities, perched boulders, glacial striae, drumlinoid ridges, glacial flutings, craig and tail structures, eskers, and directions of ice movement. The maximum extent of the last marine submergence is considered and the presumed extent mapped. Elevations in feet of raised beaches and marine shell localities are given.

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49761. BLAGOVESHCHENSKAIÂ, M. N. Sledy oledeneniâ v doline r. Nizhneĭ Tunguski i ee pritokov. (Leningrad. Vsesoûznyĭ geologicheskiĭ institut. Materialy, nov. seriiâ, 1955. vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 243–48.) 5 refs. Text in Russian. ***Title tr.:*** Marks of glaciation in the Nizhnyaya Tunguska River valley and its tributaries.

Outline of author's 1950 investigation between the Korvunchana (approx. 64°08′ N. 95°30′ E.) and Chiskova (64°08′ N. 95°35′ E.), tributaries to the Nizhnyaya Tunguska. Morainic materials, with some fossil plants, are described. Spore and pollen analyses disclose glacial origin. Glacial boulders, old terraces, and even glacial landscapes are indicated. Contributions of V. N. Saks, L. G. Kaminin, S. L. Kushev on this question are discussed. Convinced of glacial activity in this area, author urges further investigation. ***Copy seen:*** DLC.

49762. BLAGOVESHCHENSKIĬ, D. I. Mallophaga i Anoplura s zhivotnykh o. Vrangelâ (Ėntomologicheskoe obozrenie, 1958. t. 37, no. 2, p. 374–79) 24 refs. Text in Russian. Summary in English. ***Title tr.:*** Mallophaga and Anoplura from animals of Vrangel Island.

From small collections obtained by A. I. Mineev in 1932–33 and by L. A. Portenko in 1938–39, an annotated list of 30 bird lice and two true lice is given, with data on hosts. The parasites are listed also according to their hosts: 25 birds and two mammals.

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49763. BLAIR, A. A. Salmon tagging at Cape Charles, Labrador. (Canada. Fisheries Research Board, Journal, Mar. 1957. v. 14, no. 2, p. 141–44, table, maps.) 2 refs.

Account of tagging operations June 30–July 10, 1948. Dispersal was about equal north and south of the tagging station; farthest recaptured salmon was 214 miles away; average distance covered was 99 miles. ***Copy seen:*** DI.

49764. BLAIR, A. A. Salmon tagging at Francis Harbour Bight, Labrador. (Canada. Fisheries Research Board, Journal. Mar. 1957. v. 14, no. 2, p. 135–40, tables, maps.) 2 refs.

Contains information on the location and fisheries of this harbor (52°34′ N. 55°42′ W.) and tagging operations conducted during June 28–July 18, 1950. The returns indicate an equal distribution north and south of the tagging area, the greatest distance travelled by a salmon being 186 miles. ***Copy seen:*** DI.

BLAIR, CHARLES F., *Jr., see* Anderson, W. R. *and* C. F. Blair . . . We made history . . . *Nautilus. 1958.* No. 49293.

49765. BLAIR, EMIL, *and others.* A study of the cardiovascular changes during cooling and rewarming in human subjects undergoing total circulatory occlusion. (Journal of thoracic surgery, June 1957. v. 33, no. 6, p. 707–718, illus., tables.) 16 refs. *Other authors:* R. R. Austin, S. G. Blount, Jr., *and* H. Swan.

A study of 23 hypothermic patients. Blood pressure, pulse rate and its relation to temperature, points of disappearance of blood pressure and pulse, venous pressure, conditions during rewarming, cardiovascular reflexes, etc., are recorded and analyzed. ***Copy seen:*** DNLM.

49766. BLAIR, JOSEPH R., *and others.* Sequelae to cold injury in one hundred patients; follow-up study four years after occurrence of cold injury. (American Medical Association. Journal. Apr. 6, 1957. v. 163, no. 14, p. 1203–1208, illus., tables.) 9 refs. *Other authors:* R. Schatzki, *and* K. D. Orr.

A study of a representative group out of some 5,600 cases evacuated from Korea during the winter 1950–51. Initial observations of these patients began on the average six days after the injury. Following symptoms (in order of frequency) were found in the present investigation: excessive sweating; pain; cold feet; numbness; abnormal color and joint symptoms. Typical physical findings include: tissue loss and scarring, abnormal nails. X-ray examinations revealed transient osteoporosis; mutilation of terminal phalanges; cyst-like bone defects; new periosteal bone formation and growth disturbances in patients with open epiphyses. ***Copy seen:*** DLC.

BLAIR, JOSEPH R., *see also* Kulka, J. P., *and others.* Physiopathology of cold injury; cutaneous circulation . . . feet . . . *1958.* No. 52559.

49767. BLAISDELL, FRANK E. A generic synopsis and generic revision of the tribe Dasytini of North America, north of Panama; Coleoptera: Melyridae. (American Entomological Society. Transactions, Mar. 1938. v. 64, no. 1, p. 1–31, plates 1–2.)

The 35 genera considered include one, *Hoppingiana,* from northern Canada.

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49768. BLAKE, CHARLES A. Monograph of the Mutillidae of North America. (American Entomological Society. Transactions, 1886. v. 13, p. 179–286, 21 illus.)

Of some two hundred species of the so-called velvet-ants, two are from the Northwest Territories, *Sphaerophthalma frigida* and *Myrmosa unicolor.*

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BLAKE, J. D., *see* Greenberg, L., *and others.* An immunological study of the Canadian Eskimo. *1958.* No. 51347.

BLAKE, J. D., *see* Greenberg, L., *and others.* An immunological study of the Canadian Indian. *1957.* No. 51348.

49769. BLAKE, WESTON, 1930– . Landforms and topography of the Lake Melville area, Labrador, Newfoundland. Ottawa, Queen's Printer, 1956. p. 75–100, plates, fold. map. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical bulletin, no. 9.) 24 refs.

Detailed study of origin and physical characteristics of the surficial deposits of

the Lake Melville area, carried out in 1952–1953, as part of project for the Canadian Defence Research Board under supervision of F. K. Hare. Melville, largest lake in Labrador, occupies a downfaulted block, or graben; to the south is the Mealy Mountain Range, an uplifted block of intrusive anorthosite-gabbro. Hydrography, marine and river terraces, varved clays along the Naskaupi River which contain many concretions, fossil trees, are described. Raised beaches are common; locally, sand dunes are numerous. Glacial till which covers most of the area has in many places been formed into drumlins; eskers are uncommon; end moraines occur in two places; other glacial features are found, often covered by vegetation.

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49770. BLANDFORD, H. R. Hydrographic field operations. (Canadian surveyor, Jan. 1957. v. 13, no. 6, p. 357–59.)

Outlines geographical distribution of the Canadian Hydrographic Service's 48 survey ships and launches; describes field procedures and techniques used in the Arctic in reconnaissance (by boat and helicopter), ground control establishment (astronomic fixes and triangulation), and sounding. ***Copy seen:*** DGS.

BLASKOVICS, M., *see* Rieck, A. F., *and others.* Temperature acclimation in amphibians. *1958.* No. 54306.

49771. BLATTEIS, CLARK M., *and* **S. M. HORVATH.** Renal, cardiovascular and respiratory responses and their interrelations during hypothermia. (American journal of physiology, Feb. 1958. v. 192, no. 2, p. 357–63, illus., tables.) 28 refs.

A study of eight dogs during progressive temperature fall and during a period of low stable temperature, induced by immersion in ice-water. The overall results suggest a direct, depressant effect of low temperature upon the kidney, accompanied by cardiovascular and metabolic changes. The effects, however, were not all functionally correlated and rather the result of the cold-impact on all body tissues, according to the van 't Hoff law. ***Copy seen:*** DNLM.

49772. BLATTEIS, CLARK M., *and* **S. M. HORVATH.** Renal hemodynamics and function during hypothermia. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 12–13.)

Report on experiments with dogs. No changes in renal functions were observed until rectal temperature fell by some 3° C. Subsequently rate of glomerular filtration, renal plasma flow and tubular excretion of PAH decreased, first concomitantly and finally independently of body temperature. Tubular filtration remained unchanged; urine output first rose then fell below control levels.

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BLÎÂKHER, S. L., *see* Kurilova, L. M., *and* S. L. Blîâkher. O svoĭstvakh kholodovykh . . . tochek. *1958.* No. 52578.

49773. BLISS, L. C. A comparison of plant development in microenvironments of arctic and alpine tundras. (Ecological monographs, Oct. 1956. v. 26, no. 4, p. 303–337, illus., tables.) About 100 refs.

Account of studies made in 1953 around Umiat (69°22′ N. 152°10′ W.) northern Alaska and in the alpine tundra of the Medicine Bow Mts. of Wyoming. Environmental factors measured in both areas include: solar radiation; air, surface and soil temperatures; precipitation; wind, etc. The composition and character of the two floras were studied and compared and plant growth measured in terms of stem elongation and leaf expansion. Phenological events of the dominant forms were also followed throughout the growth season. In general it is concluded that the alpine tundra studied represents in most aspects a more severe environment, which is reflected in the smaller and more scatttered plants. ***Copy seen:*** DLC.

49774. BLISS, L. C. Seed germination in arctic and alpine species. (Arctic, 1958. v. 11, no. 3, p. 180–88, illus., tables.) 19 refs.

Account of germination tests made with the aim of ascertaining seed viability of plants from the arctic tundra of Alaska (near Umiat, 69°22′ N. 152°10′ W.) and the alpine tundra of Wyoming. A greater proportion of the latter germinated (of 26 species, 21 i.e. 80%; of 36 arctic species, 22 or 61%); though individual species from both tundras showed a high percentage of germination. Conditions affecting germination, influence of light and darkness, wetness, etc., are analyzed. ***Copy seen:*** CaMAI.

49775. BLIZNÎÂK, EVGENIĬ VARFOLOMEEVICH, *and others.* Vodno-

énergeticheskie izyskaniĭa. Pod red. E. V. Bliznĭaka. Moskva-Leningrad, Gos. énergeticheskoe izd-vo, 1957. 320 p. illus., tables, diagrs. and maps (in pocket). Refs. Text in Russian. *Other authors:* E. F. Belikov *and* L. D. Belyĭ. ***Title tr.:*** Exploration of water-power resources. E. V. Bliznĭak, editor.

Textbook dealing with the fundamentals and instruments of geodesy, hydrometry and geology and with the methods and organization of ground surveying for hydroelectric power constructions. The determination of river flow is described, including (p. 157–62) methods and instruments for measurement of winter flow under the ice surface and concentration of sludge-ice (shuga). Ice terminology and methods, etc. are given with illus. (p. 178–85) for the determination of thermal conditions on rivers during freezing, spring thawing and ice movements. ***Copy seen:*** DLC.

49776. BLOCH, IVAN, *and* **J. H. DAVIDSON.** Some industrial aspects of Pacific Northwest and Alaskan hydroelectric power. (Chemical engineering progress, Sept. 1957. v. 53, no. 9, p. 421–27, tables, diagrs., maps.) 4 refs.

Considers power sources for expanding electroprocess industries, including Alaska's hydroelectric potential, estimated as in excess of 16 million kw. Major hydroelectric regions of Alaska are mapped, and the estimated capacities for each region tabulated. Possible projects: the Taku and Taiya in Southeast Alaska, Wood Canyon on Copper River, Rampart on the Yukon, and Central Alaska Power Association's plans, are mentioned; need for basic investigation in Alaska is stressed. ***Copy seen:*** DLC.

BLOCH, J., *see* Gros, C. M., *and* J. Bloch. Influence de la température . . . *1957.* No. 51393.

49777. BLOCHER, R. L. Developments in Alaska in 1956. (American Association of Petroleum Geologists. Bulletin, June 1957. v. 41, no. 6, p. 1311–15, map.) 4 refs.

Contains a brief review of exploration activities for oil and gas and significant developments during the year. Drilling activities declined slightly from 1955 but geophysical exploration increased slightly. Significant developments included the awarding of a 10-yr. development contract covering over one million acres in the Yakutat area and the approval of a 71,680-acre unit on the Kenai Peninsula. A map of Alaska is included showing the general location of 1956 exploratory tests and the areas of significant development occurring prior to and including 1956. ***Copy seen:*** DLC.

BLOMKVIST, EVGENIĬA ÉDUARDOVNA, 1890–1956, *see* Zolotarevskaĭa, I. A., *and others.* Ethnographical material . . . Russian collections. *1958.* No. 56241.

BLOOM, G. L., *see* U.S. Navy Electronics Laboratory. Current, temperature, tide, and ice . . . *1956.* No. 55642.

BLOUNT, S. GILBERT, *Jr., see* Blair, E., *and others.* A study of the cardiovascular changes . . . *1957.* No. 49765.

49778. BLOY, H. Methods used by Eldorado Mining and Refining, Limited, to heat mine air. (Canadian mining journal, June 1957. v. 78, no. 6, p. 155-56, 3 diagrs.).

Describes oil-fired furnaces used at Port Radium (66°04′N. 118°W.) and Beaverlodge (55°11′N. 119°29′W.), replacing steam units. When outside temperature is at −47° F., the Port Radium plant can deliver 32,000 cu. ft./min. of air and the Beaverlodge heater 60,000 cu. ft./min. of air at +30° F. ***Copy seen:*** DGS.

49779. BLUE, A. C. Farewell to the husky. (American fur breeder, Feb. 1957. v. 30, no. 2, p. 12–13, illus.)

Notes conversion from dog teams to snowmobile by two fox trappers in Northern Manitoba. The Bosak Super "M" (illus.) climbs 40-degree snowdrifts towing 1000 lbs. ***Copy seen:*** DLC.

49780. BLUM, JOHN L., *and* **R. T. WILCE.** Descriptions, distribution and ecology of three species of *Vaucheria* previously unknown from North America. (Rhodora, Oct. 1958. v. 60, no. 718, p. 283–88, 17 illus.) 5 refs.

Describes collections of tidal *Vaucheria* gathered in the Ungava Bay region, with notes on habitat. *V. sphaerospora* and *V. submarina* are considered to be new to the North American flora. *V. compacta* var. *koksoakensis* n. var. is characterized by unusually long oogonia. ***Copy seen:*** DA.

49781. BLUMER, W., *and others.* A technique for studying the effects of drugs on monkeys subjected to hypothermia. (Journal of physiology, Sept.

30, 1957. v. 138, no. 2, p. 6P.) *Other authors:* R. Bryce-Smith, J. Cole, H. Epstein *and* P. Glees.

Description of apparatus for producing and maintaining hypothermia of 21° C. in a water bath which is also used for rewarming. ECG, core and skin temperature, respiratory volume, etc., can be measured and drugs administered without removing the animal from the bath. ***Copy seen:*** DNLM.

49782. BOBER, S., *and others.* Zmiany elektrokardiograficzne w doświadczalnej hipotermii u psów. (Polski tygodnik lekarski, 1957. rok 12, no. 1, p. 1–7, illus. table.) 5 refs. Text in Polish. Summary in English. *Other authors:* J. Nielubowicz, M. Justyna, I. Krzemińska-Lawkowiczowa *and* B. Marzinek. ***Title tr.:*** Electrocardiographic changes in experimental hypothermia of dogs.

Account of experiments with animals made hypothermic down to 16° C. Changes in ECG are analyzed and explained as well as alterations in nervous stimuli and their centers. Ventricular fibrillation is also discussed.

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49783. BOBRIEVICH, A. P. K petrografii ul'traosnovnykh vklûcheniĭ v kimberlitakh vostochnoĭ Sibiri; Amakinskaîa ėkspediţiîa. (Razvedka i okhrana nedr, Jan. 1957. god 23, no. 1, p. 6–12, illus.) 2 refs. Text in Russian. ***Title tr.:*** Petrography of the ultrabasic inclusions in the kimberlites of Eastern Siberia; Amakin expedition.

Characteristics of various inclusions in the kimberlite pipes of Yakutia are described with macroscopic illus. Considerable accumulations of picritic porphyrites were found with and without phlogopite and with definite porphyritic structure and fluidal texture. The basic mass consists of small idiomorphic pseudomorphoses of serpentine and carbonates in olivine, microlites of pyroxene and fine flakes of phlogopite. The phlogopite was of two types: large elongated idiomorphic tablets and small elongated scales in the basic mass. Various other forms and combinations of mineral inclusions are characterized. ***Copy seen:*** DLC.

49784. BOBRIEVICH, A. P., *and others.* Muassanit v kimberlitakh Vostochno-Sibirskoĭ platformy. (Akademiîa nauk SSSR. Doklady, Aug. 21, 1957. t. 115, no. 6, p. 1189–92, illus.) 10 refs. Text in Russian. *Other authors:* V. A. Kalûzhnyĭ *and* G. I. Smirnov. ***Title tr.:*** Moissanite in the kimberlites of the East Siberian platform.

Describes this mineral as found in ore slimes of bedrocks in several parts (localities unidentified) of the East Siberian platform. Appearance and color of the crystals are described, optical analyses reviewed, other properties and associated minerals are outlined. This find is claimed to represent the first moissanite of earth origin, previous discoveries having been in meteorites. From the genetic point of view, moissanite is closely associated with pyrope, ilmenite and chromodioxide and could be considered companion of kimberlite and diamonds. ***Copy seen:*** DLC.

49785. BOBROV, N. I. Kontrastnye temperatury i ikh vliîanie na organizm. (Gigiena i sanitariîa, Dec. 1958. god 23, no. 12, p. 26–31, tables.) 6 refs. Text in Russian. Summary in English. ***Title tr.:*** Extreme temperatures and their influence upon the organism.

A study of three groups, each of 30 young men, one being exposed regularly to periods of low temperature, another to contrasting (alternating) temperatures, and the third serving as controls. Both repeated cooling and contrasting temperatures produced a gradual adaptation to these procedures. The second of these methods is considered to improve the organism's resistance in regions with unstable temperature.

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49786. BOBROV, N. S. Aviatsionnye lyzhi, russkoe izobretenie. (Letopis' Severa, 1957. t. 2, p. 274–78, illus.) Text in Russian. ***Title tr.:*** Airplane skis, a Russian invention.

Outlines the history of aircraft skis, from the first, abortive efforts of Captain Kedrin and Lieutenant Piotrovskiĭ in 1910–1911. The next year Nikolaĭ Rodionovich Lobanov (presented as the actual inventor) made skis for two airplanes; they were tried successfully in 1913, and in 1915 put into production. Lobanov's skis were used during the search for Nobile and the airship *Italia* in 1928, also in Chukotka in 1930.

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49787. BOBRUSHKIN, L. G., *and others.* Obezvozhivanie kontsentrata na Olenegorskoĭ fabrike. (Gornyĭ zhurnal, May 1958, no. 5, p. 62–66, diagrs., tables.) Text in Russian. *Other authors:* N. S. V'îushinskiĭ *and* G. A. Golovanov.

511326—60——10

Title tr.: Dehydration of concentrate at an Olenegorsk plant.

Reviews an ore-dressing problem at this mining center on Kola Peninsula. Difficulties in filtration and separation of fine crushed concentrate which appeared in operation of the dehydrating equipment, as originally designed, are described in detail and with tabulated granulometric characteristics. Auxiliary dehydration with a single spiral or slotted screen classifiers and hydrocyclones, installed before filters, were found unsatisfactory due to the high water content (17–18%). A concentrate arrangement is adopted in the form of a large storage pile, from which water gradually flows out and into the collector by its own gravity. Various views and cross sections of the building with the dehydration arrangement and other equipment are shown. ***Copy seen:*** DLC.

BOBRUSHKIN, L. G., *see also* Zubarev, S. N., *and others.* Puti . . . obogashcheniia . . . *1958.* No. 56254.

BOCCARDELLI, VITTORIANO, *see* De Maria, A., *and* V. Boccardelli. Osservazioni sperimentali . . . ipotermia. *1957.* No. 50488.

49788. BOCH, S. G. Formy rel'efa morozno-merzlotnogo i termokarstovogo proiskhozhdeniia. (*In:* Akademiia nauk SSSR. Geologicheskii institut. Kratkoe polevoe rukovodstvo, 1957. p. 148–53, illus.) 4 refs. Text in Russian. ***Title tr.:*** Relief forms of frost-permafrost and thermokarst origin.

Contains instructions for investigation of topography and surface features in the northern regions of the U.S.S.R., where seasonally or permanently frozen ground prevails. Two types of polygonal ground and two types of mounds are characterized. Formation of stone stripes and stone rings is reviewed. Active processes of soil flow are treated; development of solifluction terraces is described and diagrammed. Occurrence of mountain terraces is also discussed. Development of spotty tundra and thermokarst forms is briefly described. ***Copy seen:*** DLC.

49789. BOCH, S. G. O nekotorykh formakh mikrorel'efa svîazannykh s taîaniem snezhnikov. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Biûlleten', 1957, no. 21, p. 131–35, illus.) 3 refs. Text in Russian. ***Title tr.:*** On some forms of microrelief connected with thawing of snow patches.

Reports on snow patches as observed in June, 1954 on the Kara Sea coast: patches, 1-6 m. in diameter, are left on the abraded benches of the coast during the summer period. They are composed of layers of tightly packed snow, with icing in the lower part. Their form, composition, and accumulation of loose material are described. As they melt away the deposited material builds miniature kames, outwash fans and eskers. Photos of these forms of microrelief are included. ***Copy seen:*** DLC.

49790. BOCH, S. G. Sergeĭ Aleksandrovich ÎÂkovlev. (Leningrad. Vsesoîûznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Materialy, nov. seriia, Chetvertichnaia geologiia i geomorfologiia, 1956. vyp. 1, p. 7–17, port.) Refs. Text in Russian. ***Title tr.:*** Sergeĭ Aleksandrovich ÎÂkovlev.

Presents account of the life and work of this noted Russian geologist, occasioned by his 75th birthday (Sept. 28, 1953) and the 50th anniversary of his scientific activity. His education (St. Petersburg University) and academic career (St. Petersburg Forestry School 1903–1938) are sketched. His scientific work includes glacial geology, hydrogeology, ground water, soil, flora, etc. He is the principal architect of Russian glaciological stratigraphy and maps. His (120) publications as listed, some in German, French and English, include works on the northern White Sea regions, Ural, arctic flora, glacial boulders, etc. This paper is the first in a volume (194 p.) dedicated to Dr. ÎÂkovlev.
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49791. BOCHAROV, A. Zametki o sovetskoĭ îâkutskoĭ poèzii. (Druzhba narodov, 1954. no. 4, p. 228–36.) 5 refs. Text in Russian. ***Title tr.:*** Notes on Soviet Yakut poetry.

Discusses the folkloristic and narrative trends in modern Yakut poetry that have superseded the ancient patriarchal epic. Critical analysis of style, content, indiscriminate use of political forms, verbosity, etc., is given, on the basis of the Russian translations published in the 1950's by the Yakut publishing house in Moscow. ***Copy seen:*** DLC.

49792. BOCHAROV, P. Belyĭ gus' na ostrove Vrangelia. (Okhota i okhotnich'e khozîâĭstvo, Aug. 1958. god 4, no. 8, p.

19.) Text in Russian. ***Title tr.:*** The snow goose on Vrangel Island.

Describes a rookery at Tundrovyy Pik Mt. on Vrangel, the only remaining colony of *Chen hyperboreus* in the U.S.S.R. The migration, breeding, and food of these geese, the depletion of the colony by excessive hunting and egg collecting, and need for protection are noted. A hundred-man geological expedition based at Perekat-Kun', worked on the island in 1950–52. ***Copy seen:*** DLC.

BOCHKOVSKIĬ, I. I., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Za sovetskuîu vlast' . . . *1957.* No. 49170.

49793. BODYLEVSKIĬ, VITALIĬ IVANOVICH, *and* **N. I. SHUL'GINA.** Iŭrskie i melovye fauny nizov'ev Eniseîa. Moskva, Gosgeoltekhizdat, 1958. 196 p. illus., plates. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 93.) 120 refs. Text in Russian. ***Title tr.:*** Jurassic and Cretaceous fauna of the lower Yenisey River area.

Monographic study of the macrofauna based on the authors' recent collections from various bore holes in Ust'-Yeniseyskiy Port and adjacent areas, as well as on earlier work. Investigations of Mesozoic deposits and their fauna are reviewed; Jurassic and Cretaceous fauna are outlined from the 1-P bore hole in Ust'-Yeniseyskiy Port, where a 311 m. stratum (1043–1354 m. deep) was studied and 16 horizons identified. Chapters follow on: Upper Jurassic and Lower Cretaceous Cephalopoda fauna; Jurassic and Lower Cretaceous Pelecypoda from several bore holes of the lower Yenisey region, and Upper Cretaceous fauna of the lower Yenisey, also represented mostly by fam. Pelecypoda and Cephalopoda. Description, location, measurements and age of these fauna are presented in detail. Forms are listed according to bore holes and stratigraphic position; illus. are appended.

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49794. BODYLEVSKIĬ, VITALIĬ IVANOVICH. Rasprostranenie inoceramov v verkhnem melu severnoĭ Sibiri. (Akademiîa nauk SSSR. Doklady, Oct. 21, 1957. t. 116, no. 6, p. 1001–1004.) 7 refs. Text in Russian. ***Title tr.:*** The distribution of species of *Inoceramus* in the Upper Cretaceous of North Siberia.

Contains a list of localities, mostly in the lower course of Yenisey River, and a table of stratigraphic distribution of *Inoceramus* in seven substrata. Over 40 forms are listed. ***Copy seen:*** DLC.

49795. BØ, VIDAR. Flyverliv på Nordøst-Grønland. (Polarboken 1958, p. 58–67, illus.) Text in Norwegian. ***Title tr.:*** An airman's life in northeast Greenland.

Impressions of pilot attached to Lauge Koch's summer 1956 expedition. Based at Ella Ø, two Norsemans moved scientists and equipment between the various camps in the region.

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49796. BÖCHER, TYGE WITTROCK, 1909– , *and others.* Grønlands flora. København, P. Haase & søn, 1957. 314 p., illus., map. Text in Danish. Short guide in Eskimo and English. *Other authors:* K. Holmen *and* K. Jakobsen.

Lists species (581) of vascular plants in Greenland, with detailed botanical descriptions, information on occurrence, frequencies and plant communities in which they occur. ***Copy seen:*** SPRI.

49797. BÖCHER, TYGE WITTROCK, 1909– . En Grønlandsk blomster-buket (Naturens verden, Feb. 1957. årg. 41, no. 2, p. 9–12, map, illus., col. plate.) Text in Danish. ***Title tr.:*** A Greenlandic floral bouquet.

Of the 581 flowering plants and ferns reported from Greenland, 485 are native. Eight are described and illustrated: *Empetrum hermaphroditum* and *Vaccinium uliginosum* ssp., the most important berry producers; *Cochlearia groenlandica*, of antiscorbutic value; *Oxyria digyna* and *Polygonum viviparum*, circumpolar species known from Peary Land to Kap Farvel; *Chamaenerium latifolium*, widespread, but lacking in the Scandinavian Arctic; *Sedum rosea* and *Pedicularis lanata*, their distribution is mapped, origin and migrations are discussed. *Polygonum viviparum's* method of propagating by developing new sprouts and green leaves on the lower flower axes before they fall from the parent plant, is known in other arctic plants. ***Copy seen:*** DLC.

49798. BÖCHER, TYGE WITTROCK, 1909– . *Hieracium acranthophorum* var. *isortoquense* var. nov., with remarks on the section *Foliosa* in Greenland. (Botanisk tidsskrift, Apr. 29, 1957. bd. 53, hefte 3, p. 279–83, 3 illus.) 9 refs.

Contains a Latin diagnosis of this new variety, found in 1956 by the author near the fjord Nordre Isortoq (67°16′ N. 53°26′ W.) on the western coast of Greenland; and discussion of the *Hieracium* sect. *Foliosa*, its distribution figured. This group is of eastern origin, but all the Greenland species are endemic. The introduction of *Hieracia* by Norse colonists, an idea advanced by C. E. H. Ostenfeld (No. 12931), is criticized and rejected. ***Copy seen:*** DA.

49799. BØGVAD, RICHARD, 1897– . Orientering og faerdsel i terraenet ved Ivigtut. København, Kryolitselskabet Øresund, 1948. 14 p. illus., fold. map. Text in Danish. ***Title tr.:*** Travel orientation in the terrain at Ivigtut.

Offers advice to tourists on the use of map and compass and other means of direction-finding, and on how to manage during involuntary stays in the mountains. Map of this West Greenland area shows location of huts.

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49800. BÖLIN, P. GÖSTA. Moderna havsisbrytare i Östersjön. (Teknisk tidskrift, Oct. 28, 1958. årg. 28, häfte 39, p. 1025–32, diagrs.) 24 refs. Text in Swedish. ***Title tr.:*** Modern ice-breakers in the Baltic Sea.

Summarizes experience gained in the 1957/58 winter season with the Swedish ice-breaker *Oden*, and compares effectiveness of this diesel-electric, four-propeller type with other major ice-breakers. Its main superiority over older models lies in its ability to break thick ice continuously without stopping and backing to regain speed. With the hull shape now generally accepted as standard for ice-breakers, additional ice-breaking effects can be realized only through increased displacement and engine power. Arrangements of propellers: number, types, direction or rotation, fixed vs. adjustable blades, etc., are discussed; power distribution on fore- and aft propellers, and the technical and economic aspects of a few large vs. several small diesel engines are considered. Automatic adjustment of engine moment and effect to given moment- and effect-requirements of the propeller by varying speed of rotation, is discussed; maneuvering arrangements, accommodations, and other equipment of the *Oden* are described and evaluated. ***Copy seen:*** DLC.

49801. BÖLIN, P. GÖSTA. Statsisbrytaren Oden, vår stärkaste isbrytare. (Tidskrift i sjöväsendet, Jan. 1958. årg. 121, häfte 1, p. 66–70, illus.) Text in Swedish. ***Title tr.:*** The Government ice-breaker *Oden*, our strongest ice-breaker.

Describes Sweden's newest and largest ice-breaker. Delivered from Sandvikens Skeppsdocka, Helsinki, in Nov. 1957, the ship has four propellers driven by diesel-electric engines of 10,500 s. hp. Length o.a. is 83.35 m. and displacement 5260 $m.^3$. *Oden's* ice-breaking capabilities are briefly discussed and a comparison is made with *Ymer*, the second largest Swedish ice-breaker. ***Copy seen:*** DLC.

49802. BÖÖK, J. A. The frequency of cousin marriages in three North Swedish parishes. (Hereditas, 1948. bd. 34, häfte 1–2, p. 252–55, 3 tables.) 7 refs.

Contains a study of one aspect of a larger investigation concerning inbreeding effects in a limited community, i.e. the frequency of marriages between first cousins. Data on such matings found in literature are compiled in a table. In three parishes (area: 4732. 60 sq. km., number of inhabitants 9190), marriages with both partners living number 1315; marriages between first cousins: 2.21± 0.41%. Other data will be presented in a later paper. ***Copy seen:*** DLC.

49803. BOERÉ, L. A., *and others.* Hypothermia, its principles and biochemical disturbances. (Archivum chirurgicum neerlandicum 1957. v. 9, fasc. 2, p. 155–83, illus., tables) 72 refs. *Other authors:* N. Derlagen *and* D. Kiers.

An extensive discussion of kinds of hypothermia and means of producing them; risk and conditions of ventricular fibrillation, especially biochemical conditions; clinical application of hypothermia, especially in cardiac surgery; biochemical control of human hypothermia during surgical intervention; ECG control; case analyses (8) and discussion of pertinent biochemical data. ***Copy seen:*** DNLM.

49804. BØRSET, OLA. Bruk av fremmede treslag på Østlandet og Sørlandet. (Norske skogplanteskoler. Årsskrift 1956, *pub.* 1957. p. 17–53, 19 illus., graph, 12 text maps.) Text in Norwegian. ***Title tr.:*** Use of foreign tree species in the eastern and southern districts.

Norway has two native conifers, *Picea abies* and *Pinus silvestris*. Imported stock is discussed for increasing the forest area, utilizing various site, soil, and climate combinations, and improving the value and variety of forest products. Habitat and qualities of four *Picea*, three *Pinus*, eight *Larix*, and four *Abies* species and a few others are considered; several range into arctic regions.

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49805. BØRSET, OLA. Verdens nordligste skoger. (Skogbrukeren, Feb. 15, 1955. årg. 30, nr. 4, p. 73–74, sketch maps.) Text in Norwegian. ***Title tr.:*** The northernmost forests in the world.

The most northerly coniferous forests are in Siberia, not Finnmark (as stated by Bjarne Saebøe q.v.). In Siberia, *Larix dahurica* grows at 72°30′ N., *Picea obovata* as far north as 72°20′ N. and *Pinus pumila* above 71° N. Norway has the most northern occurrence of *Pinus silvestris* at 70°22′ N. Maps by Hustich (No. 29740) are Børset's chief source. ***Copy seen:*** DA.

49806. BOFFA, GIUSEPPE. Segodnîa i zavtra. (Sibirskie ogni, Nov.–Dec. 1957. god 36, no. 6, p. 202–208.) Text in Russian. ***Title tr.:*** Today and tomorrow.

An Italian correspondent of *Unità* describes his air trip by Tu–104 to Yakutsk and Oymyakon. Impressions of the trip, talks with residents of Oymyakon, etc., the industrial potential of Yakutia, etc., are sketched.

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49807. BOFFI, L., *and* C. MASSIMO. Comportamento dell'attività succino-deidrogenasica nel cuore di ratto in ipotermia. (Sperimentale, Jan.–Feb. 1958. v. 108, fasc. 1, p. 81–89, tables.) 23 refs. Text in Italian. Summary in English. ***Title tr.:*** Succinic dehydrogenase activity in the heart of the hypothermic rat.

No change in enzyme was noted after one hour of body temperature of 30° C. But one hour at 25° produced a decrease in myocardial succinic dehydrogenase activity. Conditions returned to normal after rewarming. ***Copy seen:*** DNLM.

49808. BOGDANOV, K. A. Materialy rabot G. ÎA. Sedova za vremîa pervoĭ zimovki polîarnoĭ èkspeditsii 1912–1913 gg. (Akademiîa nauk SSSR. Izvestiîa, ser. geogr., May–June 1957, no. 3, p. 85–90, facs.) 10 refs. Text in Russian. ***Title tr.:*** Materials of G. ÎA. Sedov's work during the first wintering of the polar expedition 1912–1913.

Materials from Sedov's expedition, hitherto unknown or regarded as lost, were found in Feb. 1956, in one of the offices of the Hydrographic Service. They include his journal of his trip of Apr. 19–May 14, 1913, along the northwest coast of Novaya Zemlya from Pankrat'yeva Peninsula via Cape Zhelaniya to Cape Flissingenskiy (Flissingskiy or Vissinger-Goft), approx. 76°40′ N. 71°10′ E., and back; also his notes on trips to the Krestovyye Islands and Berkha Island in the spring and summer of 1913; notes on the trip to Cape Nassau (76°18′ N. 61°40′ E.) in Dec. 1912. Several quotations are given from the journals, describing hardships and dangers of the trips; the importance of the materials is stressed. ***Copy seen:*** DLC.

49809. BOGEN, HANS S. I., 1899–1957. Captain Harold Keith Salvesen. (Norsk hvalfangst-tidende, Sept. 1957. årg. 46, nr. 9, p. 501–506, port.) Text in Norwegian and English.

Sketch of H. K. Salvesen (born in 1897), senior partner of the shipping firm Chr. Salvesen & Co., Leith; and short history of the firm, founded in 1843. The firm started whaling in northern waters in 1905, and operated in Labrador (1937–1951) as the Polar Whaling Co., Ltd.

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BOGOÎAVLENSKAÎA, GENRIETTA EVGEN'EVNA, *see* Gorshkov, G. S. Izverzhenie sopki Bezymîannoĭ . . . *1957*. No. 51302.

BOGOÎAVLENSKAÎA, GENRIETTA EVGEN'EVNA, *see* Starkov, A. Na Tikhom okeane. *1958*. No. 55116.

49810. BOGOLEPOV, K. V. O verkhnemelovykh otlozheniîakh Eniseĭskogo Krîazha. (Akademiîa nauk SSSR. Doklady, Nov. 21, 1958. god 26, t. 123, no. 3, p. 517–19, cross-section, map.) 7 refs. Text in Russian. ***Title tr.:*** On the Upper Cretaceous deposits of the Yenisey Ridge.

Comments on age, stratigraphy and lithology of these deposits distributed in the Angara-Pit watershed (approx. 59°–60° N. 95°–96° E.) based mainly on spore and pollen analyses from a cross-section near Partizanskiy. The results of analyses are described and spore and pollen

spectra interpreted. The plant forms of Myrtipites, Ericaceae, Rhamnaceae, Proteaceae and Myricaceae predominate. Age of these deposits is discussed.

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49811. BOGOLEPOVA, I. I. O sushchestvovanii roda *Dicyemodeca* Wheeler, 1897. (Leningradskoe obshchestvo estestvoispytateleĭ. Otd. zool. Trudy, 1957. t. 73, vyp 4, p. 52–57, 3 illus.) 4 refs. Text in Russian. Summary in German. ***Title tr.:*** On existence of the genus *Dicyemodeca* Wheeler, 1897.

Contains a description of *D. dogieli* n. sp., a coelenterate found in the kidney of *Octopus ocholensis*, in the southern Okhotsk Sea. The existence of this genus had been doubted. ***Copy seen:*** DLC.

49812. BOGORODSKIĬ, V. V. Ul'trazvukovoĭ metod opredeleniîa tolshchiny l'dov. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 4, p. 65–77, illus., tables, graphs.) 5 refs. Text in Russian. ***Title tr.:*** Ultrasonic method of determining ice thickness.

"The propagation of ultrasonic waves in ice is analyzed mathematically; a method of measuring ice thickness ultrasonically is described; and the results of laboratory and field tests are reported. The velocity of longitudinal sound waves was measured by 500-kc. barium titanate transducers. The velocity of longitudinal waves in the temperature range 0° to −25° C. varied 10% for 60 x 60 x 60-cm. fresh-water samples tested in the laboratory, while for similar samples of sea ice it depended on salinity. The maximum error in field measurements on lake ice 1 m. thick and layered ice blocks 90–140 cm. thick did not exceed 5%. Field tests also showed that freshwater ice up to 2 m. thick and polar sea ice up to 0.8–1 m. thick can be measured fairly accurately using a frequency of 500 kc. The method can also be used in the study of the structural characteristics and elastic properties of various kinds of ice. Data are tabulated and graphed on the relation between longitudinal sound wave velocities and ice temperature and salinity, and wave velocities and ice thicknesses measured in the field."—SIPRE.

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49813. BOGOROV, VENIAMIN GRIGOR'EVICH, 1904– . Biogeographical peculiarities of the pelagial of the northwestern Pacific. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 180–81).

Describes investigations on the *Vitîaz'* comparing faunas of boreal and tropical regions. The largest quantities of plankton were concentrated over the Kuril-Kamchatka Trench; conditions for plankton production were found most favorable in the boreal region. ***Copy seen:*** DLC.

49814. BOGOROV, VENIAMIN GRIGOR'EVICH, 1904– . Estimates of primary production in biogeographical regionization of the ocean. (*In:* Plankton symposium 1957, *pub.* as: International Council for the Exploration of the Sea, Apr. 1958. Rapports et procès-verbeaux, v. 144, p. 117–21, maps.) 5 refs.

Author acknowledges the value of primary-production determination but sees in it only one approach to a complex of biological processes Other approaches as: estimation of biomass or analysis of sediments are proposed and their results illustrated from research of the *Vitîaz'*, including the region off southeastern Kamchatka. ***Copy seen:*** DGS.

49815. BOGOSLOVSKIĬ, B. I. K voprosu o klassifikaf̂sii agoniatitov. (Akademiîa nauk SSSR. Doklady, Sept. 21, 1957. t. 116, no. 3, p. 489–92, 3 illus.) 2 refs. Text in Russian. ***Title tr.:*** A contribution to the problem of agoniatite classification.

Contains descriptions of Timanoceratina n. subord., Timanoceratidae n. fam., *Timanoceras* n. gen., and *T. ellipsoidale* n. sp. found in Devonian ammonoidean deposits on the bank of Vozha-Vozhe River, in the southern Timan Ridge in Arkhangel'sk province. It is compared with a closely related species, *T. backlundi.* ***Copy seen:*** DLC.

BOÎARKINA, I. S., *see* Nikonov, M. N., *and others.* Agrokhimicheskaîa kharakteristika torfov . . . *1956.* No. 53610.

BOÎCHENKO, I. G., *see* Bezrukov, P. L., *and others.* Novye dannye . . . stroeniîa podvodnogo rel'efa. *1957.* No. 49709.

BOÎT̂SOVA, ANTONINA FEDOROVNA, *see* Sunik, O. P. Soveshchanie po îazykam . . . *1953.* No. 55236.

49816. BOIVIN, BERNARD. Quelques *Antennaria* canadiens. (Naturaliste canadien, Mar.–Apr. 1953. v. 80, no. 3–4, p. 120–24.) Text in French. Contrib. no. 1209, Div. of Botany and Phyto-

pathology, Science Service, Dept. of Agriculture, Canada. ***Title tr.:*** Some Canadian *Antennaria*.

Includes description of *Antennaria pulcherrima* var. *sordida* n. var. from Keewatin and James Bay.

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49817. BOIVIN, BERNARD. Quelques *Veronica* du Canada. (Naturaliste canadien, May 1952. v. 79, no. 5, p. 173–76.) Text in French. Contrib. no. 1145, Div. of Botany and Phytopathology, Science Service, Dept. of Agriculture, Canada. ***Title tr.:*** Some Canadian *Veronica*.

Includes: Veronica serpyllifolia var. *serpyllifolia* based on a specimen from Alaska. ***Copy seen:*** DA.

49818. BOIVIN, JOSEPH ROBERT BERNARD, 1916– . Animadversions and other notes on *Arnica*. (Rhodora, Feb. 1953. v. 55, no. 650, p. 55–57.) *Pub. also as:* Contrib. No. 1210, from the Div. of Botany and Plant Pathology, Science Service, Canadian Dept. of Agriculture.

Contains a description of *A. frigida* var. *glandulosa* n. var. (Yukon Territory), also critical notes and distributional data on five other species occurring in Labrador, and in northern Ontario and Quebec. ***Copy seen:*** DA.

49819. BOK, S. T., *and* J. P. SCHADÉ. Hypothermia and cerebral activity. (Acta physiologica et pharmacologica Neerlandica, 1957. v. 6, p. 775–94, illus., table.) 27 refs.

An analysis of the relationship between hypothermia and cerebral activity in rats. Electrocorticograms are discussed at levels of about 31° C., 37° to 31° C., and 31° to 18° C. Survival, revival and recovery times after ligation of the aorta just above the heart were studied. About 30° C. was found to be a critical point below which a considerable proportion of conditions analyzed, showed important change. ***Copy seen:*** DNLM.

49820. BOLAM, S. E. Oil- and abrasion-resisting rubbers in engineering. (Engineering, Aug. 16, 1957. v. 184, no. 4771, p. 202–204, illus., diagr., tables.)

Discusses properties of Hycar nitrile rubbers, to be manufactured in Great Britain. Low-temperature flexibility, and the effect of oil and gasoline on the volume change are shown. Though inferior to natural rubber in low-temperature resistance, a high acrylomitrile polymer can remain operative as low as −70° C. when in contact with lubricating oil, whereas −20° to −30° C. is the usual limit for the material in air. ***Copy seen:*** DLC.

49821. BOLLER, KENNETH HAROLD, 1911– . Strength of wood at low temperatures. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 65–80, illus., graphs.) Ref.

Test results on various types of wood and wood containers are reviewed; testing equipment is described and illustrated. Wood is generally stronger at lower temperatures, from 1.25 to 3.5 times as strong depending on the property involved. Other factors, such as moisture content, imperfections, and fastenings must be considered along with the temperature effect in practical application. In general, wood products do not lose strength as a result of subnormal temperatures.

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49822. BOLLIGER, KURT. Argus eyes and electronic brains protect the North American continent. (Interavia, June 1957. v. 12, no. 6, p. 578–81, illus., diagrs.)

Describes operation of the U.S. radar defense system, including the northern radar chains, U.S. continental stations, the Pacific and Atlantic artificial islands, flying radar stations and radar ships. Coordination of radar observations and the weapon control system by computers is outlined and illustrated.

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49823. BOLLING, G. "Operation North-West Passage." (Tidskrift i sjöväsendet, Dec. 1958. årg. 121, häfte 12, p. 907–916, illus., maps.) Text in Swedish. ***Title tr.:*** Operation Northwest Passage.

Reviews previous attempts to cross the Arctic Ocean by submarines, and describes *Nautilus'* voyage July–Aug. 1958. Its special equipment and navigational instruments are noted.

Copy seen: DLC.

49824. BOLOTNIKOV, NIKITA ÎAKOVLEVICH. Avtomaty v strane l'dov. (Znanie-sila, Jan. 1957. god 32, no. 1, p. 26–30, illus.) Text in Russian. ***Title tr.:*** Automatic stations in the land of ice.

Account of the construction of two types of automatic meteorological stations for use in the Arctic: the Alekseev radiobeacon (radiovekha Alekseeva) and

DARMS (Dreĭfuûshchaîa avtomaticheskaîa radiometeorologicheskaîa stant͡siîa: Drifting automatic radio-meteorological station), both devised by I͡U. K. Alekseev and built in the Construction Bureau of the Arctic Institute. The radio-beacon was tested in May 1952 on an ice field 250 km. northeast of Cape Chelyuskin, and many of this type have been set up on drifting ice in the Arctic Basin, Kara Sea and other arctic areas; these stations are quite reliable, and one set up in May 1955 northwest of the New Siberian Archipelago, is still working. Messages sent automatically at preestablished intervals, contribute considerably to the weather service; together with other data, they enabled Soviet scientists to forecast the unfavorable ice conditions on the Northern Sea Route in 1956. Another, improved type of automatic station, DARMS, was worked out in 1953–55 and tested in 1956 in the area of 87° 52′ N. 187°28′ E. Externally, DARMS is similar to the first type and differs mainly in that it can send information at any time on "call" from coastal stations; its construction is briefly described and figured; the accuracy of its information is noted. Geophysical explorations to be carried out in over a hundred Soviet polar and drifting stations during the IGY are briefly outlined by V. F. Burkhanov in a foreword. ***Copy seen:*** DLC.

49825. BOLOTNOVA, O. S. Sovetskiĭ sel'dîanoĭ promysel v Severnoĭ Atlantike. (Problemy Severa, 1958, vyp. 2, p. 226–37, tables.) Text in Russian. ***Title tr.:*** Soviet herring fishery in the North Atlantic.

Includes data on herring catches since 1913 according to areas and countries; Soviet penetration and developments in the North Atlantic herring industry; research, details of Soviet catches, number of vessels employed, average catches, fishing times, seasonal fluctuations, etc., fishing ports, boat building, economics of herring fisheries, plans for research and development. ***Copy seen:*** DLC.

BOL'SHAKOV, I. G., *see* Prokopovich, A. A., *and* I. G. Bol'shakov. Obogashchenie zhelezistykh kvart͡sitov . . . *1958.* No. 54149.

BOLTE, A., *see* Hirsch, H., *and others.* Über die Wiederbelebung des Gehirns bei Hypothermie. *1957.* No. 51727.

BOLTE, A., *see* Hirsch, H., *and others.* Über Formänderungen von Aktionspotentialen . . . *1958.* No. 51728.

BOMAN, NILS, *see* Hjulström, F., *and others.* Mikkaglaciären . . . *1957.* No. 51733.

BONCHKOVSKIĬ, VLADIMIR FRANT͡SEVICH, *see Vokrug sveta.* Postup' uragana. *1958.* No. 55860.

49826. BONDAM, JAN. A new occurrence of a calco-alkaline granite intrusion from the Frederikshaab district, south Greenland. (Greenland. Geologiske undersøgelse, 1956. Bulletin no. 15, 21 p., 2 text maps, 6 illus., 2 tables.) 11 refs. *Also pub. as:* Meddelelser om Grønland. Bd. 137, no. 10, 1956.

Describes a fluorite-bearing, calco-alkaline granite plug, at 61°25′ N. 48°15′ W., about four miles northeast of the head of Tigssaluk Fjord, discovered during a three-day reconnaissance in summer of 1955. The granite is closely related to some rapakivi granites, pyterlite and wiborgite, from the Viipuri area, Finland. Both this and the other, younger intrusives of south Greenland contain considerable amounts of fluorine. ***Copy seen:*** DGS.

49827. BONDAM, JAN. Uranforekomsterne i Sydgrønland. (Dansk teknisk tidsskrift, Mar. 1958. årg. 82, no. 3, p. 41–44, illus., map.) Text in Danish. ***Title tr.:*** Uranium deposits in South Greenland.

Discoveries of uranium with up to 2300 grams/ton at the surface, have been made on the Krane mountain, about 7 km. from Narssaq (60°54′ N. 46° W.); drilling with a view to rational extraction will start in 1958. The main difficulty is embedment of the uranium in a previously unknown silicate-compound; a team of Danish technicians are working on the problem of extracting it. ***Copy seen:*** DLC.

49828. BONDARENKO, M. Kraĭ almazov. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 8, illus.) Text in Russian. ***Title tr.:*** The land of diamonds.

The author, head of the Amakinskaîa Expedition of the Ministry of Geology, gives an account of the discovery of diamonds in Yakutia: diamantiferous fields were postulated by V.S. Sobolev and

A.P. Burov, and looked for since the end of World War II; the first small deposits were found in 1949–50; in 1954, the geologist V. D. Skul'skiĭ found a diamantiferous field, and L. A. Popugaeva discovered the place of origin of the diamonds in the upper reaches of the Markha River. Other deposits and fields, the richest source of all at "Mir" 1200 km. to the southeast, industrial development, etc., are mentioned.

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49829. BONDAREV, PETR DMITRIEVICH. Deformat͡siĭ zdaniĭ v ra͡one Vorkuty, ikh prichiny i metody predotvrashcheniĭa. Moskva, Iz-dvo Akademii nauk SSSR, 1957. 96 p. illus., tables. (Akademiĭa nauk SSSR. Institut merzlotovedeniĭa.) 39 refs. Text in Russian. ***Title tr.:*** Structural deformations in the Vorkuta region, their causes, and methods of prevention.

Outlines the relief, geology, hydrogeologic, climatic and permafrost conditions in the region 67°10′–68° N. 63°20′–65° E. and reviews building methods in Vorkuta and Bol'shezemel'skaya Tundra during the period 1937–1951. "Structural deformations observed 1937–1951 are described in detail. Of 165 heated and unheated structures inspected, only 35 (21 brick, 14 wooden) were undamaged. Several were completely destroyed because of poor construction and maintenance. Much of the damage can be traced to the erroneous assumption that a general degradation of permafrost was in progress. Some thaw damage was caused by snow-drift-interference with air circulation or by sewage. The undamaged buildings were erected on rock, thawed ground, or on frozen dry sand and gravel. Buildings with foundations that allowed uneven settling also remained undamaged. Permafrost conservation should be the basic construction method for the region."—SIPRE. ***Copy seen:*** DLC.

49830. BONDAREV, PETR DMITRIEVICH. Osadki pri ottaivanii l'distykh gruntov poĭmy r. Obi v ra͡one Salekharda. (Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Trudy, 1958. t. 14, p. 70–79, tables, diagrs.) 5 refs. Text in Russian. ***Title tr.:*** Settling by thawing of ice soils in the Ob' River valley in the Salekhard region.

Reports studies in 7- and 9-m. deep pits on the settling, textural changes, and moisture variations of permanently frozen grayish-blue clay soil of varying ice content, when thawed with steam points. Frozen ground of a high ice content settled on thawing under its own weight as a result of the melting of ice layers and lenses, but did not fully compress, and its moisture content decreased slightly; the magnitude of the settlement depended on the amount and form of ice inclusions. Soil with a small amount of ice cement and a moisture content of 30% expanded due to the swelling of the mineral particles, and its moisture content increased slightly. Maximum settling, settling under own weight, and under compression are calculated, and correction coefficients for grayish-blue clay soils are determined.—From SIPRE. ***Copy seen:*** DLC.

BONDAREVA, N. S., *see* Spiro, N. S., *and* N. S. Bondareva. O vlagopogloshchaĭushcheĭ sposobnosti ugleĭ . . . *1958.* No. 55092.

49831. BONDAREVA, V. Na karte, gaz. (Vokrug sveta, July 1958, no. 7, p. 10–11, map.) Text in Russian. ***Title tr.:*** Gas on the map.

Map of the U.S.S.R. showing schematically the main sources of natural gas, including those in the Pechora basin (Ukhta), at Berezovo in the Ob' basin and at the confluence of Vilyuy and Lena Rivers. Plan to raise the output of natural gas in the U.S.S.R. from 20 billion cu. m. in 1957 to 130 cu. m. in 1965 is mentioned; pipelines are expected to increase to 40–45,000 km.

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49832. BONNER, CLIFFORD M. Snow, frost and ice removal equipment. Wright-Patterson Air Force Base, Ohio, June 18, 1953. 30 p. illus., 7 p. charts (fold.) U.S. Wright Air Development Center. WADC technical note WCLE–53–130).

Reports progress to June 1, 1953, in the investigation of snow, frost and ice removal equipment and procedures for aircraft, carried out at Wright Air Development Center, Ohio. Methods used in Norway and Canada, and by the Alaskan and Northeast Air Commands are summarized. The Type A–1 Deicing Fluid Spray Outfit has appeared promising operationally; small-scale tests with infra-red heating are not favorable for USAF use; tests with high velocity air blast furnished by a gas turbine compressor have been promising. Various methods are summarized in turn under the

main categories of: Chemical de-icing, water, water- and ice-phobic materials, internal heat, external heat, covers, other means, and equipment. Advantages and disadvantages are listed, and recommendations are made. Other, related military projects are listed. Photographs show seven arrangements of movable spray-equipment.

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BONNET, D., *see* Chardon, G., *and* D. Bonnet. Action de l'hypothermie . . . *1958*. No. 50179.

49833. BONNEVIE, KRISTINE, 1872–. Zur Systematik der Hydroiden. (Zeitschrift für wissenschaftliche Zoologie, 1898. Bd. 63, Heft 3, p. 465–95, illus., plates 25–27.) 14 refs. Text in German. ***Title tr.:*** A contribution to the systematics of hydroids.

Lists 27 species of marine hydroids (in four families) 20 described as new from material collected in Greenland and Barents Seas and Svalbard waters by the Norwegian Northern Sea Expedition of 1876–78. Other papers on hydroids of this expedition are listed as No. 1966 and 20822 of *Arctic Bibliography*.

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BONOMI, L., *see* Frongia, N., *and others*. Quadri istologici ed istochimici . . . nell'encefalo . . . ipotermia . . . *1957*. No. 51015.

BONTKE, E., *see* Behmann, F. W., *and* E. Bontke. Die Regelung der Wärmebildung . . . 1 . . . *1958*. No. 49609.

49834. BOOTH, FRANK O. Septic tank important method for safe waste disposal. (Alaska's health, Oct. 1957. v. 14, p. 3, illus.)

Information is presented on the purposes of septic tanks, public sewerage systems, instructions on installing septic tanks in low temperature areas, supervising such installations, etc.

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49835. BORBERG, FINN. Grønlands Handel - det aeldste rederi. (Grønland, Aug. 1957, nr. 8, p. 309–320, illus.) Text in Danish. ***Title tr.:*** The Greenland Trading Company, the oldest shipping company.

Lists and describes some of the ships owned by this Danish company since 1797 (latterly by the state). The first steel ship was built in 1905; in 1926 the last sailing-ships were scrapped and the motor vessel without sail was introduced. The last wooden vessel was built at the end of the nineteen-forties. The company's vessels made 83 Greenland trips in 1956, ten of them to the east coast; 3,699 people were transported in 1951; in 1956: 5,800. It aims to handle 60% of the Greenland-bound freight. A new ship is being planned at present.

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49836. BORBERG, FINN. Journalisten og Grønland. (Grønland, May 1957, nr. 5, p. 181–89, illus.) Text in Danish. ***Title tr.:*** The journalist and Greenland.

Recommends institution of an annual scholarship to enable Danish journalists to study Greenland affairs on the spot. The difficulties of writing about Greenland without having visited it are exemplified from the author's experience.

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49837. BORBERG, FINN. Ny aera i grønlands-sejladsen indledes med KGH's nye skib. (Atuagagdliutit: Grønlandsposten, July 21, 1958. Ukiut 98-iat, nr. 14, p. 10–13, 15–16, illus.) Text in Danish and Eskimo. ***Title tr.:*** A new era in Greenland navigation is introduced with the Royal Greenland Trading Company's new ship.

Contains a detailed description of the 60-passenger vessel, built at Fredrikshavn, Denmark, to go into service in Jan. 1959. It is to carry a Bell 47 D helicopter to aid ice navigation and to be painted orange for easy sighting. The ship is of steel with welded 25 mm. plates riveted to the frames, diesel-powered, average speed of 14 knots and can be navigated from a closed-in, heated crow's nest. It will make 11–12 voyages a year.

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49838. BORBERG, FINN. Det nye grønlandsskib, lidt af en revolution. (Grønland, Aug. 1958, nr. 8, p. 291–94, illus.) Text in Danish. ***Title tr.:*** The new Greenland ship, somewhat of a revolution.

Describes the vessel to be launched in Aug. 1958 and put into service in Jan. 1959. The welded plates, riveted to the frames, are 25 mm. thick. The ship, diesel-powered and 87.8 m. in length, is to be navigated from a closed-in crow's nest, and to carry a helicopter for navigation in ice. She will carry 60 passengers, oil, and refrigerated, frozen, and general cargo. ***Copy seen:*** DLC.

49839. BORBERG, FINN. Den private skibsfart for Grønlands Handel. (Grønland, Jan. 1958, nr. 1, p. 18–27, illus.) Text in Danish. ***Title tr.:*** Private shipping in the service of the Greenland Trading Company.

Lists and gives details on privately-owned ships chartered by the Greenland Trading Company: one in 1939, 28 in 1956. ***Copy seen:*** DLC.

49840. BORDEN, CHARLES E. Facts and problems of Northwest coast prehistory. (Anthropology in British Columbia, 1951. no. 2, p. 35–52, illus. on 2 unnumb. appended plates, table.) 22 refs.

Supports F. de Laguna's (No. 3829) and H. B. Collins' (No. 3332) assumption that an early Eskimo stratum underlies Indian cultures of southern British Columbia and northwestern Washington State. The Nootka are suggested as first Indians to settle on the coast in preference to the Eyak, Tlingit, Haida, Tsimshian or Kwakiutl. Eskimo traits in Nootka whale-hunting practices are discussed and tabulated; close relationship is noted to North Alaskan Eskimos in technical aspects and to Aleut-Koniags in ritual elements of whaling. The southward spread of an early Eskimoid culture along the Pacific coast is speculated upon. ***Copy seen:*** DSI.

49841. BORDOVSKIĬ, O. K. Guminovye veshchestva v osadkakh zapadnoĭ chasti Beringova morîa. (Akademiîa nauk SSSR. Doklady, Mar. 1, 1957. t. 113, no. 1, p. 157–60, 2 illus., 3 tables.) 8 refs. Text in Russian. ***Title tr.:*** Humic substances in the deposits of the western part of the Bering Sea.

Contains a study of humic substances which form an important part of the organic deposits of the Bering Sea. The amount fluctuates from .08 to 1.02% and the mean is .38% of the dry weight of the deposits. Table 1 shows their content and the humic coefficient of various deposits. The coefficient ranges from 16.8 to 39.8 %, the mean amount is about 26%. The humic substances may be divided into five groups (from .2 to .8%) the distribution of which is shown (fig. 2). These substances are characterized by their comparatively high content of hydrogen and nitrogen (tables 2–3), the amount of N fluctuating from 1.97 to 3.84%. About 13% (average) of the whole amount of N in all deposits of Bering Sea are tied in humic substances. ***Copy seen:*** DLC.

49842. BORENIUS, GUSTAF. Blommor och fåglar i Sarek; några minnen från en sommarvandring. (Sveriges natur. Årsbok 1956. årg. 46, nr. 3A, p. 77–82, illus.) Text in Swedish. ***Title tr.:*** Blossoms and birds in Sarek; some recollections from a summer excursion.

Bird life and flora are noted on a summer tour across the lower Sarek region in north Sweden. Among some twenty birds identified (by common name) is a thrush (*Turdus torquatus*) previously unreported north of Umeå. Several of the many plants cited were found at unusually high elevations: *Saxifraga oppositifolia* and *S. nivalis* above 1900 m., and *Ranunculus glacialis* above 2,000 m. in the Kebnekaise region. A correlation between certain species and lime-rich rocks is noted. The larva damage to mountain birch (serious) could not be estimated until another summer. ***Copy seen:*** DLC.

49843. BORENIUS, GUSTAF. Klätterkurs och bestigningar 1957. (Till fjälls, 1957. årg. 29, p. 79–81.) Text in Swedish. ***Title tr.:*** Climbing course and ascents in 1957.

Includes ascents made in north Sweden (about 20) and by Swedes in Norway (five) and Greenland (five). Dates, participants, and short route descriptions are given. ***Copy seen:*** DLC.

BORING, WILLIAM D., *see* Walker, D. L., *and* W. D. Boring. Studies . . . coxsakie virus infection . . . environmental temperature. *1957.* No. 55921.

49844. BORISHANSKIĬ, L. S. K voprosu ob ionizatsionnom balanse v oblasti Barentsova morîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1933. vyp. 18, p. 91–99, diagr.) 17 refs. Text in Russian. Summary in German. ***Title tr.:*** The ionization balance in the Barents Sea region.

Measurements at three different locations showed an average time of existence of 116.3 sec. for the ions. Average number of normal ions was 553/cm.^{3}, and average intensity of ion formation, 407 pairs/cm.^{3} sec. The determination of an equation for ionization balance and for the coefficient of ion destruction is explained; the apparatus used for the measurements

is described. Computed average number of normal ions, 477 cm.,^{3} is considered to be in satisfactory agreement. Relatively larger ion concentration at sea at a low formation intensity is ascribed to a more prolonged ion duration over sea than over land. ***Copy seen:*** DLC.

49845. BORISKOVSKIĬ, PAVEL IOSIFOVICH, 1911– . Izuchenie paleoliticheskikh zhilishch v Sovetskom Soĭuze. (Sovetskaîa arkheologiîa, 1958, no. 1, p. 3–19, illus.) Refs. Text in Russian. ***Title tr.:*** The study of paleolithic dwellings in the Soviet Union.

Discusses the construction materials (bone, stone, wood and hides), building techniques, ground plans and shapes of paleolithic surficial and pit dwellings, including those at Buret' on the Angara River, p. 8 (cf. No. 53740).

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49846. BORISKOVSKIĬ, PAVEL IOSIFOVICH, 1911– . Paleoliticheskie zhilishcha na territorii SSSR i ėtnograficheskie paralleli k nim. Moskva, Izd-vo Akademii nauk SSSR, 1956. 31 p. (Doklady sovetskoĭ delegatsii na v mezhdunarodnom kongresse antropologov i ėtnografov) Refs. Text in Russian and French. ***Title tr.:*** Paleolithic dwellings on the territory of U.S.S.R. and their ethnographic parallels. (Papers presented by the Soviet delegation at the Fifth International Congress of Anthropological and Ethnological Sciences).

Mentions the late-paleolithic, small oval-shaped houses at Buret' excavated by A. P. Okladnikov in 1936–1940, and the permanent settlements discovered in Mal'ta and Afontova Gora (on the Yenisey River). The likeness between the house-plans of some late-paleolithic communal dwellings of Europe and Siberia and those of American Indians is believed to be based on a similar matriarchal clan community. The even greater analogies of the former to 17th-18th century, large, pit-houses of the Chukchis and Eskimos are attributed rather to economic and geographic than cultural factors. ***Copy seen:*** DLC.

49847. BORISOV, EVG. Taĭna redkikh zemel'. (Znanie-sila, Oct. 1958. god 33, no. 10, p. 8–10, illus.) Text in Russian. ***Title tr.:*** Mystery of the rare earths.

Sketch of the activities of V. B. Aleksandrov, a young mineralogist of the Academy of Science's Institute of Mineralogy, Geochemistry and Crystallochemistry of Rare Elements: mineral collecting in Kola Peninsula for Moscow University and the Institute of Rare Elements; study of metamict (metamiktnyĭ) mineral structure by X-ray analysis in the laboratory of this institute, etc.

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49848. BORISOV, P. Mozhno li ispravit' klimat? (Vokrug sveta, Apr. 1958, no. 4, p. 2–6, illus., maps.) Text in Russian. ***Title tr.:*** Is it possible to improve the climate?

Outlines plan to temper the Arctic Basin by pumping out cold water at 500 cu. km./day over a dam built across Bering Strait, and letting the warm masses of Atlantic water flow into it. A general temperature rise in the Northern Hemisphere is anticipated; such "war against cold" is claimed to be feasible and the cost of the dam construction and pumping installations is estimated at 100–110 billion rubles. Several Soviet scientists, including I. D. Papanin, comment on this plan in the next issue of this magazine (no. 5, p. 7); it was criticized by D. Drogaĭtsev, q.v. ***Copy seen:*** DLC.

49849. BORISOV, P. A. Karel'skie shungity, tsennoe iskopaemoe. (Razvedka i okhrana nedr, Mar. 1957. god 23, no. 3, p. 12–19, illus., graphs, map.) Text in Russian. ***Title tr.:*** Karelian shungite, a valuable mineral.

Attempts to develop shungite deposits of various carbon concentration (5–98%) for industrial use are reviewed since 1870. Shungite is classified in five categories according to carbon concentration: 90–98, 55–75, 34–37, 10–30, and 5–10% C. Large deposits of shungite of 34–37% C with heat value of 3000–4000 cal./kg. were found, but it was not adopted for fuel due to the appearance of liquid slag covering the burning mass. Shungite slates are generally used for other industrial purposes: in metallurgy, electrical engineering, for fire- and acid-resistant products, mineral paints, jewelry and even in agriculture. Shungite slates contain various minerals (quartz, mica, spar and microelements such as V, Mo, Cu, Ni, B, W, Co, etc. These deposits are shown in sections, and located on map: various developments are described in text. ***Copy seen:*** DLC.

49850. BORN, ERIC von. Mot polerna i äldre tider. (Nautisk tidskrift, Dec. 1956. årg. 49, nr. 12, p. 431–36.) Text in

Swedish. ***Title tr.:*** Toward the Poles in olden times.

Reviews polar research from the first arctic expedition 2300 years ago to the present. ***Copy seen:*** DLC.

49851. BORODIN, L. S. K geokhimii Khibinskogo shchelochnogo massiva. (Akademiîa nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh ėlementov. Trudy, 1957, vyp. 1, p. 23–34, tables, map.) 4 refs. Text in Russian. ***Title tr.:*** On the geochemistry of the Khibiny alkali massif.

Main geochemical characteristics of the massif as described by A. E. Fersman in 1937, are summarized, and new data given, based on recent petrographic, mineralogical and geochemical investigations. Samples (25), each 3–5 kg., from various typical rocks, are examined, and results of quantitative and qualitative analyses are presented in tables. The composition of the Khibiny massif, distribution of rare and dispersed elements in rocks and minerals; and classification of these elements in alkali rocks, pegmatites and epigenetic veins are treated in turn. Beryllium and gallium, hitherto overlooked in the literature on Khibiny, are characterized. ***Copy seen:*** DLC.

49852. BORODIN, L. S. Osnovnye osobennosti stroeniîa i sostava zhilnykh obrazovaniĭ Khibinskogo massiva (pegmatitov) v svîazi s voprosami ikh genezisa i klassifikat͡sii. (Akademiîa nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh ėlementov. Trudy, 1957, vyp. 1, p. 123–37, tables.) 4 refs. Text in Russian. ***Title tr.:*** Main features of the structure and composition of pegmatite vein formation in Khibiny massif, and the question of its genesis and classification.

Results of investigation of the geologic and genetic interrelation of vein formations in this area are presented from material collected by the author. Formations represented in the structure of Khibiny massif are reviewed. Two groups of pegmatite veins are distinguished: syngenetic and epigenetic. Both groups are treated in detail and features of their mineral composition are outlined. General principles of pegmatite classification are discussed. The classification itself is presented in tables. ***Copy seen:*** DLC.

49853. BOROVIK-ROMANOVA, TA-T'ÎANA FEDOROVNA, *and* **E. D. KALITA.** O t͡sezievo-rubidievom mikroklinpertite i rasprostranenii v nem redkikh shchelochnykh metallov. (Geokhimiîa, 1958, no. 2, p. 107–114, illus., tables.) 11 refs. Text in Russian. Summary in English. ***Title tr.:*** On cesium-rubidium microcline-perthite and the distribution of rare alkali metals in it.

Describes microcline-perthite from pegmatite of Kola Peninsula. Its rubidium content ranges from 1.08 to 1.6% and cesium from 0.11 to 0.14%. On comparison with samples from the Khibiny, the Urals, Karelia and other regions, the Kola microcline-perthite is found many times richer in rubidium and cesium than the others, and should be called cesium-rubidium microcline-perthite. A certain regularity in the rubidium distribution is established according to depth within the pegmatite. ***Copy seen:*** DLC.

49854. BOROVIK-ROMANOVA, TA-T'ÎANA FEDOROVNA, *and others.* Ob otnoshenii soderzhaniĭ kaliîa k rubidiîu v mineralakh iz pegmatitovykh zhil Kol'skogo poluostrova po dannym spektral'nogo analiza. (Geokhimiîa, 1958. no. 4, p. 334–41, table, diagrs.) 11 refs. Text in Russian. Summary in English. *Other authors:* A. F. Sosedko, and E. N. Savinova. ***Title tr.:*** On the ratio of potassium and rubidium content in minerals from pegmatite veins of the Kola Peninsula according to data of spectral analyses.

Microclines and micas of pegmatite veins with differing paragenetic associations in northern Kola Peninsula were studied. In 30 samples of microclines, the K/Rb ratio varied from 106 in ordinary veins to 7 in the more complex; from nine samples of micas, the ratio varied from 13.4 to 3.6. Zonality of the pegmatite field affects the K/Rb ratio. The gradual accumulation of rubidium and other rare elements in the microclines and micas may be explained by gradual differentiation during cooling of the residual magma. ***Copy seen:*** DLC.

49855. BOROVIK-ROMANOVA, TA-T'ÎANA FEDOROVNA, *and* **A. F. SOSEDKO.** Soderzhanie redkikh shchelocheĭ v mineralakh iz pegmatitovykh zhil Kol'skogo poluostrova po spektral'nym analizam. (Geokhimiîa, 1957, no. 5, p. 368–79, illus., tables, diagrs.) 17 refs. Text in Russian. Summary in English. ***Title tr.:*** The content of rare alkalis in minerals from pegmatite veins of the Kola Peninsula according to spectral analyses.

Presents data on distribution of lithium, rubidium and cesium in microclines and micas taken from pegmatite veins in the Leshaya Mountain region of northern Kola. Analyses of the Li, Rb, Cs content are presented. Zonality of the rare alkali content as disclosed and illustrated in map, is lowest in the northwestern part of the region and the highest in the southeast. ***Copy seen:*** DLC.

49856. BOROVSKIĬ, M. Nezamerzaûshchie drenazhnye voronki na puchinistykh uchastkakh. (Avtomobil'nye dorogi, Aug. 1958. god 21, no. 8, p. 23, illus.) Text in Russian. ***Title tr.:*** Non-freezing drainage channels in roads subject to swelling.

Small diameter, 20-cm. deep drainage channels dug in the road surface to assist in the drainage of underground water and to prevent freezing at temperatures down to −22° C. are described. The channels are filled with fine sand mixed with salt: 25–35 kg./cu. m. of sand.

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BOROWSKI, J., *see* Sas, A., *and* J. Borowski. Instantanés de Laponie. *1957.* No. 54554.

49857. BORSY, J. Vergleichende Untersuchungen über Wirkung von Analgetika und Largactil auf die chemische Thermoregulation. (Acta physiologica, 1957. t. 11 (suppl.), p. 98–99.) Text in German. ***Title tr.:*** Comparative investigations on the effect of analgetics and Largactil upon chemical thermoregulation.

Account of experiments with rats exposed to moderately low temperature (16–17° C.) and administered non-toxic doses of analgetics. O_2-consumption, RQ-values, CO_2-production and body temperature are registered. Largactil in doses of 5–10 mg/kg. raised the rate of metabolism caused by cold, but doses of 20 mg/kg lowered it.

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49858. BORUTA, KAZYS, 1905– . Šiaurės kelionės; nuo seniausių laikų iki šių dienų narsiųjų keliauninkų didvyriški žygiai ir darbai. Vilnius, Valstybinė grožinės literatūros leidykla, 1957. 503 p. illus., plates, ports. Text in Lithuanian. ***Title tr.:*** Northern travels; heroic expeditions and work of bold travelers, from ancient times to the present day.

Popular, richly illustrated account of the main arctic and antarctic expeditions, beginning with the northern voyages of Phoenician and Greek (Pytheas) navigators, and continuing through the Soviet expeditions in 1955. ***Copy seen:*** DLC.

49859. BORZENKO, A. Tri medvedîa Magadanskogo okhotnika. (Okhota i okhotnich'e khozîaĭstvo, May 1958. god 4, no. 5, p. 81.) Text in Russian. ***Title tr.:*** A Magadan hunter's three bears.

Notes killing of a family of three bears by a worker of the collective farm (*artel'*) "40 let Oktyabrya" in the Vostochnyye Tundra District of Magadan Province.

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49860. BOSTOCK, HUGH SAMUEL, 1901– . Yukon Territory; selected field reports of the Geological Survey of Canada, 1898 to 1933. Ottawa, Queen's Printer, 1957. xiii, 650 p. 3 fold. maps, 5 text maps. (Canada. Geological Survey. Memoir 284.)

Review of the period 1876–1897 is followed by reports year by year 1897–1933, of the early geological explorations together with the Survey Director's summary of Yukon work of the year. Original accounts of Klondike placer fields, Whitehorse copper belt, Windy Arm and Wheaton River silver and antimony ores, Mayo and Beaver River silver-lead camps, Carmacks coal deposits and many other areas are included. Most reports are given in full, but accompanying maps are omitted. Geologic map of Yukon Territory (scale 1: 1,267,200) shows practically all known geological information and places referred to in the volume. ***Copy seen:*** DGS.

BOSTOCK, HUGH SAMUEL, 1901– , *see also* Canada. Geol Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

49861. BOUCHER, V. J. Seals, seaways and sailormen. (Alaska sportsman, June 1957. v. 23, no. 6, p. 8–13, 36–38, illus.)

Contains popular account of early sealing in the Pribilof Islands and other North Pacific rookeries, with mention of migration, habitats, conservation measures, etc. Fur seals encountered at Ketchikan in 1955, are also mentioned. ***Copy seen:*** DI.

49862. BOUDA, KARL. Die Sprache der Jenissejer; genealogische und morphologische Untersuchungen. (Anthropos, 1957. v. 52, fasc. 1–2, p. 65–134.) 42 refs. Text in German. ***Title tr.:*** The language of the Yeniseians; a genealogic and morphologic study.

Lists (with German equivalent) the Samoyed, Finno-Ugrian, east Turkic, Tungus and Russian loan words in Yeniseian, and compares the latter with Indo-Chinese and Caucasian. The phonetics of the original vocabulary and the morphology of the Yeniseian verb are discussed. As a result of his linguistic research, author suggests the Yeniseians moved to their present location on the middle and lower Yenisey River from a more southerly homeland.

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49863. BOUISSET, L., *and others.* Survie des trypanosomes et des hématozoaires dans le sang citraté et glucosé conservé en glacière. (Société de Biologie, Paris. Comptes rendus, 1958. t. 152, no. 4, p. 674–78, illus.) 5 refs. Text in French. *Other authors:* A. Lessa and J. Ruffié. ***Title tr.:*** Survival of trypanosomes and hematozoans in citrate-glucose blood kept in the refrigerator.

Blood infected with *Trypanosoma equiperdum,* kept at 4 to 6° C. was inoculated at regular intervals into rats; similarly cooled blood with *Plasmodium berghei* was inoculated into mice. In the first case the parasites preserved their virulence for six hours; in the second for 18. Cold attenuated the virulence of both parasites. ***Copy seen:*** DNLM.

49864. BOULOUARD, RAYMOND. Action du froid sur la teneur en 17-hydroxycorticostéroïdes du sang chez le rat et le cobaye. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 5, p. 913–17, illus., table.) 14 refs. Text in French. ***Title tr.:*** The effect of cold on the blood content of 17-hydroxycorticosteroids in the rat and guinea pig.

A comparative study of the two species exposed to an identical temperature of 4.5° ±1° C. for 3, 6, or 24 hrs. In the guinea pig, the level of 17-hydroxycorticosteroids rose proportionately to the logarithm of exposure time and adrenal hypertrophy. In the rat there was a slight drop in the corticosteroids despite the enlargement of the adrenals. An explanation of this difference is suggested.

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BOUNOUS, GUSTAVO, *see* King, H., *and* G. Bounous. Cardiac input in hypothermia. 1958. No. 52285.

49865. BOUSFIELD, EDWARD LLOYD, 1926– . Fresh-water amphipod crustaceans of glaciated North America. (Canadian field-naturalist, Apr.–June 1958. v. 72, no. 2, p. 55–113, 13 illus.) 73 refs.

Contains a taxonomic treatment of 30 species and subspecies of amphipodous crustaceans from fresh waters of Canada and contiguous areas of the United States that have been exposed to the Pleistocene glaciation: a key and list of species with synonymy, descriptions, distribution, ecology and data on material examined. Critical remarks are added. *Gammarus l. lacustris* (Baffin Island and Hudson Bay, Yukon and Alaska), *Pontoporeia affinis* (arctic coast, through Labrador to Lake Washington), *Anisogammarus confervicolus* (Alaska to California) and *Hyalella azteca* (north to the tree line in Canada and Alaska), are included.

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BOWBELSKA, IRENA, *see* Perzyna, T., *and others.* Wpływ hipotermii . . . *1958.* No. 53943.

49866. BOWDEN, FRANK PHILIP. Fasta kroppars friktion. (Teknisk tidskrift, Feb. 14, 1956. årg. 86, häfte 7, p. 125–31, illus., diagrs.) 19 refs. Text in Swedish. ***Title tr.:*** The friction of solids.

Includes discussion (p. 127–28) of friction in skiing with graphed data on temperature (+5 to −25° C.) influence on the friction coefficient for skis coated with wax, paraffin, and polytetrafluoretylen (Teflon). The minimum coefficient is at 0° C. for all coatings. Three ways of applying Teflon, which has the lowest friction coefficient (0.1 at −25° C.), to the skis, are illustrated.

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49867. BOWDEN, WRAY MERRILL, 1914– . Cytotaxonomy of *Potentilla fruticosa,* allied species and cultivars. (Harvard University. Arnold Arboretum. Journal, Oct. 1957. v. 38, no. 4, p. 381–88, illus.) 16 refs. *Pub. also as:* Contrib. no. 1606 from the Botany and Plant Pathology Div., Science Service, Canadian Dept. of Agriculture, Ottawa.

Contains results of chromosome-number determinations of a large collection of shrubby potentillas at the Dominion Arboretum at Ottawa. Plants of *P. fruticosa* s. str. from England and Sweden are tetraploid (2n=28) but North American populations of "*P. fruticosa*" including some specimens from Kenai Peninsula, Alaska, are diploid (2n=14). The cytological data should be helpful when a

thorough biosystematic study is made of the shrubby potentillas.

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49868. BOWDEN, WRAY MERRILL, 1914– . Cytotaxonomy of section *Psammelymus* of the genus *Elymus*. (Canadian journal of botany, Nov. 1957. v. 35, no. 6, p. 951–93, 2 plates, 32 illus. incl. 6 text maps) 41 refs. *Pub. also as:* Contrib. No. 1560 from the Botany and Plant Pathology Div., Science Service, Canadian Dept. of Agriculture, Ottawa.

Contains comparative studies of three grass species: *E. racemosus*, a tetraploid species (2n=28); *E. arenarius*, a northern European species (northern Scandinavia) that is octoploid (2n=56) and was introduced to West Greenland and North America; *E. mollis* (2n=28) with three subspecies, which has a wide distribution from the North Pacific coast to southern Greenland, and occurs in the Arctic from the Taymyr Peninsula to West Greenland (text maps 5–6). Intermediate forms of *E. mollis* complex occur from eastern Siberia and Alaska, through northern Canada to James Bay and northern Quebec. Keys to the species, subspecies, varieties and forms are supplied. Discussions of ecology and *E. mollis* complex (center of origin: Kamchatka Peninsula and adjacent areas) are added.

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49869. BOWDEN, WRAY MERRILL, 1914– . Natural and artificial x *Elymordeum* hybrids. (Canadian journal of botany, Jan. 1958. v. 36, no. 1, p. 101–123, 2 plates.) 27 refs.

Describes four putative and four proved hybrids of *Elymus* x *Hordeum* in this treatment of x *Elymordeum*. Seven of these hybrid grasses are from North America and one from Russia. *Elymordeum schaackianum* hybr. nov. from Attu Island in the Aleutians is included.

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BOWE, ROBERT L., *see* Barlow, G., *and others*. Circulating . . . 17-hydroxycorticosteroid . . . hypothermia. *1958*. No. 49546.

BOWE, ROBERT L., *see* Spurr, G. B., *and others*. Influence of body temperature on cardiac sensitivity to potassium. *1958*. No. 55103.

BOWLES, KENNETH L., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

49870. BOWMAN, WALDO. Build-up for better transarctic bases. (Engineering news-record, Feb. 1957. v. 158, no. 6, p. 30–43, illus.)

Describes prevailing construction and research at U.S. military bases and camps in Greenland. The Thule program includes a huge apron and widening of runway and taxiways, both paved with asphaltic concrete on an 8-ft. layer of gravel: 80 x 1,800 ft. tar-rubber strips are laid in the jet-plane refuelling areas. Ten new buildings are to be constructed, and the roofs of 85 barracks improved. Research teams at and on the icecap beyond Thule study construction and transportation problems; an experimental road from the coast up and onto the icecap is under construction. Some 3,000 ft. of tunnel have been drilled in the ice for housing and storage purposes, or as an access to the icecap. In Søndre Strømfjord, construction projects include buildings and 15,000 ft. of water mains. Here, as well as at Thule, extensive use is made of Schokbeton, a Dutch concrete of unusual density and strength.

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49871. BOWSHER, ARTHUR LEROY, 1917– , *and* J. T. DUTRO, *Jr.* The Paleozoic section in the Shainin Lake area, central Brooks Range, Alaska. Washington, D.C., U.S. Govt. Print. Off., 1957. 39 p. illus., 2 maps, incl. 1 fold, 7 diagrs., table. (U.S. Geological Survey. Professional paper 303–A. Exploration of Naval Petroleum Reserve No. 4 and adjacent areas, northern Alaska, 1944–53, pt. 3, areal geology.) 22 refs.

The Paleozoic section exposed in this area (approx. 68°20′ N. 151° W.) is divided into five formations, four of which have not been described before. The Kanayut conglomerate, 3,300 ft. thick, of Late Devonian age, overlies an unnamed shale and sandstone formation, also Late Devonian. The overlying Kayak shale, 960 ft. thick, consists chiefly of black shale of Mississippian age. The Lisburne group, about 2,200 ft. of fossiliferous bioclastic limestone and dolomite, is composed of two formations; the Wachsmuth limestone (early Mississippian) and the Alapah limestone (late Mississippian). "Structurally the area is characterized by imbricate thrust faulting and high-angle reverse faulting. Mississippian rocks apparently represent plat-

form-type deposition in an east-trending late Paleozoic seaway."

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BOWSHER, ARTHUR LEROY, 1917– , *see also* Detterman, R. L., *and others.* Glaciation . . . Brooks Range . . . *1958.* No. 50531.

49872. BOYARSKY, L. L., *and* L. STEWART. Neurogenic inhibition of shivering (Science, April 5, 1957. v. 125, no. 3249, p. 649–50, illus.) 6 refs.

Account of experiments with dogs and cats made to shiver by placing ice around the trunk. The inhibitory stimulus was a 1-m sec pulse from a thyratron oscillator with variable voltage and frequency. The stimulus applied to the skin, caused immediate inhibition which ceased with the cessation of the stimulus.

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BOYD, DONALD W., *see* Thomas, M.K., *and* D. W. Boyd Wind chill in northern Canada. *1957.* No. 55409.

49873. BOYD, HUGH. The survival of white-fronted geese, *Anser albifrons flavirostris* Dalgety & Scott, ringed in Greenland. (Dansk ornithologisk forening. Tidsskrift, Mar. 1958. årg. 52, hefte 1, p. 1–8, 2 tables.) 10 refs. Summary in Danish.

Some 835 specimens were ringed during 1946–1958 in West Greenland, between 64° to 72°30′ N. Recovery series in 1946–50 and the distribution are tabulated. This goose resembles other populations of *Anser* in the mortality experience of adults and of young birds after fledging. ***Copy seen:*** DSI.

49874. BOYD, WILLIAM L. Microbiological studies of arctic soils. (Ecology, Apr. 1958. v. 39, no. 2, p. 332–36, illus., tables, map.) 10 refs.

Report on investigation of soils from the vicinity of Point Barrow, Alaska, Oct. 1955–Dec. 1956. Highest counts of plates (incubated at 22° C.) were made when the soil was frozen; a sharp drop was noted once the summer thaw set in. Part of the population was able to grow at 2° C. Preliminary experiments suggest that limited microbial activity takes place in the soil during the summer.

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49875. BOYLE, ROBERT WILLIAM, 1920– . The geology and geochemistry of the silver-lead-zinc deposits of Galena Hill, Yukon Territory. Ottawa, Queen's Printer, 1957. 41 p. text map, fold. map, plans, tables (Canada. Geological Survey. Paper 57–1.) 43 refs.

Summary report of author's 1955 field work on the silver-lead-zinc deposits of this area, completing program started in 1953. Topography, glacial and frost action, climate, general geology and rock types are noted. Of three formations underlying Galena Hill, the Central Quartzite contains the most important ore deposits. Vein faults and fault systems are discussed in some detail, illustrated by plans and located on fold. map. Geochemistry of the deposits is briefly treated; these deposits are similar to those on Keno Hill. Mineralization history of Galena Hill has been long and involved: at least three hypogene stages and a supergene stage still in progress. Lead, zinc, and silver contents of oxidized and unoxidized lodes are shown in table.

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49876. BOYLE, ROBERT WILLIAM, 1920– , *and* C. B. CRAGG. Soil analyses as a method of geochemical prospecting in Keno Hill – Galena Hill area, Yukon Territory. Ottawa, Queen's Printer, 1957. 27 p. text map, 2 fold. maps, tables, diagrs. (Canada. Geological Survey. Bulletin 39.) Refs.

Results of research carried out summer 1955, using soil analyses to determine the dispersion characteristics of lead, zinc, and copper from lead-zinc-silver lodes. Previous studies (No. 38962, 38963, 38964), gave information on the dispersion of lead, zinc, and copper from the lode deposits, using analyses of stream and spring waters. This report describes a method of detecting the approximate position of an ore body by analysis of the overlying drift. Zinc and copper because of their dispersion habits were not satisfactorily located, unlike lead with limited dispersion and enriched in soils near the lode deposits. The total heavy metals content of residual soils was a good indicator of presence of vein faults and deposits, and was easy to determine. Near-surface glacial materials, muck, and peat along traverses across known vein faults were generally poor indicators of the presence of such vein faults or deposits. Samples of glacial material taken close to bedrock gave good anomalies, however. Topographic and geological conditions, character and composition of soils and glacial deposits are briefly outlined. The most satisfactory method of

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field sampling and the field laboratory procedure are described in some detail. Results of investigation generally indicate wide dispersion of zinc, slight dispersion of lead and erratic dispersion of copper; there is a possibility of detecting lodes and vein faults in this area by a grid of soil analyses. ***Copy seen:*** DGS.

49877. BOYLE, ROBERT WILLIAM, 1920– . Soil analysis as a method of geochemical prospecting for lead-silver deposits, in the Keno Hill area, Yukon. (Canadian mining journal, Jan. 1957, v. 78, no. 1, p. 49–55, 5 illus., incl. geol. map and cross-section, 3 tables.) 5 refs.

Contains results of geochemical research conducted by the Canadian Geological Survey in summer 1955 in the Keno Hill area (63°58′ N. 135°22′ W.). Dithizone (diphenylthiocarbazone) was used for estimating the content of heavy metals in the soils. Investigation of spring and stream waters (No. 38963) had given data on the dispersion of lead, zinc, and copper from lode deposits. Dispersion patterns, determined by character of soil, glacial deposits, vegetation, spring and stream water, as well as those of the lode and of surface topography, have a bearing on geochemical prospecting using soil analyses. Presence of permafrost does not affect applicability of this method. Zinc is the most strongly dispersed of the three elements; lead and copper have only a limited dispersion. Tabular summary of results of analyses of lodes, soils, and plants are presented. Recommendations to prospectors on procedures are added. ***Copy seen:*** DGS.

49878. BOZHENOVA, A. P., *and* **F. G. BAKULIN.** Éksperimental'nye issledovaniîâ mekhanizma peredvizheniîâ vlagi v promerzaûshchikh gruntakh. (*In:* Materialy po laboratornym issledovaniîâm merzlykh gruntov, sbornik 3, 1957. p. 117–28, tables) 21 refs. Text in Russian. ***Title tr.:*** Experimental study of moisture migration in freezing ground.

"The investigations are outlined, and the experimental procedure is described. The data obtained are tabulated and revisions of theories on forces active in moisture migration in freezing and frozen soils are proposed. Distilled water and $CaCl_2$ solutions were used to determine separately the migration intensity associated with tightly and loosely bound water in soil. The influence of many factors on moisture migration were observed, but maximum effects were associated with the adsorptive power of ice crystals and the mineral component of soils. The effects of ground freezing on the migration of film water will be investigated next."—SIPRE.

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49879. BOZHENOVA, A. P. Znachenie osmoticheskikh sil v protsesse migratsii vlagi v gruntakh. (*In:* Materialy po laboratornym issledovaniîâm merzlykh gruntov, sbornik 3, 1957. p. 129–41, tables) 12 refs. Text in Russian. ***Title tr.:*** The role of osmotic forces in moisture migration in soils.

Basic works on moisture migration in freezing soil and factors influencing migration intensity are examined to determine the role of osmotic forces in those processes. Experiments at the Institute of Permafrostology were found in disagreement with earlier theories claiming osmotic forces as a major factor in ice formation and moisture migration. Increased effect of osmotic forces was only found in soils with high electrolytic contents.

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BOZHENOVA, A. P., *see also* TSytovich, N. A., *and others.* O fizicheskikh îâvleniîâkh . . . v . . . gruntakh. *1957.* No. 55539.

BRÅDLIE, O., *see* Solberg, P., *and* O. Brådlie. Nitrat- og ammoniuminnhold . . . *1957.* No. 55049.

49880. BRÅTHEN, HARRY. Studiereise til Finnland 13.2–11.3. 1953. (Skogbrukeren, Dec. 1, 1953, årg. 28, nr. 23, p. 345–49, Jan. 15, 1954. årg. 29, nr. 2, p. 15–22, illus.) Text in Norwegian. ***Title tr.:*** Study trip to Finland Feb. 13–Mar. 11, 1953.

Describes a trip to study working and living conditions of Finnish forestry personnel, with special emphasis on Lappmark north of Rovaniemi. Several wood industries were visited by the Norwegians, the forestry methods and equipment: modern trucks and well-kept iced roads for horse-drawn transport of logs and lumber were admired. Housing, living conditions, and recreational facilities for forest workers are excellent, and include mobile forest huts on wheels, each with a bathhouse. Author's difficult journey home along the Russian border to northern Norway is noted.

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49881. BRADBURY, MARGARET G., *and* D. M. COHEN. An illustration and a new record of the North Pacific bathypelagic fish *Macropinna microstoma.* (Stanford ichthyological bulletin, 1958. v. 7, no. 3, p. 57–59, illus.) 2 refs.

Description of two larvae and one adult of this form earlier reported from Alaskan waters and the Kuril-Kamchatka Trench. Catches suggest that the species is a "solitary-dwelling fish." ***Copy seen:*** DI.

49882. BRADLEY, JOHN. The meaning of paleogeographic pole. (New Zealand journal of science and technology, Jan. 1957. sec. B, v. 38, no. 4, p. 354–65, 3 text maps.) 10 refs.

Examines geomagnetic evidence for "pole wandering;" defines various uses of the term "pole." Suggests that former poles should be designated by their geologic age, e.g. Triassic North Pole, etc. Concludes that geomagnetic evidence on the positions of paleogeographic poles supports the theory of continental drift rather than the hypothesis of a rigid and moving crust.—From author's summary. ***Copy seen:*** DN–HO.

49883. BRAND, VLADIMIR ÈDUARDOVICH, *and* L. F. SOLODOVNIKOVA. Proektirovanie maloėtazhnykh domov iz kamyshitovykh paneleĭ KB. (Stroitel'naîa tekhnika. Bûlleten', June 1957. god 14, no. 6, p. 10–17, illus., diagrs., tables.) Text in Russian. ***Title tr.:*** Designing few-story houses of "Kamyshit" panels KB.

Various types of houses constructed of "Kamyshit" panels (KB) are described in detail. These panels are made of compressed reeds or rushes reinforced by wires and impregnated by asphalt. The panels are placed in a reinforced concrete frame. The clearances are filled with a rich liquid concrete; the inside and outside surfaces are covered with plaster layers. This construction can withstand appreciable loads, shocks and low temperature. For temperature to -36° C. the panel used is 14 cm. thick. ***Copy seen:*** DLC.

49884. BRANDER, STEN, *and* E. RUDBERG. Långlöpornas land, långfärder på skidor i maj. (Till fjälls, 1957. årg. 29, p. 48–55, illus.) Text in Swedish. ***Title tr.:*** The land of long runs; long tours on skis in May.

Describes an area south of Riksgränsen, north Sweden, and west of Kebnekaise, stretching into Norway (approx. 67°50′–68°20′ N. 17°40′–18°30′ E.), with suggestions for trips and general advice. ***Copy seen:*** DLC.

49885. BRANDES, C. H., *and others.* Rare fishes from distant northern seas; Germany. (International Council for the Study of the Sea. Annales biologiques, 1955, *pub.* 1957. v. 12, p. 54–55.) 2 refs. *Other authors:* A. Kotthaus, *and* G. Kreft.

A list of 24 rare or "exotic" fishes collected by German vessels in arctic and sub-arctic waters. Scientific name, location of find and depth, size, etc., are given. Some fishes were found in the stomachs of others. ***Copy seen:*** DI.

49886. BRANDIS, HANS JOACHIM, von. Allgemeine und örtliche Kälteschäden im Kriege. Stuttgart, F. Enke, 1943. 40 p. table (Vorträge aus der praktischen Chirurgie, Heft 27.) About 100 refs. Text in German. ***Title tr.*** General and local cold injuries in wartime.

Translated into English by William F. Sheeley for U.S.A.A.F. Aero Medical Center, Nov. 25, 1946. Hq. 3d Central Medical Establishment. Translations no. 14, 38 p. (copy at AMAU).

Following an introduction on the incidence of cold injuries in peace and war, the author discusses the heat balance in man: heat balance as dependent on circulation and nervous control; the effect of cold on thermal balance; causes of general hypothermia; its physiology and pathology, clinical aspects and therapy; the nature of local cold injury; its causes, clinical picture, prevention and therapy; chilblains. ***Copy seen:*** DNLM.

BRANDMAN, OTTO, *see* Redisch, W., *and others.* Chronic trench foot . . . *1951.* No. 54250.

49887. BRANDT, PALLE. Eventyrets tid er forbi; Østgrønland parat til nytiden. (Atuagagdliutit: Grønlandsposten, Nov. 22, 1956. Ukiut 96-iat, nr. 23, p. 5–6) Text in Danish. ***Title tr.:*** The age of adventure has passed; East Greenland is ready for the new era.

Describes a voyage from West to East Greenland on the annual trip of the *Tikerâq;* and presents case that East qualifies now for administrative status

similar to West Greenland, that the two should be in closer contact.

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49888. BRANDT, PALLE. Østgrønland: da kolonien Angmagssalik blev grundlagt. (Atuagagdliutit: Grønlandsposten, Dec. 6, 1956. Ukiut 96-iat, nr. 24, p. 5–6). Text in Danish. ***Title tr.:*** East Greenland: when the settlement of Angmagssalik was founded.

Brief survey of Eskimo settlement in East Greenland; native population is known on the southeast coast from about 1380. Some details are given on the founding of Angmagssalik (65°36′ N. 37° 38′ W.) in 1894. The total population in the district, then 247, is now nearly 2,000.

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49889. BRANDT, PALLE. Østgrønland III: nyt og gammelt mødes i Angmagssalik. (Atuagagdliutit: Grønlandsposten, Dec. 13, 1956. Ukiut 96-iat, nr. 25, p. 5–6.) Text in Danish. ***Title tr.:*** East Greenland III: new and old meet at Angmagssalik.

Discusses critically, some aspects of life at this settlement (65°36′ N. 37°38′ W.), harbor conditions, shops, hospital, water supply, etc. ***Copy seen:*** DLC.

49890. BRANDT, PALLE. Østgrønland IV; de aeldre tager stadig trommen frem, når de er til fest. (Atuagagdliutit: Grønlandsposten, Jan. 31, 1957. Ukiut 97-iat nr. 2, p. 5–6.) Text in Danish. ***Title tr.:*** East Greenland IV; the old people still get out their drums on festive occasions.

Notes the school at Angmagssalik (65°36′ N. 37°38′ W.), still in primitive premises but with 50–70 pupils; cultural life at the settlement and role of Eskimo magic, greater in East than West Greenland, are also touched upon.

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49891. BRANDT, PALLE. Østgrønland V; mange ikke udnyttede erhversmuligheder i Angmassalik distrikt. (Atuagagdliutit: Grønlandsposten, Feb. 28, 1957. Ukiut 97-iat, nr. 4, p. 8–9, illus.) Text in Danish. ***Title tr.:*** East Greenland V; many unexploited trade possibilities in Angmagssalik District.

Contains description of Skjoldungen (approx. 63°20′ N. 41°30′ W.) with 118 inhabitants, and Kap Dan (66° N. 37° W.) with 270; the people are very poor, the housing inferior. The fishing and sealing industries in the district could be expanded, if loans were granted for processing plant, etc. In 1955 fish, skins, blubber and liver worth about 100,000 D. kr., were bought by the Greenland Trading Company. ***Copy seen:*** DLC.

49892. BRANDT, PALLE. Østgrønland VI; befolkningen kan godt følge med i det nye, der et sket. (Atuagagdliutit: Grønlandsposten, Apr. 11, 1957. Ukiut 97-iat, nr. 7, p. 5–6, illus.) Text in Danish. ***Title tr.:*** East Greenland VI; the population is well able to take part in the new development.

Reviews the difference in status between East and West Greenland, self-government being less developed in the former. The liquor situation is discussed, prohibition in East Greenland was lifted in 1956 and spirits are rationed at present.

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49893. BRANNAN, PETER. Continental air power on NORAD's front line. (Canadian aviation, Feb. 1958. v. 31, no. 2, p. 40–41, illus.)

Relates impressions from a five-day winter visit to a DEW Line radar station on Melville Peninsula. Supplies flown in to this station via Frobisher by DC–4's and C–46's, are distributed to the smaller sites by DC–3's, Otters, Beavers, and Sikorsky S–55 helicopters.

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BRANNAN, PETER, *see also* Hemphill, E., *and* P. Brannan. A cure for carriers' ills. *1958.* No. 51680.

49894. BRANNIAN, J. D. Siting the DEW Line radar stations. (Engineering and contract record, July 1957. v. 70, no. 7, p. 53–55, +, illus.)

Contains a detailed description of the preparatory surveying work carried out before siting locations for the DEW Line field stations. Research started early in 1953 with priority on the Alaskan coastal area. From the main base established at Barter Island, light aircraft flew supplies to field stations. In the Canadian Arctic insufficient data were available to support the construction program. Air photographs, etc., were obtained from government and military sources and additional aerial surveying was carried out by the contractors in 1954. Transportation of materials and equipment was assigned to the Military Sea Transport Service, and temporary field stations were established in early 1955. Construction problems in permafrost areas are discussed, and aerial

photographing and surveying procedures are described and evaluated. The clothing problem is briefly mentioned, and the types of building foundations used, are listed. ***Copy seen:*** DLC.

49895. BRANTON, CLARENCE IVAN. Suggestions for buying a house. College, Alaska, Feb. 1958. 11 p. (Alaska. University. Extension Service. Bulletin 805.)

Discusses, with special application to Alaska, factors in condition of wood, common types of roofing materials, problems of condensation control, procedures for checking water purity, heating and plumbing facilities, etc.

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BRANTON, CLARENCE IVAN, *see also* Alaska. University. Extension Service. Condensation control . . . *1957.* No. 49206.

BRATASH, D. T., *see* Akademiîa nauk SSSR. ÍAkutskiĭ filial. Za sovetskuîu vlast' . . . *1957.* No. 49170.

BRATCHENKO, P., *see Avtomobil'nyĭ transport.* Kombinirovannyĭ paropodogrev . . . *1957.* No. 49453.

49896. BRATTSTRÖM, HANS. Research vessel "Fridtjof Nansen." Bergen, Grieg, 1957. 14 p. illus. (Bergen, Norway. Universitetet. Årbok 1956, naturvitenskapelig rekke, no. 9.)

Describes (with photos and cross sections) this Norwegian-built vessel completed in 1955 for the biological station of the University of Bergen. Of steel construction, 58.15 gross tonnage, it is designed for use in western Norwegian fjords. It has a 3–4 man laboratory; arrangements for washing and sorting of samples are on deck. Deck equipment also includes trawl, cargo, and hydrographic winches. Two-cyl. semi-diesel engine of 100/140 hp. gives speed of ten knots; tanks hold fuel for a six-day cruise, approx. 1,300 mi.

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49897. BRAUN, T., *and* **B. MOSINGER.** Effect of hypothermia on death by starvation. (Nature, Apr. 5, 1958. v. 181, no. 4614, p. 968.) 5 refs.

Adult rats made hypothermic with chlorpromazine showed no loss of weight or better survival than untreated controls. Ten-day old animals showed loss of weight but survival was not protected by hypothermia. Other aspects of the problem are also reported.

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49898. BRAZHNIN, IL'ÍÂ. Severnaîâ tetrad'; zapiski voennogo korrespondenta. (Neva, Feb. 1958, no. 2, p. 10–62, illus.) Text in Russian. ***Title tr.:*** Northern note-book; memoirs of a war correspondent.

Eye-witness account of the June 1941–July 1942 fighting on the Murmansk front. Several operations, including the defense of Murmansk and Rybachiy Peninsula, are described in detail with mention of regiments (Russian, German and Finnish), place names and dates.

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49899. BREBBIA, D. R., *and others.* Water vapor loss from the respiratory tract during outdoor exercise in the cold. Natick, Mass., May 1957. 10 p. illus. tables. (U.S. Army. Quartermaster Research & Development Command, Natick, Mass. Environmental Protection Division. Technical Report EP–57.) 7 refs. *Other authors:* R. F. Goldman *and* E. S. Buskirk.

Account of observations on three men, in subarctic environment. Heat loss through expired air was found to amount to 9 percent of the total energy loss. Water vapor loss was directly proportional to ventilation volume and averaged 32 mg./liter of expired air.

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49900. BREBNER, D. F., *and others.* The relation between the coefficients for heat exchange by convection and by evaporation in man. (Journal of physiology, 1958. v. 141, no. 1, p. 164–68, illus.) 9 refs. *Other authors:* D. McK. Kerslake *and* J. L. Waddell.

A study of the problem in human subjects at rest and at four speeds. "Results confirmed the theoretical expectation that the evaporation coefficient should be twice the convection coefficient."

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49901. BREDAL, THORBJØRN. Mofjellet gruber. (Tidsskrift for kjemi, bergvesen og metallurgi, Mar. 1950. årg. 10, nr. 2B, p. 97–98, diagr., table.) Text in Norwegian. ***Title tr.:*** The Mofjellet mines.

The Mofjellet mine at Mo-i-Rana (66° 19′ N. 14°10′ E.) in northern Norway, is described. In a limerich micaschist are three parallel lenses of ore about 30 m.

apart vertically. The ore is a complex of copper, sulphur, and iron pyrites, zincblende, galena, and small amounts of molybdenum, silver, and gold. About 80 are employed, and planned annual production is 60,000 tons of raw ore. The mining operation is described; 1929–1948 mining and flotation production figures are tabulated. ***Copy seen:*** DLC.

49902. BREEV, KONSTANTIN ALEKSANDROVICH, *and* **D. A. SAVEL'EV.** Kozhnyĭ ovod severnogo olenîa i bor'ba s nim. Moskva-Leningrad, Izd-vo Akademii nauk, 1958. 103 p. illus. tables, map. (Akademiîa nauk SSSR. Vsesoûznoe ėntomologicheskoe obshchestvo. Nauchno-populîarnaîa seriîa, vyp. 6.) 71 refs. Text in Russian. ***Title tr.:*** The reindeer-gadfly and its control.

This handbook deals first (p. 5–43) with the morphology and natural history of this insect, its enemies, normal fluctuations in its numbers, and factors responsible for them. The second part covers damage caused by the gadfly and its extent; general principles in combatting the pest; destroying the maggots; methods of combatting the imagos: killing them on lures (skins), zootechnical methods, utilizing shady covers, modern insecticides (DDT), precautions in working with the latter, etc. A final chapter (p. 90–96) deals with estimates on the number of insects, of attacks per time-unit, wind conditions and attacks, etc.

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49903. BREEV, KONSTANTIN ALEKSANDROVICH, *and* **Z. F. KARAZEEVA.** Materialy po biologii kozhnogo ovoda *Oedemagena tarandi* L. 3; nablûdeniîa nad kukolkami i vzroslymi ovodami. (Parazitologicheskiĭ sbornik, 1957. t. 17, p. 199–228, illus. tables) 15 refs. Text in Russian. ***Title tr.:*** Materials on the biology of the gadfly *Oedemagena tarandi* L. 3; observations on pupae and adult insects.

Presents (in sequence to No. 33718, 33719) information on pupation period under various environmental conditions, including different temperatures; survival rate under these conditions; ecdysis; proportion of sexes; sexual development; life span and egg production under various experimental conditions; effect of temperature and humidity; biology of oviposition (on reindeer); physiology of attacking reindeer; etc.

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49904. BREHM, G. Zur Pathogenese der Kälteurtikaria. (Dermatologische Wochenschrift, Sept. 1957. Bd. 136, Heft 38, p. 1020–22, illus., table.) 13 refs. Text in German. ***Title tr.:*** The pathogenesis of cold urticaria.

Report on investigation and experiments with three patients. Static cold and moving air (wind) were evaluated. Two factors, it is concluded, may be responsible for this syndrome: cold and pressure. ***Copy seen:*** DNLM.

49905. BREITENSTEIN, CH. Dieselelektrischer Antrieb für Polareisbrecher auf dem Prüfstand. (Schiff und Hafen, Nov. 1958. Jahrg, 10, Heft 11, p. 931–32, illus.) Text in German. ***Title tr.:*** Testing the diesel-electric drive of a polar ice-breaker.

Notes and illustrates test-construction of part of machinery to be installed on the 22,000 hp. Soviet ice-breakers under construction at Sandvikens Skeppsdocka, Helsinki. ***Copy seen:*** DLC.

BREĬTFUS, LEONID L'VOVICH, 1864-1950, *see* Vize, V. IÛ. Neskol'ko . . . gidrologii Karskogo morîa. *1931.* No. 55841.

49906. BREITUNG, A. J. Native roses of Canada. (Naturaliste canadien, May 1952. v. 79, no. 5, p. 184–88.)

Presents a key, and describes 12 species occurring in Canada, two in the far North, *Rosa acicularis* (from Labrador to Alaska) and *R. woodsii* in Yukon Territory and Mackenzie District.

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49907. BRENDEL, WALTER, *and others.* Der Kreislauf in Hypothermie; die einzelnen Kreislaufgrössen und ihre Koordination während der Auskühlung. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 266, Heft 4, p. 341–56 illus. tables.) 38 refs. Text in German. *Other authors:* C. Albers *and* W. Usinger. ***Title tr.:*** Circulation in hypothermia; the individual circulation perimeters and their coordination during hypothermia.

A study of O_2-consumption and of circulation in dogs made hypothermic to 20° C. The individual circulation values were determined not only by the drop in body temperature but also by narcosis-produced and other nervous factors. If these additional factors are disregarded, very similar temperature gradients are obtained for O_2-consumption, pulse frequency and for volume per minute.

Relations and correlations between the three latter, and some other perimeters, are also established. ***Copy seen:*** DLC.

49908. BRENDEL, WALTER, *and others.* Kreislaufregulation in tiefer Hypothermie. (Pflügers Archiv für die gesamte Physiologie, Dec. 1957. Bd. 266, Heft 1, p. 45–46.) Text in German. *Other authors:* C. Albers *and* W. Usinger. ***Title tr.:*** Regulation of circulation in deep hypothermia.

O_2, arterial pressure, heart frequency and volume were studied in two groups of dogs with fibrillation or asystole produced by different administration of the narcotic. Each group showed a different course of circulation, O_2-consumption, etc., and showed different cardiac and circulatory reflexes to extraneous stimuli. ***Copy seen:*** DLC.

49909. BRENDEL, WALTER, *and others.* Die Reaktivität des Kreislaufs in Hypothermie; ein Beitrag zur Frage des Narkoseeinflusses. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 266, Heft 4, p. 357–72, illus. tables.) 37 refs. Text in German. *Other authors:* C. Albers *and* W. Usinger. ***Title tr.:*** The reactivity of circulation during hypothermia; a contribution to the problem of narcosis influence.

A study of circulatory reactivity and adaptation as dependent on depth of narcosis. Dogs made hypothermic to 20° C. were used. Even at 25–20° C., the various circulatory reflexes examined remained active. Depth of narcosis had a significant influence upon the absolute level of the circulatory values and upon their temperature course during hypothermia. The kind of death from cold also depended on depth of narcosis, shallow narcosis producing ventricular fibrillation, deep narcosis-asystole. ***Copy seen:*** DLC.

BRENDEL, WALTER, *see also* Albers, C., *and others.* Blutgase in Hypothermie . . . *1958.* No. 49224.

BRENDEL, WALTER, *see also* Albers, C., *and others.* Der intrapulmonale Gasaustausch . . . *1957.* No. 49225.

BRENDEL, WALTER, *see also* Albers, C., *and others.* Der intrapulmonale Gasaustausch . . . *1958.* No. 49226.

49910. BRESLAU, ROGER C. Hypervitaminosis A. (Archives of pediatrics 1957. v. 74, no. 4, p. 139–52; no. 5, p. 178–96.) 76 refs.

A comprehensive review of the subject with sections on clinical symptoms; history and literature; differential diagnostic features; acute vitamin A toxicity; hypervitaminosis A in pregnancy; etc. It is suggested that the disorder is much more wide-spread than hitherto believed and brief leads to its diagnosis and prevention are given. ***Copy seen:*** DNLM.

49911. BRESLAVETS, LIDIIA PETROVNA, 1882– . Znachenie poliploidi v vidoobrazovanii rasteniĭ. (Moskovskoe obshchestvo ispytateleĭ prirody. Biŭlleten', otd. biol. n. ser. July–Aug. 1957. t. 62, no. 4, p. 95–103, 3 tables.) 4 refs. Text in Russian. Summary in English ***Title tr.:*** The importance of polyploidy in the formation of plant species.

Study of autopolyploidy preceded by a classification of polyploids and the methods of their development and the difficulties arising in the classifications of polyploid forms. In autoploidy, the basic cause of change in the plant organism is increased "genom" or an augmented size of the cell. This involves new physiological properties, new norms of reaction, and different areas of distribution due to incompatibility and sterility. Species studied include *Empetrum nigrum, E. hermaphroditum* (Arctic), *Rumex tenuifolius* (northern Scandinavia and northern Siberia), *R. acetosella stricta* (Scandinavia, Alaska), *R. graminifolius* (Alaska). The importance of autoploidy in the formation of species and their distribution is stressed. ***Copy seen:*** DLC.

49912. BREWER, A. W. Ozone concentration measurements from an aircraft in N. Norway. (Royal Meteorological Society. Quarterly journal, Apr. 1957. v. 83, no. 356, p. 266–68, 4 graphs.) ref.

Results of measurements of vertical distribution of ozone and water vapor, made at Bardufoss (68° N. 18° E.) and at Tromsø (69°34′ N. 18°35′ E.), Apr.–July 1955, part of a general program to determine world-wide distribution of ozone. Meteorological equipment (listed) was installed in a Royal Norwegian Air Force Vampire trainer. First flights were failures, but four (June 24–July 12, 1955) successful flights gave results described and shown on graphs. All ascents showed a large increase in ozone concentration at the tropopause. Besides winter time ozone measurements, simultaneous temperature and humidity

measurements are recommended for additional knowledge of the tropopause.

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49913. BREWER, MAX C. Some results of geothermal investigations of permafrost in Northern Alaska. (American Geophysical Union. Transactions, Feb. 1958. v. 39, no. 1, p. 19–26, table, map, diagrs., graphs.)

Presents paper previously (1955) reported in abstract which was listed as No. 38986. ***Copy seen:*** DLC.

49914. BREWER, MAX C. The thermal regime of an arctic lake. (American Geophysical Union. Transactions, Apr. 1958. v. 39, no. 2, p. 278–84, diagrs., graphs.) 6 refs.

Presents results of investigations 1951–55 by the U.S. Geological Survey, of Imikpuk Lake (approx. 71°20′ N. 156°40′ W.), North Alaska, typical of lakes in the coastal plain. Those in the Barrow area have average depth of 2–3 or 6–9 ft. The water is in an isothermal state during the ice-free period, late June–Sept. A two-cycle heating and cooling process takes place after the lake is frozen over; heat radiation through the ice is terminated when a thin cover of snow has accumulated; bottom sediments cause the second temperature rise, the magnitude of which depends on water depth and distance from the shore. Permafrost underlies the shallow lakes; an unfrozen basin of several hundred ft. depth may extend beneath the deeper ones. ***Copy seen:*** DLC.

BREWER, MAX C., *see also* Collins, F.R., *and others.* Test wells, Umiat . . . *1958.* No. 50308.

BREWSTER, WILLIAM R., Jr., *see* Henneman, D. H., *and others.* Immediate metabolic response . . . hypothermia . . . man. *1958.* No. 51684.

BRICK, R. M., *see* Smith, R. L., *and others.* Mechanical properties of high-purity iron-carbon alloys . . . *1952.* No. 55000.

BRIESEMEISTER, WILLIAM J., *see* American Geographical Society. Geographic study of mountain glaciation. *1958.* No. 49276.

49915. BRIGGS, WINSLOW R. Some plants of Mount McKinley National Park, McGonogall Mountain area. (Rhodora, Aug. 1953. v. 55, no. 656, p. 245–52.) 4 refs.

Contains description of the area (foothills to the north of Mt. McKinley and just north of the Muldrow Glacier), and a list of over seventy species of vascular plants with notes on habitats. Specimens were collected by the author and T. Scudder in the summer of 1952, during a Harvard Mountaineering Club expedition into the Alaska Range. ***Copy seen:*** DA.

49916. BRILL, RUDOLF FRIEDRICH, 1899– . Structure of ice. Wilmette, Ill., July 1957. iv, 67 p. illus., graphs, tables (U.S. Army. Corps of Engineers. Snow Ice and Permafrost Research Establishment. SIPRE report 33.) 42 refs.

"The procedures for growing samples of ice used in the experiments are described. Experiments using the method of bending bars of ice to determine their viscoelastic behavior were made. Tests were conducted on single crystals with various orientations, polycrystalline samples, and mixed crystals of ice-NH_4F. These tests showed that the hexagonal base plane is the gliding plane at plastic deformation and that Becker's equation can be used for the description of the viscoelastic creep of ice. Studies show that amounts up to 10% of NH_4F, may be absorbed in the ice lattice. Dielectric studies indicate that the relaxation time τ_0 decreases markedly with increasing concentration of NH_4F, down to a minimum value corresponding to some concentration between 0.1 and 1% NH_4F, and then increases again with further increasing concentration. The dc resistivity of ice-NH_4F increased with the concentration of NH_4F. Investigations were also carried out using X-ray diffraction techniques to determine the thermal amplitudes of H_2O molecules as well as of hydrogen atoms in ice. The molecular vibration can be described by a characteristic temperature of θ—220K."

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49917. BRINCH, VIGGO. Minedrift i Østgrønland. (Ingeniøren, teknisk ugeblad, Apr. 6, 1957. årg. 1, nr. 1, p. 8–10, illus.) Text in Danish. ***Title tr.:*** Mining in East Greenland.

Describes briefly the lead and zinc deposits at Mestersvig, mining and flotation procedures, and day-to-day life among the (85) personnel. Of varied composition, the deposits are estimated to contain about one-half million tons of ore with, on average, 10% lead and 8% zinc. About 35 tons of 80% lead concentrate and 35 tons of 62% zinc concen-

trate is produced daily by two shifts. Both the flotation plant and the electric power station are built completely into the mountain; the outer entrances to the mines are rarely blocked by snow, forcing a halt in production. ***Copy seen:*** DLC.

49918. BRINGER, KARL GÖRAN. Fågellivet på Vakketjåkko, ett sydväxtberg norrom Torneträsk. (Fauna och flora 1957, häfte 1–2, p. 34–48, illus.) Text in Swedish. 23 refs. ***Title tr.:*** Bird life on Vakketjåkko, a mountain north of Torneträsk with rich vegetation on its south slope.

Some 60 species were observed in summers 1953–1956. But conditions which have produced an unusually rich vegetation on this mountain (also called Ortovaare, 993 m. above sea level) seem not to have influenced bird life which is like that in surrounding areas.

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BRINGMAN, E. W., *see* Zarrow, M. X., *&* E. W. Bringman. Decreased sensitivity . . . eosinophil depletion test . . . low . . . temperature. *1957.* No. 56163.

BRINK, NILS, *see* Wiklander, L., *and others.* Studies on gyttja soils . . . *1950.* No. 56035.

49919. BRINK, PER. On a collection of stoneflies (Plecoptera) from Newfoundland and Labrador. (Opuscula entomologica, 1958. bd. 23, häfte 1–2, p. 47–58, text map.) 23 refs.

Ten stoneflies from Newfoundland and 17 from southern Labrador were collected by a team of C. H. Lindroth, E. Palmén and R. Tuomikoski. They are enumerated with distributional and ecological data. The faunal connection between Europe and North America is discussed, together with recent data deriving from human transport.

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BRINSMADE, JOHN C., *see* Taylor, R. L., *and others.* Field crops for Alaska. *1958.* No. 55353.

49920. *BRISTOL QUARTERLY.* Winterization trials in Canada. (Bristol quarterly, Summer 1957. v. 2, no. 5, p. 115–17, illus.)

Cold weather ground and flight tests on the Bristol Britannia aircraft conducted at Winnipeg during Feb. 1957 are described briefly. Ground tests included control surfaces, effectiveness of cabin heating, engine starting, under-carriage retraction tests, and nosewheel steering on icy runways. Ground and take-off handling was checked in high wind and blowing snow. Flight tests were made at temperatures down to −57.5° C. The tests demonstrated the operational suitability of the aircraft for the unfavorable conditions in the Arctic.

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49921. BRISTOW, JOHN, *and* **A. HINTON,** *Editors.* Great true adventures in ice and snow. London, Arco Publications Ltd., 1957. 352 p.

Contains 26 extracts from narratives of polar travel, 17 of them on the Arctic. They are drawn from Franklin (cf. No. 5194) Kane (No. 8373) and others of the mid-19th century to the 1930's: the first Russian drifting station North Pole.

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BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, *see* Smith, A. U. Life at low temperatures. *1958.* No. 54986.

49922. BRITISH GLACIOLOGICAL SOCIETY. Field work, I.G.Y. (Ice, July 1958. no. 2, p. 2–4, 7–8.)

Selected notes on expeditions, etc. include Canadian Operation Hazen, 1957–58 in northern Ellesmere; American Geographical Society projects; photogrammetric studies of selected Alaskan glaciers; detailed study of McCall Glacier, Brooks Range; work of SIPRE in Greenland; of the Juneau Ice Field Research Project; and of the arctic drifting stations; Soviet plan for five arctic glaciological stations; work done in 1957 by the Expédition Glaciologique Internationale au Groenland, led by P.-É. Victor; Arctic Sea Ice Conference, Feb. 25–27, 1958, at Easton, Maryland. ***Copy seen:*** DGS.

BRITISH GLACIOLOGICAL SOCIETY, *see also Ice. 1958 in progress.* No. 51908.

49923. BRITTON, MAX EDWIN, 1912– . A tundra landscape. Washington, D.C., Office of Naval Research, 1958. 13 p. illus., maps. Reprinted from Research reviews, Jan. 1958.

Tundra as observed in the vicinity of Pt. Barrow, northern Alaska, has an overall uniformity, but variety in detail. Its landscape features: subdued relief, standing water, patterned ground, and vegetation cover of low-growing grasses and grass-like plants are described. Geomorphic processes causing develop-

ment and modification of polygonally patterned ground are explained, with discussion of the interrelationships between these processes and the plant populations. Photos of patterned ground and thaw lakes are included.

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49924. BRITTON, MAX EDWIN, 1912– . Vegetation of the arctic tundra. (Biology Colloquium. 1957. v. 18, p. 26-61, illus., maps.) 63 refs.

Discusses factors shaping tundra vegetation and describes representative types found on the Alaska Arctic Slope along a transect from the front of the Brooks Range to Umiat in the Foothills Province and Point Barrow on the Coastal Plain. Special attention is given to processes peculiar to the high latitude such as the formation and development of ice-wedge polygons and thaw-lake cycles and their effects on vegetation. The author concludes that there is great variety in tundra landscapes and the factors shaping them. ***Copy seen:*** DLC.

49925. BRITTON, NATHANIEL LORD, 1859–1934, *and* **J. N. ROSE.** New or noteworthy North American Crassulaceae. (New York Botanical Garden. Bulletin, Nov. 11, 1903, v. 3, no. 9, p. 1–45.)

Describes some hundred and fifty species, the majority new, among them: *Rhodiola alaskana* n. sp. (type from Misty Harbor, Nagai Island, Alaska, C. H. Townsend, July 22, 1893) and *R. integrifolia* also from Alaska.

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BRITTON, NATHANIEL LORD, 1859–1934, *see also* Hollick, C. A., *and* N. L. Britton. *Cerastium arvense* . . . 1887. No. 51773.

49926. BROBAK, KARL. Fiske og fangst. Oslo, Fabritius, 1956. 163 p. illus., diagrs., maps, table. Text in Norwegian. ***Title tr.:*** Fishing and hunting.

Textbook for use in government fishery schools on Norwegian sea fishing and hunting activities. The areas concerned are the shallow seas from Baffin Bay eastward to Novaya Zemlya, the coasts of Norway and northeastern North America and the northern Atlantic islands. Seasons of activity are outlined; types of vessels, techniques of setting out and handling the variety of equipment, care of the catch, etc., are described and illustrated; general regulations are included. Over 20 species of fish, Norwegian shell-fish, whales, and seals are discussed. ***Copy seen:*** DLC.

49927. BROCH, HJALMAR, 1882– . Einige Stylasteriden (Hydrokorallen) der Okhotskischen und Japanischen See. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa morei SSSR, 1935, vyp. 22, p. 58–60, illus.) Text in German. Summary in Russian. ***Title tr.:*** Some Stylasterida (Hydrocorals) of the Okhotsk and Japanese Sea.

A list of six species of these corals with identification key and notes on location, ecology, etc. One form *Stylaster* (*Allopora*) *norvegicus* is also recorded from the North Atlantic. ***Copy seen:*** DLC.

49928. BROCH, HJALMAR, 1882– . Korallovye polipy, Anthozoa, preimushchestvenno iz tikho-okeanskikh vod, sobrannye sovetskimi ėkspeditsiiami v 1930–1932 g. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa morei SSSR, 1937. vyp. 23, p. 5-22, illus.) 26 refs. Text in Russian and English. ***Title tr.:*** Anthozoa, mainly from Pacific waters, collected by Soviet expeditions during 1930–1932.

Contains information on earlier studies of anthozoans from these areas, followed by description of 20 species collected in the North Pacific including the Bering and Okhotsk Seas. Morphology and anatomy, location and substrate, taxonomic position, geographic distribution, etc., are considered. ***Copy seen:*** DLC.

49929. BROCH, HJALMAR, 1882– . Oktokorallen russischer Expeditionen im Polarmeer während der Jahre 1929–1935. Oslo, H. Aschehoug & Co., 1956. 18 p. 2 text maps. (Norske videnskapsakademi, Oslo. I. Matematisk-naturvidenskapelig klasse. Avhandlinger, 1956. no. 4.) 11 refs. Text in German. ***Title tr.:*** Octocorals from the Arctic Ocean collected by Soviet expeditions, 1929–1935.

A German original which was translated into Russian and published in 1955, No. 38995 of *Arctic Bibliography.*

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49930. BROCH, HJALMAR, 1882– . Über einige geographisch interessante Fundstellen von Alcyonarien und Hydrokorallen im nördlichen Stillen Ozean. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa morei SSSR, 1933. vyp. 17, p. 81–86, illus.) 7 refs. Text in German. Summary in

Russian. ***Title tr.:*** Some geographically interesting locations of alcyonarians and hydrocorals in the North Pacific.

Notes on finds in new areas, one in the Okhotsk Sea, for two alcyonarians, with records of temperature and salinity. Also description of a new species, *Stylaster* (*Allopora*) *boreopacificus*, n. sp. with discussion of related species, taxonomic position, etc. ***Copy seen:*** DLC.

49931. BROCHU, MICHEL, *and* **J. R. MACKAY.** Les lacs orientés de la région de la Baie de Liverpool; commentaires sur un article de J. R. Mackay. (Revue canadienne de géographie, Apr.–Sept. 1957. v. 11, no. 2–3, p. 175–78) Ref. Text in French and English. ***Title tr.:*** Oriented lakes of the Liverpool Bay region; commentaries on an article by J. R. Mackay.

Apropos No. 46537, Brochu challenges Mackay's wind theory, suggests that these lakes are due to melting of pingo or glacial ice (i.e. thermokarst features) and that their orientation is a relic feature of buried glacier ice or of ice action. Mackay in turn deals (in English) with distribution, size and shape of lakes and pingos, and other factors to demonstrate Brochu's view untenable. ***Copy seen:*** DGS.

49932. BROCHU, MICHEL. Pendage et directions tectoniques au Canada et leur signification. (Zeitschrift für Geomorphologie, Oct. 1957. Bd. 1, Heft 2, p. 143–68, 2 text maps, graphs, 11 tables.) Approx. 275 refs. Text in French. Summaries in English and German. ***Title tr.:*** Dip and tectonic directions in Canada and their meaning.

Examination of the maps of the eastern Canadian Shield yielded a median value of 60° for dip of the Precambrian rocks (*infra*). Statistical study of the three great folded systems of Canada, including arctic and subarctic regions, was made (Precambrian folds of the Canadian Shield, the Appalachians, the Rockies) and the value of 60° confirmed for the entire Shield. These high dip angles indicate reduction of the undisturbed sediments by as much as 50%. Center of the orogeny appears to have been the Arctic Basin. Dip angles of the Appalachians and Rockies are generally 30°–50° indicating reduction of original area by at least 15–17%. Tables give median values of dip angles and regional distribution of dip directions for northern Quebec-Labrador, Northwest Territories, Yukon. ***Copy seen:*** DGS.

49933. BROCHU, MICHEL. Pendages du Precambrien sur l'est du Bouclier canadien. (Geologie en Mijnbouw, n. s., July 1955. v. 17, no. 7, p. 188–91, graph, 2 tables.) 33 refs. Text in French. ***Title tr.:*** Dips of the Precambrian on the east of the Canadian Shield.

Presents statistical analysis of more than 3000 measurements obtained from 31 map sheets (mostly scale 1 in.=1 mi.) covering the southern half of Quebec Province, excluding Labrador. Tables and graph summarize values computed for Temiskaming, Keewatin and Greenville formations; a mean value of 60° found for the Shield in Quebec, is compared with 69° found by Cailleux for the entire Precambrian. ***Copy seen:*** DLC.

49934. BRODIE, HUGH R., *and others.* Heat production in newborn infants under normal and hypoxic conditions. (Journal of physiology, Aug. 1957. v. 138, no. 1, p. 156–63, illus., table.) 10 refs. *Other authors:* K. W. Cross *and* T. R. Lomer.

Account of experiments with two groups of babies, one breathing air, the other 15° oxygen. Body and environmental temperature records were used to discover thermal effects due to hypoxia. A reduction of O_2-intake caused a significant drop in body heat production.

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49935. BRODSKIĬ, KONSTANTIN ABRAMOVICH. Fauna veslonogikh rachkov, Calanoida, i zoogeograficheskoe raĭonirovanie severnoĭ chasti Tikhogo okeana i sopredel'nykh vod. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1957. 222 p. illus., tables, maps. About 300 refs. Text in Russian. ***Title tr.:*** The fauna of copepods, Calanoidea, and the zoogeographic division of the northern part of the Pacific Ocean and the adjacent seas.

The families and their taxa as well as their general distribution are discussed (p. 16–34) following an introductory chapter on aim, material and methods of this study. A general analysis of distribution, theoretical considerations, earlier studies, etc., are presented, followed (p. 53–106) by a description of species-composition, distribution and grouping of these crustaceans in the upper 50 m. of the sea, including the Okhotsk, Bering, Chukchi, East-Siberian and Arctic Seas. Seasonal changes in grouping, vertical distribution, abyssal calanids, vertical zones and the character of calanids in the different seas and their

origins are discussed. Value for fisheries, etc., is also considered.

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49936. BRØGGER, ANTON WILHELM, 1884– , *and* H. SHETELIG. Vikingeskipene; deres forgjengere og etterfølgere. Oslo, Dreyers forlag, 1950. 296 p. illus., plates. Text in Norwegian. ***Title tr.:*** The Viking ships; their ancestry and evolution. An English translation by Katherine John, slightly revised and abridged, but with many additional illus., was pub. in 1953 (copy at LC).

Popular account of Norse vessels, their origin and development through the Middle Ages. The skin boat, log boat (dugout) and Norwegian clinkerbuilt plank boat are described (p. 14–42) and the Viking ship traced back to the arctic skin boat, specifically the Eskimo women's boat, the umiak. ***Copy seen:*** DLC.

49937. BRØNDEGAARD, V. J. Folkloristiske reliktplanter. (Naturens verden, 1955. årg. 39, hefte 5–6, p. 143–48). Text in Danish. ***Title tr.:*** Folkloristic relict plants.

Common wild-growing edible plants are discussed. Present-day Eskimos, Chukchis, Lapps and North Norwegians use various berries, sorrel, and other greens. These natural foods are often high in vitamin and trace mineral content.

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49938. BRØNDSTED, H. Forslaget til en børnelov for Grønland. (Atuagagdliutit: Grønlandsposten, May 9, 23, 1957. Ukiut 97–iat, nr. 9, p. 6–9, illus.; nr. 10, p. 6–7, +, illus.) Text in Danish and Eskimo. ***Title tr.:*** The draft of a children's law in Greenland.

Contains explanations of the draft published in Denmark, Ministeriet for Grønland: Beretninger vedrørende Grønland, 1956, nr. 2, Grønlands landsråds forhandlinger 1956, appendix 16. Comparisons are made with the present law.

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49939. BRØNDUM, L. Der må svares sagligt på direkte angreb på kirken fra sekterne. (Atuagagdliutit: Grønlandsposten, Sept. 26, 1958. Ukiut 98-iat, nr. 20, p. 10, +, illus.) Text in Danish. ***Title tr.:*** Direct attacks on the church by the sects should be answered objectively.

Discusses problems facing the church in Greenland, where author, director of the theological seminary in Denmark, spent two months in 1958: revision of the catechists' status, attitude of the Roman Catholic Church towards missionary activity, the need for religious welfare workers, also a special minister for the Danes on duty there. ***Copy seen:*** DLC.

49940. BRØNDSTED, JOHANNES, 1890– . Det lukkede land, essays og rids. København, Gyldendal, 1948. 117. p. illus., maps. Text in Danish. ***Title tr.:*** The closed land; essays and sketches.

Contains 12 essays, three of arctic interest: on Vinland, its discovery and location (p. 35–47); north Norwegian huntsmen (p. 72–81), a review of archeological studies of northern Norway, contrasting the stone age hunters and the conservative agriculturists. A sketch of circumpolar culture (p. 82–87) stresses similarities betwen arctic native cultures and the importance of archeological studies in northern Siberia.

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49941. BROĬDO, SOLOMON MOISEEVICH. Za 62-I parallel'ю̂. [Irkutsk] Irkutskoe knizhnoe izd-vo, 1957. 183 p. illus., ports. Text in Russian. ***Title tr.:*** Beyond the 62d parallel.

Journalist's sketches of the natural conditions, population, exploration and development in the region of the upper Lena, Vilyuy, Nizhnyaya Tunguska ("Ugryum-Reka"), Podkamennaya Tunguska (Katanga) and Angara Rivers, an area divided administratively between Irkutsk and Krasnoyarsk Provinces and Yakut A.S.S.R. Hunting, fur trade and reindeer breeding in the Tungus (Evenki) collective farms are described with notes on a hospital and its personnel, construction of a highway from Podvoloshino on the Nizhnyaya Tunguska across the watershed to Chekuysk on the Lena, etc. (p. 68–96). Construction of railroad between Ust'-Kut on the Lena and Bratsk on the Angara (p. 130–54); search for diamonds in the Nizhnyaya Tunguska and Vilyuy basins (p. 156–82) are reported. The leading role of M. M. Odintsov, the head of Tungusskaîa Expedition in 1947, in discovery of diamonds in Yakutia is stressed.

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49942. BRONSON, E. H. Foundations for mill construction on clay and permafrost. (Mining engineering, Nov. 1957. v. 9, p. 1262–67, table, graphs.) 6 refs.

Construction methods and soil test procedures are described, from experience with structural problems of the Malartic Gold Fields Ltd. mining plant in Northern Quebec (approx. 48°10′ N. 78° W.) where ore-bearing country rock is covered by strata of clay, sand and silt to a depth varying to 40 ft. Soil investigations must be done prior to foundation design, and preliminary reconnaissance should be completed by the autumn preceding construction. Depth of the active layer is tested by rodding and auger boring. Permafrost islands of limited area consisting of silt or clay must be removed by stripping the overburden, melting with high-pressure steam, or blasting and scraping. Temporary buildings for light loads can be floated on the stabilized soil over continuous permafrost: the natural surface cover, undisturbed but increased by several ft. of sand or other insulation, topped with timber pads or mud sills, will carry the structure. Permanent buildings or heavy concentrated loads require piling or a concrete foundation. Wood piles are generally used because of their poor thermal conductivity. The piles are installed in holes produced by a high-pressure steam jet and allowed to freeze solid. Satisfactory pile depth is considered to be 1.5 times that of the active layer. The piles usually have an enlarged section at the bottom end, which is held rigidly in the refrozen permafrost and prevents any subsequent heaving. —From SIPRE. ***Copy seen:*** DLC.

BROOKE, RICHARD, *see* Simpson C.J.W., *and others.* North ice . . . *1957.* No. 54901.

BROOKS, ARTHUR M., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

BROOKS, CHANDLER McC., *see* Suda, I., *and others.* Analysis . . . hypothermia on central nervous system responses. *1957.* 55211.

49943. BROOKS, DOUGLAS L. The distribution of carbon dioxide cooling in the lower stratosphere. (Journal of meteorology, Apr. 1958. v. 15, no. 2, p. 210–19, diagrs., tables.) 18 refs.

Contains detailed explanation and computations, and summary, of one aspect of heating and cooling of the stratosphere. Stratosphere is believed to be the scene of large changes in temperature and circulation, but physical explanations for observed patterns remain inadequate. Two striking features of the arctic stratosphere the "monsoon" circulation observed bebetween 20 and 30 km., and the appearance of large perturbations on the strong zonal flow in winter, need fuller theoretical explanation; they are usually attributed to changes in radiational heating and cooling, produced in and just below the ozone layer by the seasonal movement of the sun. The stratosphere is assumed to be approximately in radiative equilibrium; but study of the sources of radiational heat gain and loss discloses need for examination of the radiation balance, with special reference to carbon dioxide. The arctic stratosphere below 30 km. is found in all seasons a region of net radiational deficit. Even in summer a deficit exists near the Pole. Carbon dioxide cooling contributes notably to the radiational rates of temperature change below about 40 to 60 mb.; it also determines the rates of change at all heights north of the boundary of polar night. In fall and winter the temperature change gradients are of a magnitude to favor maximum local temperature gradients at the polar night boundary above the 20 mb. level, a possible source for perturbations observed in this region.

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49944. BROOKS, JOHN LANGDON, 1920- . The systematics of North American *Daphnia.* New Haven, Yale Univ. Press, 1957. 180 p. 65 illus., 61 plates incl. 6 maps, 7 tables. (Connecticut Academy of Arts & Sciences. Memoirs, v. 13.) 79 refs.

Contains a monographic treatment of the cladoceran subgenus *Daphnia,* with a general discussion of the systematic and zoogeographic findings, comparison with previous classifications, a key to North American species and descriptions of fifteen. The form and variation of each species is recorded in camera lucida drawings (over 300 in all). A synonymy, notes on taxonomic history, a differential diagnosis to supplement the key, and pertinent ecological and distributional data (six maps) are also given. At least five of the species occur in all sections of Alaska, northern Canada and the Aleutians; two species are recorded from Greenland. Ten regions are indicated into which North America can be divided on the basis of *Daphnia* systematics. A list of localities (except New England) and an index of names, are appended. ***Copy seen:*** DLC.

BROOKS, PATRICIA, *see* Seibert, R. A., *and* P. Brooks. The biochemistry of tissue . . . cold . . . muscle protein . . . *1957*. No. 54668.

49945. BROOKS, SHELDON. University Peak, Alaska; defeat and success. (*In:* Mountain world, 1956/57. p. 49–54, 2 plates.)

Describes unsuccessful attempt made on this 15,030 ft. peak (61°20′ N. 141°48′ W.) in the St. Elias Range by a seven-man party led by P. Gerstmann, July 1954, and a successful ascent made in June 1955 by the six-man John McCall Memorial Expedition led by K. Hart.

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BROSGE, WILLIAM P., *see* Gryc, G., *and others*. Geology of northeastern Alaska. *1958*. No. 51410.

49946. BROTHERUS, VIKTOR FERDINAND, 1849–1929. Botanische Wanderungen auf der Halbinsel Kola. (Botanisches Centralblatt, 1886. Bd. 26, p. 169–72, 200–203, 233–38, 284–88.) Text in German. ***Title tr.:*** Botanical excursions on the Kola Peninsula.

Description of journey in the summer of 1885 from Helsinki through Uleåborg and Kuusamo to the White Sea at Kandalaksha, with notes on terrain, weather, plants and mosses encountered. The mountains around Kandalaksha were also visited and their flora and plant associations are described, as are those of the coastal strips explored.

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BROTHERUS, VIKTOR FERDINAND, 1849–1929, *see also* Rauhala, A. *Puccinia veratri . . . 1953*. No. 54234.

BROWN, CLEMENT R., *see* Ayton, M. W., *and others*. Cold weather operation of Diesel . . . *1958*. No. 49454.

49947. BROWN, F. M. Itineraries of the Wheeler survey naturalists 1871: Ferdinand Bischoff. (New York Entomological Society. Journal, Sept.–Dec. 1957. v. 65, no. 3–4, p. 219–34, 2 text maps.) 20 refs.

Brief sketch of his life and his collecting trip during 1865–1866 (14 months) in the Baranof Island area during the Western Union Telegraph Expedition. Subsequently he made another trip to the Asiatic side of Bering Strait with the telegraph party. In 1868 Bischoff was again in Alaska, this time for the Smithsonian Institution. He spent a year in Kodiak Island, and in 1869 shipped out eight boxes of zoological collections.

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49948. BROWN, G. M., *and others*. Pyroxenes from the early and middle stages of fractionation of the Skaergaard intrusion, East Greenland. (Mineralogical magazine, Sept. 1957. v. 31, no. 238, p. 511–43, illus., diagrs., tables.) 25 refs. *Other authors:* E. A. Vincent, *and* P. E. Brown.

Contains results of study of calcium-rich and calcium-poor pyroxenes, collected on the British East Greenland Geological Expedition, 1953. These coexisting pyroxenes were separated from the gabbros and ferro-gabbros and chemically analyzed; 13 analyses (nine new), together with optical properties, are presented. Trends of crystallization, subsolidus exsolution and inversion textures are examined. ***Copy seen:*** DGS.

49949. BROWN, J. H., *and* **E. E. HOWICK.** Physical measurements of sea ice. San Diego, Calif., Feb. 11, 1958. 23 p., diagrs., tables. (U.S. Navy Electronics Laboratory. Research and development report 825.) 16 refs.

Reports results of a continuing study of such sea-ice properties as density, salinity, air-bubble distribution, size and distribution of crystal grains, elastic moduli. Observations were made at two sites in Bering Sea: 60°20′ N. 168°38′ W. in Feb. and Mar. 1954, and at 63°05′ N. 166°09′ W. in Mar. and Apr., 1955, from or near USCGC *Northwind*. The results, it is stressed, are "point" data, from a given point in a relatively short time; equipment layout is shown on diagram. Recommendations for further study include the variation of all parameters over one entire ice season at one location, and continuous measurements over a complete ice season of four parameters.

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49950. BROWN, MALCOLM, 1916– . Vascular physiology of the Eskimo. (Revue canadienne de biologie, June 1957. v. 16, no. 2, p. 279–92, table.) 43 refs.

A review of investigations on the problem of acclimation in Eskimos and white men. Vascular dynamics at 20° C. while at rest and during acute cold exposure are discussed and supplemented with a summary of metabolic studies. Skin and tissue temperature; insulation index; blood flow in hand and forearm,

pulse and blood pressure are described and the question of human acclimatization to cold discussed in the light of the findings. Experiments were carried out on Eskimos at Coral Harbour, Southampton Island, summer 1949, 1950, 1954, and on control group (students) at Kingston, Ontario in fall, 1950, 1954.

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BROWN, MALCOLM, 1916– , *see also* Baugh, C. W., *and others.* Blood volumes of Eskimos and white men . . . 1958. No. 49581.

BROWN, P. E., *see* Brown, G. M., *and others.* Pyroxenes . . . *1957.* No. 49948.

49951. BROWN, R. J. E. Observations on break-up in the Mackenzie River and its delta in 1954. (Journal of glaciology, Oct. 1957. v. 3, no. 22, p. 133–41, 6 illus., 2 text maps, 2 graphs, table.) 3 refs.

Observations were made during the Aklavik Relocation Survey. The river and delta are ice-bound nearly eight months a year, with freeze-up and break-up approx. six weeks each. Mean daily January air temperature along the river are −23° C. at Waterways, Alta., −32° C. near Fort Good Hope, −29° C. on the delta. Ice conditions are reported for Apr. 15, and May 29–June 11 in the delta channels. Break-up starts at Great Slave Lake and progresses downstream, daily observations at settlements along the river, May 19–June 2, are given, and break-up in the delta is described.

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BROWN, RICHARD K., *see* Masoro, E. J., *and others.* Lipogenesis from carbohydrate . . . cold. *1957.* No. 53176.

49952. BROWN, S. G. Migrations of humpback whales. (Nature, June 22, 1957. v. 179, no. 4573, p. 1287.)

A review of observations and investigations on the migrations of *Megaptera novae-angliae* northbound and southbound from the Antarctic. Both the Southern as well as the Pacific Ocean are considered and out-of-season movements noted. Work of W. H. Dawbin in New Zealand waters is signalized.

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BROWN, THEODORE G., Jr., *see* Cotton, M. de V., *and* T. G. Brown. Effects of pressor amines and ouabain . . . hypothermia. *1957.* No. 50353.

49953. BROWN, WILLIAMSON JAMES, 1902– . Studies in the Scarabaeidae, I; Coleop. (Canadian entomologist, Dec. 1928. v. 60, no. 12, p. 301–307.)

Contains descriptions of seven new species and an old recognized one; *Aphodius albertanus* occurs in the Northwest Territories. ***Copy seen:*** DLC.

49954. BROWNE, IRENE M., *and* **A. P. CRARY.** The movement of ice in the Arctic Ocean. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 191–208, 7 text maps, 11 graphs, 2 tables.) 8 refs.

"Ice movement and governing factors are examined in detail on the basis of observations at T–3, May 1952–Sept. 1955, and theoretical considerations. The pattern of movement is clockwise and much of the ice pack north of Greenland, Canada, and Alaska may be caught in a closed orbit. Near the North Pole the movement is either toward the Atlantic or back into another orbit. The time required for a complete movement of ice across the ocean north of Siberia from the Laptev Sea to the Greenland Straits appears to take about three yrs., while that for a complete cycle of Alaska and Canada can vary from 4–10 yrs., depending on the orbit. The causes for ice movements are atmospheric circulation, which acts by virtue of the wind stresses on the rough ice surface, and ocean circulation beneath the ice. The movement of T–3 in the higher latitudes is greater in proportion to winds than that nearer the coast of Ellesmere Island, which may be due to the effect of the movement of the ice island itself in the region of more loosely packed ice. The general scattering of T–3 data can be traced to convergence and divergence of wind systems and resulting accumulation of pressures, which are transmitted through the ice to affect local conditions."—SIPRE.

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49955. BROWNING, J. C. Quebec mining review. (Canadian mining journal. Feb. 1958. v. 79, no. 2, p. 120–23, illus., text map).

Annual survey stresses expansion in iron ore and asbestos in 1957; production increased, and aggregate value of all minerals reached a new record, despite falling prices; exploration of deposits west of Ungava Bay, decline in gold production, expected increase in titanium, etc., are noted. Map shows nine areas being mined or explored.

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49956. BRUCKNER, I., *and others.* The influence of provoked hypothermia on anaphylactic shock. (Rumanian medical review, Jan.–Mar. 1957. v. 1, no. 1, p. 26.) "From: Fiziologia Normalasi Patologica, no. 2, 1956." *Other authors:* G. Moldoveanu *and* M. Corneanu.

Account of experiments with guinea pigs. Hypothermia proved to reduce the intensity of anaphylactic shock and to lower the death rate.

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49957. BRÜCK, KURT, *and others.* Hautdurchblutung und Thermoregulation bei neugeborenen Kindern. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 265, Heft 1, p. 55–65, illus.) 26 refs. Text in German. *Other authors:* M. Brück *and* H. Lemtis. ***Title tr.:*** Skin circulation and thermoregulation in newborn children.

Record of observations on 12 term and three premature infants made during the first 12 hours and on the fourth and eighth day of life. During the first hours of life, a maximal vasoconstriction was noted; a vasodilatation at that time could only be effected by raising the core temperature often above 38° C. Reflectory vasoconstriction and dilatation was easily elicited in the older children when rectal temperature was moderate (36.3 to 37.5° C.) but only in three out of 27 cases in those 12 hrs. old.

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49958. BRÜCK, KURT, *and others.* Thermoregulatorische Veränderungen des Energiestoffwechsels bei reifen Neugeborenen. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 267, Heft 4, p. 382–91, illus., table.) 17 refs. Text in German. *Other authors:* M. Brück *and* H. Lemtis. ***Title tr.:*** Thermoregulatory changes of energy metabolism in the mature newborn.

A study of metabolism and skin circulation in 11 infants. At an ambient temperature of 23° C. regulatory increase of metabolism was noted from the first hours of life, and reached nearly adult values on the seventh to ninth day. Comparison of metabolism with circulation showed no fundamental difference from conditions in grown-ups; quantitative differences are attributable to unfavorable surface-volume conditions, lack of fat-layer, etc., in the infant.

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49959. BRÜCK, KURT, *and others.* Wärmeleitfähigkeit und Durchblutung verschiedener Stellen der Körperoberfläche bei reifen und unreifen Neugeborenen. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 266, no. 5, p. 518–27, illus., table.) 16 refs. Text in German. *Other authors:* M. Brück *and* H. Lemtis. ***Title tr.:*** Heat conduction and blood circulation of various body areas in mature and immature infants.

Account of investigations of infants during their first two weeks of life, aided with Hensel's heat conductivity meter. Cutaneous circulation was found to be an effective thermoregulator even in the premature babies and from the first hours of life. Heat conductivity among the small infants is high due to lack of an insulating fat-layer, hence the small effect of thermoregulatory circulation in them. Differences in skin circulation in the various regions were also studied.

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BRÜCK, KURT, *see also* Kundt, H. W., *and others.* Hypothalamustemperatur . . . *1957.* No. 52565.

BRÜCK, KURT, *see also* Kundt, H. W., *and others.* Hypothalamustemperatur und Hautdurchblutung. *1957.* No. 52566.

BRÜCK, MONICA, *see* Brück, K., *and others.* Hautdurchblutung und Thermoregulation . . . *1957.* No. 49957.

BRÜCK, MONICA, *see* Brück, K., *and others.* Thermoregulatorische Veränderungen . . . *1958.* No. 49958.

BRÜCK, MONICA, *see* Brück, K., *and others.* Wärmeleitfähigkeit . . . *1958.* No. 49959.

49960. BRUEMMER, FRED. Moosonee and Moose Factory. (Canadian geographical journal, July 1957. v. 55, no. 1, p. 24–29, 7 illus., text map.)

Moosonee (51°16′ N. 80°36′ W.) with a population of 60 whites and 400 Indians, is the center of commerce for James Bay; and since 1931, linked to the interior by railroad. Moose Factory on an island two miles distant, is a trading post with the main Hudson Bay Co. store for the area, the R.C.M.P. post for the James Bay region and a large Indian hospital. Other facilities, schools, missions, etc., are noted for both towns. Neither has any industry; most of the Indians are trappers. ***Copy seen:*** DLC.

49961. BRUES, CHARLES THOMAS, 1879– . A monograph of the North American Phoridae. (American Entomological Society. Transactions, 1903. v. 29, no. 4, p. 331–404, plates 5–9.)

Contains tables to the genera and species of this family, the so-called humpbacked flies, and an enumeration of about 70, with synonyms, descriptions, critical notes and data on distribution and specimens; fifteen species and two varieties are described as new. *Phora pachyneura* (Alaska) and *P. groenlandica* (West Greenland) are included. Catalog of species by genera is added.

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49962. BRUEVICH, S. V. Khimicheskie issledovaniîa Instituta okeanologii AN SSSR na Dal'nevostochnykh morîakh i prilegaîushcheĭ chasti Tikhogo okeana; tezisy doklada. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 29–31.) Text in Russian. ***Title tr.:*** Chemical investigations of the Institute of Oceanology Academy of Sciences U.S.S.R., in the Far Eastern waters and adjacent parts of the Pacific; theses of a report.

The Institute's projected work is outlined in its applied, theoretical and expository phases. Earlier work including the Bering and Okhotsk Seas is reviewed. Details of research needed in these two seas as well as in the general area are discussed. ***Copy seen:*** DLC.

49963. BRUEVICH, S. V. Some chemical features of the waters and the sediments of the Far East seas and the adjacent part of the Pacific. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 176–77.)

Reports investigations in hydrochemistry and chemistry of sediments and of the atmosphere undertaken by the Dept. of Sea Chemistry of the Institute of Oceanology, Academy of Sciences, U.S.S.R. during 1949–1955 on the R/V *Vitîaz.* Work, in the Okhotsk, Bering, and (partly) Japan Seas and adjacent Pacific, was concentrated in the Kuril-Kamchatka Trench region. Its scope, extended during IGY, is outlined and some conclusions drawn. ***Copy seen:*** DLC.

49964. BRUMLEVE, STANLEY J., *and* **X. J. MUSACCHIA.** Liver coenzyme A and total fatty acids in turtles under varying environmental conditions. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 16–17).

Out of four groups, cold-exposed and animals kept in the laboratory had about the same coenzyme A and total fatty acids levels in the liver. The "wild" animals had the highest values for both.

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49965. BRUN, ESKE, 1904– . Greenland today. (Arctic, 1957. v. 10, no. 2, p. 119–21.)

Describes political status as an integral part of Denmark, economy (based primarily on the sea), mining possibilities in the northeast, welfare and public health programs (TB, etc.), education, radio in adult education. Inter-continental air routes and Danish policy are discussed in relation to Greenland.

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49966. BRUN, ESKE, 1904– . Malmhavne-projektet. (Grønland, July 1957. nr. 7, p. 274–77, illus., map.) Text in Danish. ***Title tr.:*** The iron ore port project.

Discusses project to build transit ports in West Greenland for two Canadian companies developing ore deposits in the Ungava area, viz.: Oceanic Iron Ore of Canada Ltd. at Marraq between Faeringerhavn (63°41′ N. 50°34′ W.) and Fiskenaesset (63°05′ N. 50°41′ W.) and for Atlantic Iron Ore Ltd. on Rype Ø near Godthåb (64°11′ N. 51°43′ W.). Negotiations are in progress on the basis that construction and operation of the ports be by a Danish company and reasonable charges be made.

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49967. BRUN, ESKE, 1904– . Udviklingen i Grønland under nyordningen. (Grønland, June, July 1958; nr. 6, p. 201–209; nr. 7, p. 241–52, illus.) Text in Danish. ***Title tr.:*** Development in Greenland under the new order.

Contains a survey of the administration, social services, health service, housing, education, religious life, judicial system, economic life, etc. The main achievements to date and the more important problems still to be solved are noted. ***Copy seen:*** DLC.

49968. BRUNNSCHWEILER, DIETER H. Die Luftmassen der Nordhemisphäre. (Geographica helvetica, 1957. Bd. 12, Nr. 3, p. 164–95, 10 text charts, diagrs., tables) 63 refs. Text in German. Summary in English. ***Title tr.:*** The air masses over the Northern Hemisphere.

Recent climatic classifications have their origins in dynamic climatology.

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The major causative factor of the climatic differentiation of the Northern Hemisphere is claimed to be air masses. Their type and characteristics are determined at 60 stations (including northern Canada, Alaska, Greenland, Svalbard, U.S.S.R.) from a five-year series of weather maps. By this method (termed "aerosomatic") air mass regions are delimited for alternate months. Frequency of each air mass also mean and extreme values of major meteorological elements observed in conjunction are diagrammed for six type-stations (including Matochkin Shar, Novaya Zemlya, 73°16′ N. 56°27′ E.). With Europe as example (including northernmost parts), a short description of each "aerosomatic" province is given according to the occurrence, sequence and effectiveness of individual air masses.

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49969. BRUSKIN, ARKADIĬ. V Omchakskoĭ doline. (Na severe dal'nem, 1955, vyp. 2, p. 115–19.) Text in Russian. ***Title tr.:*** In the Omchakskaya valley.

Journalist's notes on a trip from Magadan to a mining operation in the Kolyma River basin: rapid climatic changes en route; rise of production due to introduction of new methods and mechanization of dredging, transportation and washing of (gold?) placer sand and gravel; failures due to clumsiness and excessive weight of this machinery in relation to the local technical facilities, etc.

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49970. BRUTON, HENRY C. Recent developments in Naval communications-electronics. (Signal, Mar. 1957. v. 11, no. 7, p. 7–12, illus.)

Outline by the Director of U.S. Naval Communications includes mention of application of ionospheric and tropospheric scatter techniques in the North Atlantic and between continental U.S. and Alaska, and use of balloon-supported antennas (Skyhook) for low-frequency transmission from polar latitudes.

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BRYAN, KIRK, Jr., *see* Livingstone, D. A., *and others*. Effects . . . arctic environment . . . origin and development . . . lakes. *1958*. No. 52872.

BRYCE-SMITH, R, *see* Blumer, W., *and others*. A technique . . . studying . . . drugs . . . hypothermia. *1957*. No. 49781.

49971. BRYLD, PER. Kulturel og materiel udvikling. (Grønland, Apr. 1958, nr. 4, p. 154–58). Text in Danish. ***Title tr.:*** Cultural and material development.

Continues discussion of whether cultural development in Greenland has kept pace with material improvement. The two are not comparable: cultural change comes slowly; more pertinent would be consideration of the aims and means of educational work in the country.

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49972. BRYRUP, JØRGEN. Nye konstruktionsprincipper i grønlandske traeskelethuse. (Ingeniøren, ugeblad, July 27, 1957. årg. 1, nr. 17, p. 4–5, illus., diagr.) Text in Danish. ***Title tr.:*** New construction principles in Greenland houses with wood frames.

Compares wood-frame construction in Greenland, United States, Canada and Scandinavia. The Greenland frames use the largest timbers, though snow and wind pressures are calculated higher in the other countries. Smaller-dimension timber is unsafe if joined in the traditional Danish way, which weakens supports. Ten houses are to be raised in Outdligssat (70°05′ N., 53°01′ W.) to test frames with nailed joints. Inside walls consist of plaster plates attached to fiber board and nailed directly to the wooden frame, which is half-timbered of 2 x 4 in. timber. A layer of aluminum foil is placed between the wood fiber and plaster plates; immediately behind the outer boarding is an overlapping layer of wind-tight cardboard. Various ways of raising the frame are to be tried, and three types of chimneys will be tested. The roofs will be experimentally covered with corrugated aluminum. ***Copy seen:*** DLC.

BRYSON, R. A., *see* U.S. Navy. Weather Research Facility. Normal 500 mb charts . . . *1957*. No. 55652.

49973. BUCH, KURT, 1881– . Ett sekel oceanografi; föredrag inför Finska vetenskaps-societeten vid tillträdande av ordförandeskapet den 29 April 1952. Helsingfors, 1954. 16 p. (Finska vetenskaps-societeten. Årsbok-vuosikirja, 1951–1952. v. 30B, no. 3). Text in Swedish. ***Title tr.:*** A century of oceanography; lecture before the Finnish Scientific Society by the new chairman, April 29, 1952.

International oceanographic investigation, organized in Brussels in 1853, has

developed in a variety of fields. Advances in oceanographic knowledge are reviewed, among them the theory of cold water outflow at depth from arctic regions, ice investigation and mapping, fishery developments, and meteorological studies. Contributions of the small northwestern European countries and their scientists are noted. ***Copy seen:*** DGS.

BUCHWALD, VAGN, *see* Sørensen, H., & V. Buchwald. Redegørelse . . . radioaktive grønlandske mineraler . . . *1958.* No. 55024.

BUCKLEY, JOHN J., *see* Lensink, C. J., *and others.* Food habits of marten in interior Alaska . . . *1955.* No. 52755.

49974. BUCKLEY, JOHN LEO, 1920– . Wildlife in arctic and sub-arctic Alaska. (Biology Colloquium, 18th, 1957. p. 89–99, illus. map.) 20 refs.

A discussion of the human inhabitants of the area, the larger wildlife forms of importance to man, the interrelation of man and wildlife, and problems of wildlife management. The increasing value of wildlife as recreation for local and tourist populace is stressed and the role of wildlife management analyzed. Account of ensuing discussion is appended.
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49975. BUCKLEY, JOHN LEO, 1920– . Wildlife in the economy of Alaska. Dec. 1957. 33 p. illus., tables. (Alaska. University. Biological papers no. 1, revised.) 15 refs. A contribution of the Alaska Cooperative Wildlife Research Unit.

A review of the value of fish and wildlife, recreational, commercial, social, esthetic. Statistics are presented on expenditures of license holders; man-days spent hunting and fishing, their distribution, expenditures; game taken; value of commercial fishing; of fur, meat, etc. Costs of management; computation and statistical methods, etc., are also discussed. ***Copy seen:*** CaMAI.

BUCKLEY, JOHN LEO, 1920– , *see also* Scott, R. F. Resource planning . . . *1957.* No. 54647.

BUDA, D., *see* Santoro, A., *and others.* Variazioni biochimiche . . . *1957.* No. 54545.

49976. BUDANOV, N. D. Rol' noveĭsheĭ tektoniki i svîazannykh s neĭ treshchinnykh narusheniĭ v gidrogeologii Urala. (Sovetskaîa geologiîa. Sbornik, 1957. no. 58, p. 25–39, diagrs., text map.) 17 refs. Text in Russian. ***Title tr.:*** The role of recent tectonics and their connection with fracture dislocations in hydrogeology of the Ural.

Outlines recent crustal movements and dislocations in the Ural region revealed in ground water hydrology and deep-boring studies. Occurrence and circulation of thermal waters are given special attention. In the northern Urals they are found in the Pechora, Shchugor, Toshemka, Ivdel', Vagran, Tura and other river regions. Development of salt dome structures is noted. More attention to such investigations is recommended.
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49977. BUDANOV, V. I., *and others.* Present-day vertical movements of Far Eastern seacoasts of the U.S.S.R. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 111–12.) *Other authors:* A. T. Vladimirov, A. S. Ionin, P. A. Kaplin *and* V. S. Medvedev.

Reports investigations by members of the Institute of Oceanology, Academy of Sciences, U.S.S.R.: areas of subsidence include eastern Chukotsk Peninsula, northeast coast of the Koryak Range, west and parts of the east coasts of Kamchatka; rising areas include the western coast of Anadyr Bay and parts of southeast and eastern Kamchatka. A chart, 1:7,500,000, compiled by the authors on the basis of these studies is described. ***Copy seen:*** DLC.

49978. BUDANOV, V. I., *and others.* Sovremennye vertikal'nye dvizheniîa beregov dal'nevostochnykh moreĭ. (Akademiîa nauk SSSR. Doklady, Oct. 21, 1957. t. 116, no. 6, p. 1005–1008, 3 illus.) 12 refs. Text in Russian. *Other authors:* A. T. Vladimirov, A. S. Ionin, P. A. Kaplin, and V. S. Medvedev. ***Title tr.:*** Present vertical movements of the shores of Far Eastern seas.

Study of vertical movements of the coasts of the Chukchi, Bering, Okhotsk and Japanese Seas, based on investigations of shore grading and geomorphology. Anadyr Bay, parts of eastern and northeastern Kamchatka, and southern Sakhalin are in the process of uplift; others are in the state of sinking (eastern and northern Chukotsk Peninsula, western Kamchatka, Okhotsk region, etc.) and some are more or less stable. Methods of evaluating the coasts' dislo-

cation and speed of this process, are noted and discussed.

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49979. BUDANOV, V. I., *and* **A. S. IONIN.** Sovremennye vertikal'nye dvizheniîâ zapadnykh beregov Beringova moriâ. (Akademiîâ nauk SSSR. Okeanograficheskaîâ komissiîâ. Trudy, 1956. t. 1, p. 65–72, illus., map.) 6 refs. Text in Russian. ***Title tr.:*** Present vertical movements of the western shores of the Bering Sea.

Earlier work concerning this problem is reviewed. Stable, sinking and rising zones in the area from northern Chukotka to central Kamchatka are distinguished and described: their general characteristics, types, kinds of sublittoral profiles, distribution of such profiles within the area studied, etc. ***Copy seen:*** DLC.

BÜCKMANN, A., *see* International Commission NW Atlantic Fisheries. Proceedings . . . 1956–57. *1957*. No. 51934.

49980. BUEN, HELGE. *Sphagnum lindbergii* in Norway. (Nytt magasin for botanikk, 1958. v. 6, p. 129–34, 2 illus., 4 tables) 9 refs.

Contains a study of this peat-moss, with consideration of form variation of stem-leaves, measurements of stem- and branch-leaves, variations of the pores (tables), and data on Norwegian distribution, including the northern regions.

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49981. BÜTLER, HEINRICH. Beobachtungen an der Hauptbruchzone der Küste von Zentral-Ostgrönland: Ergebnisse von Untersuchungen ausgeführt in den Sommern 1955 und 1956. København, C. A. Reitzel, 1957. 79 p. illus., plate, maps, profiles incl. 1 fold. (Meddelelser om Grønland, bd. 160, nr. 1). 51 refs. Text in German. Summary in English. ***Title tr.:*** Observations on the main fault zone of the coast of central East Greenland: results of investigations carried out in the summers of 1955 and 1956.

Describes various stretches of the large Post-Devonian main fault, mapped in detail by the author during the Danish Expedition to East Greenland, led by L. Koch. The main fault is traced from East Hudson Land south and west to Svinhufvuds Bjerge where it is connected with the Staunings Alper fault by a younger diagonal fault which branches off in a southwesterly direction near Kejser Franz Josephs Fjord. The sections described are in east Hudson Land, Geographical Society Ø, Traill Ø, Liverpool Land, and the inner Scoresby Sund region. ***Copy seen:*** DSG.

BUFFUM, CHARLES W., *see* Spec. Libraries Assoc. Geog. *and* Map Div. Bulletin. *1958*. No. 55089.

49982. BUGGE, AAGE, 1896– . Dobbeltheden i Grønlands kulturliv. (Grønland, June 1957, nr. 6, p. 236–40, illus.) Text in Danish. ***Title tr.:*** The duality of Greenland's cultural life.

It is essential that neither Greenland nor Danish civilization be emphasized at the cost of the other. ***Copy seen:*** DLC.

49983. BUGGE, AAGE, 1896– . Julianehåb kirke i fortid og nutid, i anledning av kirkens 125-års jubilaeum. (Grønland, Jan. & Mar. 1958. nr. 1, p. 11–17, nr. 3, p. 93–98, illus.) 8 refs. Text in Danish. ***Title tr.:*** Julianehåb church, past and present, on the occasion of its 125th anniversary.

This church, consecrated in 1832, was built through the efforts of Dansk Missionsselskab (The Danish Missionary Society), of which the founder, Bone Falch Rønne, had a great interest in missionary work in Greenland. Notable priests at Julianehåb, the church building and equipment, and the anniversary celebrations are described. The town has at present about 1,570 inhabitants (350 in 1909). ***Copy seen:*** DLC.

49984. BUGGE, CARL, 1881– . Statsgeolog Steinar Foslie. (Tidsskrift for kjemi, bergvesen og metallurgi, Dec. 1951. årg. 11, nr. 10, p. 189, port.) Text in Norwegian. ***Title tr.:*** State geologist Steinar Foslie.

Tribute to Steinar Foslie, 1887–1951, whose work was largely on the geology of ore bodies. His special interest was the petrography and chemistry of ores, though he devoted attention to mapping. The Ofoten area of arctic Norway is among the regions on which he wrote.

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49985. BUGGE, JENS A. W. Rana gruber; geologisk beskrivelse av jernmalmfeltene i Dunderlandsdalen. Oslo, Aschehoug, 1948. 149 p., illus., plates, maps, incl. 3 fold., diagrs. (Norway. Geologiske undersøkelse. Skrifter, nr. 171.) Text in Norwegian. Summary in English. ***Title tr.:*** Rana mines; geologic

description of the iron ore deposits in Dunderland valley.

The surface and bedrock geology of the several small ore bodies in a small section of Dunderlandsdalen in northern Norway were surveyed and investigated by diamond drilling. Tectonics, petrology, and chemical and spectral analyses of the ores are described and variation diagrams included. These upper Cambrian or lower Ordovician sedimentary magnetite and hematite ores and the related dolomite and calcite marbles and lime-rich schists are believed to have been deposited in a shallow marine area between two continental areas under conditions of strong chemical weathering and an atmosphere rich in CO_2. Comparisons are made with ore deposits and bedrock geology of other localities in northern Norway and Sweden. ***Copy seen:*** DGS.

49986. BUGGE, JENS A. W. Sedimentaere jernmalmer og deres deformasjon. (Tidsskrift for kjemi, bergvesen og metallurgi, June 1950. årg. 10, nr. 6, p. 227–34, illus., cross-sections, maps, diagrs.) 7 refs. Text in Norwegian. ***Title tr.:*** Sedimentary iron ores and their deformation.

Eighty percent of iron ores known are of sedimentary origin, with 25–45% iron content. The various means by which further concentration may take place are examined. Deformation of the bedrock and the resulting concentration of ore in two well known north Norwegian localities, Dunderland and Sydvaranger, are outlined and illustrated.

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49987. *BUILDING RESEARCH IN CANADA.* Regional stations of D. B. R. (Building research in Canada, June 1957. v. 2, no. 5, p. 127–28, illus.)

Contains a brief review of activities of the regional stations (of the National Research Council's Division of Building Research) located at Halifax, Saskatoon, Vancouver, and Norman Wells. The purpose of these small regional stations is to provide personal liaison between the building industry and the engineering-architecture professions in the area, and the Building Research Centre in Ottawa. Work of the Prairie Regional Station at Saskatoon is primarily concerned with cold weather performance of building enclosures. The Northern Research Station at Norman Wells is staffed during the summer months and is concerned with field and laboratory studies on permafrost as well as other special problems of building in the North. ***Copy seen:*** DLC.

49988. BUĬNITSKIĬ, VIKTOR KHARLAMPOVICH. Postoiannyĭ stok poverkhnostnykh vod i general'naia skhema dreifa morskikh l'dov v Arkticheskom basseĭne. (Nauchnye doklady vysshei shkoly. Geologo-geograficheskie nauki, 1958, no. 1, p. 42–47, diagr., table, maps) 9 refs. Text in Russian. ***Title tr.:*** The constant flow of surface water and the general scheme of sea ice drift in the Arctic Basin.

Drifts of the *Fram*, the *G. Sedov*, and the stations North Pole 1–5 were analyzed by the author, with conclusion that a constant flow of surface waters, independent of wind, exists in the Arctic Basin; from all points of the Basin, this flow is toward the area between Spitsbergen and Greenland; the rate of flow becomes greater, the nearer to the "strait"; this flow is caused by the inflow of Atlantic, Pacific and river waters into the Arctic Basin. ***Copy seen:*** DLC.

BUKDAHL, JØRGEN, 1896– , *see* Graenseforeningen. Det nye Norden . . . *1956*. No. 51322.

49989. BUKHTEEVA, A. V. Luga poĭmy Eniseia v raĭone Turukhanska. (Akademiia nauk SSSR. Izvestiia vostochnykh filialov, 1957, no. 6, p. 128–37, tables.) 4 refs. Text in Russian. ***Title tr.:*** Water-meadows of the Yenisey River in the region of Turukhansk.

The spring-flood of the Yenisey at the confluence of its tributary the Turukhan lasts from mid-May till mid-July, and raises the water level 18–20 m. above the average waterline. Meadows on the flooded banks yield annually 25-50 cwt. of good quality hay per hectare. The grass cover of these meadows is described in detail, the ecological associations are analyzed, and genetic evolution of grasses in the area is discussed.

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49990. BUKOVSKAIA, Z. I. Zverovodstvo v kolkhozakh Iakutskoĭ ASSR. (Karakulevodstvo i zverovodstvo, Sept.-Oct. 1957. god 10, no. 5, p. 60–61, table.) Text in Russian. ***Title tr.:*** Fur farming in the kolkhozes of Yakut A.S.S.R.

Contains information on the beginnings of animal farming in 1936; present number of farms and animals (foxes); improvement in the production of young; outstanding kolkhozes; farming of polar

and blue foxes; technical course, etc. ***Copy seen:*** DLC.

BULANZHE, ÎÛ. D., *see* Akademiîa nauk SSSR. Mezhduvedomstvennyĭ komitet. Mezhdunarodnyĭ geofizicheskiĭ god. Informat͡sionnyĭ bûlleten' . . . *1957*. No. 49182.

BULGAKOV, N. P., *see* Gakkel', ÎA. ÎA. Razrushenie ostrova Semenovskogo. *1958*. No. 51051.

49991. BULL, COLIN B. B. A gravity survey of a glacier-dammed lake in North Greenland. (Royal Society of Edinburgh. Proceedings, 1957–1958. v. 67, pt. 1, Sect. B, Biology, p. 42–53, 3 text maps, diagr.) 5 refs. Communicated by R. A. Hamilton.

Contains results of survey of frozen Britannia Sø during first winter of British North Greenland Expedition. Survey was made Dec. 1952–Mar. 1953 to test reliability of the gravity meter and readings were obtained at about 230 points on the western half of the lake. Results suggested their use in estimating lake depths as part of the study of the glacial geomorphology of the area, and, by calculations, a contour map of the lake bottom, contour interval 25 m., was produced. A map is presented showing the combined effect of the latitude effect and the variations of the topographically corrected Bouguer anomaly, it has a 2-milligal interval. The geomorphological significance of a submerged shelf found along the western side of the lake, and of the shape of the lake bottom, is discussed briefly. ***Copy seen:*** DGS.

49992. BULL, COLIN B. B. Observations in North Greenland relating to theories of the properties of ice. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 67–72, graph, 2 tables.) 15 refs.

Inland ice thickness was determined and traverse made from Dronning Louises Land (77°30′ N. 25° W.) to Nunatarssuaq (76°30′ N. 68° W.) to measure gravity values and determine altitude of stations, during the British North Greenland Expedition, 1952–1954. Surface slope of the ice was measured directly to test Nye's formula relating slope and thickness (No. 31650). Values and azimuths of maximum slopes are given for 14 stations (complete values, No. 41788); calculated and measured ice thickness and shear stress are stated. Variations of shear stress may not be related to rates of movement. Different values of shear stress in north and south Greenland may be due partly to presence of bottom melting in the north. Temperatures in the ice sheet are discussed.

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BULL, COLIN B. B., *see also* Simpson, C. J. W., *and others*. North ice . . . *1957*. No. 54901.

49993. BULL, HENRIK. Om tørking: tørking av fersk fisk. Bergen, Grieg, 1928. 27 p. graphs, tables, fold. diagr. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier, 1928, nr. 5.) Text in Norwegian. ***Title tr.:*** On drying: drying of fresh fish.

Artificial drying of fresh fish was investigated for the summer fishing in Finnmark, Norway, where flies and uncertain weather create waste and spoilage. Drying processes using chemical applications and heat are summarized. Types of fuel and temperature rates, etc. are considered. ***Copy seen:*** DLC.

49994. BULLOCK, F. J. They are putting the heat on winter ice. (Canadian transportation, May 1958. p. 73–74, illus.)

Notes successful use in Canada of the Swedish Atlas-Copco system of opening channels in frozen waters by a perforated polythene pipe laid on the bottom and connected to a compressor ashore. The possibility is advanced of feeding the pipe with surplus heat from industrial plants along the frozen water. Advantages and disadvantages are discussed of a causeway across the Strait of Belle Isle, between Newfoundland and the mainland, to prevent cold arctic current from entering the Gulf of St. Lawrence.

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49995. BULYCHEVA, A. I. Fauna Amphipoda Belogo morîa. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniû Belogo morîa, 1957, vyp. 1, p. 391–410, tables, map.) 7 refs. Text in Russian. ***Title tr.:*** The amphipod fauna of the White Sea.

Account based on various collections and an examination of fish stomachs: 95 benthonic and three planktonic forms are described, 14 new for the area. Depth of find, substrate, frequency, geographic distribution, etc. are noted. Origin of the forms and vertical distribution are also discussed. ***Copy seen:*** DLC.

49996. BULYCHEVA, A. I. K faune Amphipoda Belogo morîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1934. vyp. 20, p. 57–63, illus.) 7 refs. Text in Russian. Summary in German. ***Title tr.:*** To the amphipod fauna of the White Sea.

Account of these crustaceans collected by G. S. Gurvich, q. v. and others, with identification key; 45 species were identified in the material, with one subspecies. Three forms are considered as high-arctic; 18 as predominantly arctic.

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49997. BULYCHEVA, A. I. Morskie blokhi moreĭ SSSR i sopredel'nykh vod; Amphipoda-Talitroidea. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1957. 186 p. illus., tables, maps. (Akademiîa nauk SSSR. Zoologicheskiĭ institut. Opredelitel' po faune SSSR, no. 65.) 60 refs. Text in Russian. ***Title tr.:*** Marine amphipods of Soviet and adjacent seas: Amphipoda-Talitroidea.

Monograph in two parts, the first (p. 3–74) dealing with the taxonomic position and morphology of these crustaceans; their phylogeny and evolution; geographic distribution (including arctic waters); methods of their collection. Pt. 2 presents descriptions of these forms in taxonomic order with synonyms, data on morphometry and anatomy, sexual development, geographical distribution. A list of Latin names of the forms described is appended. ***Copy seen:*** DLC.

49998. BUNAK, VIKTOR VALERIANOVICH, 1891– . Chelovecheskie rasy i puti ikh obrazovaniîa. (Sovetskaîa ėtnografiîa, 1956. no. 1, p. 86–105, fold. graph.) Refs. Text in Russian. ***Title tr.:*** Human races and their formation.

Discusses the origin and anthropological characteristics of minor or sub-races considered to have evolved, in the neolithic or mesolithic, from four major races: Tropical, Southern, Western, and Eastern. The Yakuts, Tungus, Paleosiberians (arctic type) and Amerindians, who penetrated America via Bering Strait, are classified (p. 100–101) as part of the Eastern (or Mongoloid) race; the Vogul-Ostyak or Uralian type is considered a separate north-Eurasian form incorporating traits of both the Eastern (Mongoloid) and Western (Europoid) races; the Lapps (p. 103) are seen as the oldest European specimens and belong to the subarctic European type. The first of a series of articles in controversy with G. F. Debeţs (q.v.) on the classification of human races. ***Copy seen:*** DLC.

49999. BUNAK, VIKTOR VALERIANOVICH, 1891– . Ob ocherednykh zadachakh v izuchenii rasoobrazovaniîa u cheloveka; v svîazi so stat'eĭ G. F. Debeţsa *O printsipakh klassifikatsii chelovecheskikh ras.* (Sovetskaîa ėtnografiîa, 1958, no. 3, p. 125–35.) Refs. Text in Russian. ***Title tr.:*** Current problems in the study of race formation; in connection with G. F. Debeţs' article *Principles of race classification.*

Takes issue with Debeţs' opinion (No. 50478) on the time (paleolithic) of race formations, preferring their origin in the neolithic or mesolithic. A discussion is included (p. 132) of the Ural-Altaic and Lapp types, which author considers of different origin. ***Copy seen:*** DLC.

50000. BUNKER, JOHN P., *and* R. GOLDSTEIN. Coagulation during hypothermia in man. (Society for Experimental Biology and Medicine. Proceedings, Jan. 1958. v. 97, no. 1, p. 199–202, table.) 13 refs.

A study of clotting factors in ten patients with slowly induced hypothermia. Contrary to observations in the dog, no fall in concentration of clotting factors was observed. Minor disturbances in coagulation observed during surgery and transfusion were also noted under normothermic conditions. The only significant difference found, was a decrease in prothrombin consumption.

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BUNKER, JOHN P., *see also* Henneman, D. H., *and others.* Immediate metabolic response . . . hypothermia . . . man. *1958.* No. 51684.

BURAKOVSKIĬ, V. I., *see* Akimov, G. A., *and others.* Vliîanie glubokogo obshchego okhlazhdeniîa . . . *1957.* No. 49194.

50001. BURBIDGE, FREDERICK EDWARD, 1922– , *and* J. R. LAUDER. A preliminary investigation into break-up and freeze-up conditions in Canada. Ottawa, July 2, 1957. 13, 12 p., text maps, diagrs. (Canada. Meteorological Branch. Circular 2939, TEC–252.) 11 refs. Mimeo. *Also pub as:* Royal Meteorological Society, Canadian Branch, Papers, 1957. v. 8, no. 1, p. 16–39.

Ice formation and melting of Canadian rivers and lakes are discussed on the basis of records from 360 stations (about

a dozen in the far North) covering periods from 36–40 years, and the meteorological conditions prior to initial ice formation and breakup are examined to determine the critical number of days of freezing and thawing required to produce these changes. Average freeze- and break-up dates for Canada are mapped; in the North, time of average breakup varies from Aug. 1 in the Arctic Islands to May 15 in the Great Slave Lake area; freezeup occurs about Sept. 1 in the northwestern Arctic Islands, and about Nov. 1 in central Labrador; the interval between breakup and freezeup ranges from one to five months. Average dates of opening and closing of navigation in the Mackenzie River are tabulated; and data are graphed on mean daily air temperatures from Mar. 1 to the date of breakup, and from Oct. 1 to the date of skim-ice formation in the North Saskatchewan River, as well as similar data on freezeup of the Athabaska River.

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50002. BURCHARD, OSKAR. Bryologische Reiseskizzen aus Nordland. (Botanisches Centralblatt, 1889. Bd. 37, No. 4, p. 97–106, text map.) Text in German. ***Title tr.:*** Bryological travel notes from Nordland.

Contains a general sketch of the vegetation of this province of Norway, with reference in particular to various mosses and hepatics, their habitats, local distribution, etc. ***Copy seen:*** DLC.

50003. BURDON-JONES, C., *and* G. H. CHARLES. Light reactions of littoral gastropods. (Nature, Jan. 1958. v. 181, no. 4602, p. 129–31, illus., tables.) 5 refs.

Account of experiment with *Littorina littoralis* L. which has shown a very strong light compass reaction. Experiments on the effects of polarized light on its movement in water or air indicate that it "orientates itself along the plane of polarization of light falling on it from above." ***Copy seen:*** DNLM.

50004. BURENDAHL, BO. Om konstruktion av isbrytare. (Svensk sjöfarts tidning, 1954. årg. 50, nr. 8, p. 285–89, 304–308, illus.) Text in Swedish. ***Title tr.:*** Ice-breaker construction.

Ice-breakers principally used in temperate zones are described. History, specifications, equipment, and personnel are discussed, based on features of American vessels. ***Copy seen:*** DLC.

50005. BUREŠOVÁ, O. Poruchy thermoregulace a metabolismu jako důsledek šířící se EEG deprese. (Československá fysiologie, 1957. ročník 6, sešit 3, p. 376–81, illus., table.) 12 refs. Text in Czech. ***Title tr.:*** Thermoregulatory and metabolic disorders as signs of spreading EEG depression.

Account of experiments with hypothermic mice and rats. EEG depression produced by 25% K Cl caused quicker cooling and a reduction of O_2-consumption in the cooled animals. This is assumed to be due to disturbed chemical thermoregulation. ***Copy seen:*** DNLM.

50006. BURKE, P. E. The lands of the midnight sun: rise from the ashes. (Norseman, Nov.–Dec. 1958. v. 16, no. 6, p. 396–401, illus.)*

Contains impressions and observations of Scandinavia north of the Arctic Circle: Luleå in Sweden; Rovaniemi, Finland, Hammerfest, Nordkap, Tromsø, and Narvik in Norway. Reconstruction following World War II is noted. The Norwegian Lapps, who number about 20,000, are described, with comment on their changing way of life. Brightly colored houses, a shopping center enclosed under one roof, and a school with classrooms built around a covered playground are adaptations to the northern climate.

**Norseman*, a bi-monthly review of current events, published in London since Jan. 1943, ceased publication as of Dec. 31, 1958.

Copy seen: DLC.

50007. BURKE, WILLIAM E. The White Alice story. (Signal, Sept. 1957. v. 12, no. 1, p. 7–10, illus., map.)

Describes planning and construction of this Alaskan communications system of 33 stations, of which 23 links operate in the 700–900 mc.-band, using the over-the-horizon technique. One and ten kw. transmitters feed 30-ft. circular parabolic or 60-ft. rectangular parabolic antennas; up to 132 voice channels are derived on either the Bell System TD–2 Microwave system operating in the 4,000 mc.-band (used in unattended repeaters near road facilities), or scatter links Western Electric Type K and L frequency division multi-channel terminal equipment. Telegraph channels are obtained by adding voice-frequency carrier telegraph terminals to the voice channels. The system is scheduled for completion by 1958.

Copy seen: DLC.

50008. BURKE-GAFFNEY, T. E. Sherritt Gordon moves a 2000-ton concentrator, and a town, 165 miles. (Mining engineering, June 1953. v. 5, no. 6, p. 582–83, 3 illus.)

Describes shift of nickel-copper operations from Sherridon to Lynn Lake, Manitoba, in 1947–53: transition from production at Sherridon, through dismantling, to resumed operation at the new site. The moving of most of a mine plant and a town, carefully planned, was aided by temperatures below −20° F. Some families vacated their homes and re-occupied them 10 days later.

Copy seen: DGS.

50009. BURKHANOV, VASILIĬ FEDOTOVICH, *Editor.* Cherez okean na dreĭfuûshchikh l'dakh. Rasskazy uchastnikov dreĭfuûshchikh stanûiĭ i vysokoshirotnykh ėkspeditsiĭ. Moskva, Gos. izd-vo geogr. lit-ry, 1957. 383 p. col. front., illus., ports., maps (2 fold.) Text in Russian. ***Title tr.:*** Across the ocean on drifting ice; stories by members of drifting stations and high latitude expeditions.

Contains 11 articles as listed (with translated titles). They are abstracted under their authors' names, viz:

BURKHANOV, V. F. Achievements of the Soviet geographic explorations in the Arctic.

PAPANIN, I. D. The first drifting station "North Pole."

KRENKEL', E. T. The first stay on the North Pole.

SOMOV, M. M. 376 days on the drifting ice floe.

SHCHERBAKOV, D. I. In the center of the Arctic.

TRESHNIKOV, A. F. At the North Pole.

KANAKI. V. G. In the polar day and polar night.

TOLSTIKOV, E. I. Northward from Vrangel Island.

IZVEKOV, M. V. From a hydrologist's notebook.

GORDIENKO, P. A. Station "North Pole-4" continues its drift.

VOLKOV, N. A. Across the ocean on an ice floe. ***Copy seen:*** DLC.

50010. BURKHANOV, VASILIĬ FEDOTOVICH. K beregam Antarktidy. Izd-vo "Morskoĭ transport," 1956. 102 p. illus., ports., maps (3 fold.) 55 refs. Text in Russian. ***Title tr.:*** Toward the shores of Antarctica.

Includes two chapters relating to the Arctic: a survey of Soviet explorations (p. 9–23) summarizing No. 39075, and an outline (p. 23–27) of investigations planned for the IGY 1957–58, with sketch of current economic and cultural development in the Soviet Arctic. Maps show exploratory drifts in the Arctic Basin, bathymetry of the Basin, and Soviet polar stations to participate in the IGY. ***Copy seen:*** DLC.

50011. BURKHANOV, VASILIĬ FEDOTOVICH. Otvazhnye pomoshchniki polûarnikov. (Kryl'ûa rodiny, June 1957. god 8, no. 6, p. 27, port.) Text in Russian. ***Title tr.:*** Courageous helpers of the polar workers.

Note by deputy chief of the Main Administration of the Northern Sea Route in tribute to the pilots whose flights, landing on drifting ice, etc., made possible the achievements of recent arctic and antarctic exploration. The most outstanding arctic flyers are cited by name. ***Copy seen:*** DLC.

50012. BURKHANOV, VASILIĬ FEDOTOVICH. Uspekhi sovetskikh geograficheskikh issledovaniĭ v Arktike. (*In his:* Cherez okean na dreĭfuûshchikh l'dakh, 1957. p. 3–49, illus., maps (2 fold.).) Text in Russian. ***Title tr.:*** Achievements of the Soviet geographic explorations in the Arctic. Translated by E. R. Hope for Canadian Defence Research Board July 1957, *its* T253 R, 26 p. (copy at CaMAI).

Condensed but encyclopedic account of Russian arctic explorations from the Great Northern Expedition of the early 18th century to the present-day High Latitude Expeditions and drifting stations North Pole-3–6 with summary of their work in the physical sciences. Notes on the main expeditions include dates, names of leaders and outstanding members, area of investigation, and achievements. Fourteen hydrological expeditions sent out by the Arctic Institute U.S.S.R. in the last five years, have covered 68,972 sea miles in study and survey of arctic waters. Ice reconnaissance in summer and winter has logged over 500,000 air km. annually. In 1954, Soviet aircraft covered more than a million km. over the Arctic Basin, made several hundred landings (none forced) on drifting ice, and delivered 15 carloads of freight to the drifting stations; these records were surpassed in 1955 and 1956. In 1955,

an expedition on the ice-breaker *Litke* rounding Franz Joseph Land and Spitsbergen, reached 83°11′ N., a record latitude for a free-sailing ship. New methods and observation techniques have been worked out by Soviet explorers, and many new instruments and devices constructed by the Arctic Institute, among them a heavy hydrographic winch "North Pole," a radiosonde field laboratory, a thermometric installation, a magnetic variation station, automatic radio-beacon "Vekha," a flying observatory, Flinders bar, current integrator, self-recording current meter (direction and velocity), automatic meteorological transmitter, magnetometer with visible recording, automatic field ionosphere self-recorder, a radiowave tester, Shaposhnikov's movable prefabricated house type 4 (PDSh–4, Podvizhnoĭ domik Shaposhnikova, tip 4). The main publications relating to the Arctic are stated to include monographic descriptions of the Chukotsk National District, Henrietta Island, Kotel'nyy Island and Novaya Zemlya, G. I͡A. Vangengeĭm's *Osnovy makrot͡sirkuli͡atsionnogo metoda dolgosrochnykh prognozov pogody dli͡a Arktiki* (Principles of the macro-circulation method of long-range weather forecasting for the Arctic), A. P. Nikol'skiĭ's *Magnitnye vozmushcheni͡a v Arktike* (Magnetic disturbances in the Arctic) and a part of the scientific results of Drifting Station "North Pole-3" and "North Pole-4." Maps show aircraft landings on the Arctic Basin ice during 1937–56, including those outside the so-called Soviet sector, a scheme of ice drifts and (p. 35) drifts of Soviet stations. ***Copy seen:*** DLC.

50013. BURKHANOV, VASILIĬ FEDOTOVICH. Velikiĭ Severnyĭ morskoĭ put'. Priroda, Jan. 1958. god 47, p. 9–18, illus. map). Text in Russian. ***Title tr.:*** The Great Northern Sea Route.

Significance of this Route to life and economy of arctic U.S.S.R. is discussed; Russian penetrations and expeditions are outlined from the 18th century to the present including explorations by air, advances following the Revolution, establishment and administration of the Route. Investigation of the polar region, weather and ice studies and forecasts, oceanographic work, publications, conditions during World War II, shipbuilding, are reviewed. ***Copy seen:*** DLC.

BURKHANOV, VASILIĬ FEDOTOVICH, *see also* Bolotnikov, N. I͡A. Avtomaty v strane l'dov. *1957*. No. 49824.

50014. BURN, J. H., *and* **M. J. RAND.** Excitatory effects of vagal stimulation on cooled atria and their relation to adrenaline. (Journal of physiology, Feb. 1958. v. 140, no. 2, p. 45P–46P.) 4 refs.

Atria of rabbit (or cat) hearts with the vagus nerves attached and suspended in a bath, stopped contracting when the temperature was reduced below 20° C. Vagal stimulation causes the contractions to begin again. Experiments discussed indicate that this action is due to ACh and not to adrenaline or noradrenaline. ***Copy seen:*** DNLM.

50015. BURNS, R. B. Hydrographic conditions in Icelandic waters August/September, 1956. (International Council for the Study of the Sea. Annales biologiques, 1956, *pub.* 1958. v. 13, p. 33–34, maps.)

Report on survey made by the Scottish R/V *Explorer*. Temperature and salinity, oxygen and free phosphate were determined and water bodies and movements outlined. O_2 supersaturation in the upper layers was established. ***Copy seen:*** DI.

50016. BUROV, ALEKSANDR PETROVICH. Almazy I͡Akutii. (Okti͡abr', July 1957. god 34, no. 7, p. 172–75). Text in Russian. ***Title tr.:*** Diamonds in Yakutia.

Brief outline of the physical properties of diamonds, the world output, utilization in industry, and story of their discovery in Central Siberia. In an area "infested with diamonds" between the Yenisey and the Lena from the Trans-Siberian railroad north to the Arctic Circle and beyond, finds have been made at hundreds of sites, the richest in the Vilyuy basin. The low quality of Yakutia diamonds is noted. ***Copy seen:*** DLC.

BUROV, ALEKSANDR PETROVICH, *see also* U.S.S.R. Ministerstvo geologii i okhrany nedr SSSR. Almazy Sibiri. *1957*. No. 55592.

BURT, JOHN E., Jr., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

BURT, W. V., *see* Danielsen, E. F., *and others*. Intensity . . . severe storms . . . *1957*. No. 50431.

50017. BURT, WILLIAM H. Some distribution records of mammals from Hudson Bay. (Journal of mammalogy, May 1958. v. 39, no. 2, p. 291.)

Notes on new localities (on the Belcher and other islands in Hudson Bay) for the collared lemming, its burrows and nests; the meadow vole; and skeletons of a least weasel and an arctic hare.

Copy seen: DLC.

50018. BURTON, ALAN CHADBURN, 1904– , *and* G. FROESE. The heat losses of the unprotected human head in cold conditions. Ottawa, July 1957. 14 p. illus., tables (Canada. Defence Research Board. Environmental Protection Section. EP technical report no. 6) 5 refs.

A study of heat losses from the head made by measurements with a temperature gradient calorimeter. It was found that at rest and 40° F., the head gives off one half of the body's heat production, at 5° F. three-quarters of it. Recommendation is made that except for periods of work and exercise in the cold, headgear should be always worn.

Copy seen: DNLM.

50019. BURTON, ALAN CHADBURN, 1904– . Research in applied physiology of the cold. (Revue canadienne de biologie, June 1957. v. 16, no. 2, p. 293–301.) 8 refs.

Review of investigations conducted at the Dept. of Biophysics, University of Western Ontario during the last few years. These include problems of damp-cold vs. dry-cold, effects of breathing O_2 in the cold; heat loss from the human head, etc. ***Copy seen:*** DLC.

BURTON, ALAN CHADBURN, 1904– , *see also* Armstrong, H. G., *and others.* The physiological effects of breathing cold . . . air. *1958.* No. 49382.

BURTON, ALAN CHADBURN, 1904– , *see also* Froese, G., *and* A. C. Burton. Effect of breathing O_2 on O_2 consumption . . . cold. *1957.* No. 51003.

BURTON, ALAN CHADBURN, 1904– , *see also* Froese, G., *and* A. C. Burton. Heat losses . . . human head. *1957.* No. 51004.

50020. BURTON, MAURICE, 1898– . Some sponges from the Okhotsk Sea and the Sea of Japan. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa morei SSSR, 1935. vyp. 22, p. 61–81, illus., tables.) 50 refs.

A study of sponges, the first for this area, based on material collected in 1925–31 by expeditions of the State Hydrological Institute. The species are, "with five exceptions, and apart from the species new with this report, mainly characteristic of the arctic fauna." Sixty-six species are described, six of them new. Diagnosis, occurrence, taxonomic position, geographic distribution, etc., are discussed. ***Copy seen:*** DLC.

50021. BURTT, B. L., *and* C. W. MUIRHEAD. *Cassiope lycopodioides;* Ericaceae. (Curtis's botanical magazine, Oct. 1957. n. ser. v. 171, pt. 4, [4] p., plate 298, illus.)

Contains description, synonyms and data on cultivation of this herbaceous plant, first described by G. W. Steller on his travels to Kamchatka in 1740–44, and known also from the Commander and Aleutian Islands and the Juneau region in Alaska. ***Copy seen:*** DA.

50022. BURYKIN, A. F. Chetyre plavaniĭa kapitana Khromchenko. (Priroda, Mar. 1957, no. 3, p. 77–80, 2 text maps.) Text in Russian. ***Title tr.:*** Four voyages of Captain Khromchenko.

Contains a general account of four voyages of this naval officer and prominent explorer. The first was made in 1821 with two vessels, the brig *Golovnin* commanded by Khromchenko and cutter *Baranov* (A. K. Étolin), from Novo-Arkhangel'sk on Baranoff Island to Kodiak Island, Unalaska, the Pribilof group, Golovnin Bay and back. Khromchenko repeated the trip in 1822 from Baranoff to Stuart Island. The coast of Alaska and islands visited were described and mapped. A dictionary of native languages was compiled and a diary kept of the expedition. Later Khromchenko made two circumnavigations, in 1828 on the *Elena,* and in 1831–33 on the transport *Amerika,* from Kronshtadt to Novo-Arkhangel'sk. On both these voyages he explored the islands of Pacific Ocean and the coast of Alaska; during his voyage in 1831–33 he visited also Kamchatka Peninsula (Petropavlovsk).

Copy seen: DLC.

BUSHKANETS, IU. S., *see* Demokidov, K. K., *and others.* Geologicheskoe stroenie . . . *1957.* No. 50494.

50023. BUSKIRK, ELSWORTH R., *and others.* Variations in resting metab-

olism with changes in food, exercise and climate. Denver, Colorado, Oct. 1957. 19 p. illus., tables. (U.S. Army. Medical Nutrition Laboratory, report no. 215.) 42 refs. *Also pub.* as: U.S. Quartermaster Research & Development Center. Environmental Protection Research Division. Technical Report EP–59, May 1957. *Other authors:* P. F. Iampietro and B. E. Welch.

A study of basal and resting oxygen consumption (VO_2) in eight groups of men, to determine the effects of specific dynamic action, of exercise and climate upon metabolism. Two groups lived at Fort Churchill Canada, and at Mt. Washington, N.H. Climate (temperature) as such did not appear to affect basal VO_2 or the pattern of resting metabolism, with exception that at 20.00 hours, the VO_2 in hot-day environment was higher than in the moderate or cold at the same time. Peak VO_2 associated with specific dynamic action amounted up to two times basal VO_2, indicating the necessity of considering food intake and time after meal, when total VO_2 is determined. ***Copy seen:*** DNLM.

BUSKIRK, ELSWORTH R., *see also:* Brebbia, D. R., *and others.* Water vapor loss . . . respiratory tract . . . cold. *1957.* No. 49899.

Iampietro, P. F., *and others.* Caloric intake . . . cold . . . *1957.* No. 51892.

Iampietro, P. F., *and others.* Caloric intake . . . cold . . . *1958.* No. 51893.

Iampietro, P. F., *and others.* Diurnal oxygen consumption and rectal temperature of man . . . cold . . . *1957.* No. 51894.

Iampietro, P. F., *and others.* Effect of food, climate and exercise on rectal temperature . . . *1957.* No. 51895.

Iampietro, P. F., *and others.* Effects . . . food, climate . . . rectal temperature . . . *1957.* No. 51896.

Iampietro, P. F., *and others.* Heat exchanges . . . nude men . . . cold . . . *1958.* No. 51897.

Iampietro, P. F., *and others.* Heat exchanges . . . cold . . . humidity, temperature and windspeed. *1958.* No. 51898.

Kreider, M. B., *and others.* Effect . . . cold exposure on nocturnal body temperatures of man. *1958.* No. 52481.

Kreider, M. B., *and others.* Oxygen consumption and body temperatures during the night. *1958.* No. 52482.

Kreider, M. B., *and* E. R. Buskirk. Supplemental feeding . . . sleep . . . cold. *1957.* No. 52483.

Kreider, M. B., *and* E. R. Buskirk. Supplemental feeding . . . sleep . . . cold. *1957.* No. 52484.

Welch, B. E., *and others.* Energy requirements . . . subarctic bivouac. *1957.* No. 55983.

Welch, B. E., *and others.* The relation . . . climate and temperature . . . food and water intake . . . *1957.* No. 55984.

Welch, B. E., *and others.* Relation . . . climate and temperature food and water intake . . . *1958.* No. 55985.

BUSS, IRVEN OTTO, 1908– , *see* Fritsch, L. E., *and* I. O. Buss. Food . . . American merganser . . . *1958.* No. 50997.

50024. BUSWELL, ARTHUR S., *and* **A. KALLIO.** Flowers for Alaska. College, June 1954. 4 p., Mimeographed. (Alaska. University. Extension Service. Circular 400.)

Gives planting instructions, uses, and descriptive remarks for annuals and perennials found to grow well in Fairbanks, Anchorage, and Matanuska valley areas. ***Copy seen:*** DA.

50025. BUSWELL, ARTHUR S. Vegetables; select them, show them at your district fair. Palmer, June 1957. 9 p. (Alaska. University. Agricultural extension service, Circular no. 458.)

Instructions to exhibitors concerning the preparation, desired qualities and appearance of vegetable exhibits in general, and of each kind of those grown locally. About 25 species are discussed. ***Copy seen:*** CaMAI.

50026. BUSYGINA, M. V., *and* **A. A. MINKH.** Vliianie otritsatel'no ionizirovannogo vozdukha na kholodovuiu retseptsiiu kozhi. (Gigiena i sanitariia, Dec. 1956. god 21, no. 12, p. 5–11, illus., tables.) 15 refs. Text in Russian. ***Title tr.:*** Effect of negatively ionized air upon cold-reception of the skin.

Account of experiments with subjects inhaling artificially ionized air, ambient temperature and humidity remaining constant. During breathing of nega-

tively ionized air there was a decrease in the number of responding cold-points; after inhalation of such air a significant increase took place.

Copy seen: DNLM.

50027. BUTAKOVA, E. L. K petrologii Maĭmecha-Kotuĭskogo kompleksa ul'traosnovnykh i shchelochnykh porod. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik statei po geologii Arktiki, vyp. 6, p. 201–249, fold. plate, illus., 4 tables, 2 text maps.) 5 refs. Text in Russian. ***Title tr.:*** Petrology of the ultrabasic and alkali rock complex of the Maymecha-Kotuy River basin.

Presents results of author's field investigation, 1952–1955, in the Maymecha-Kotuy interfluve region, 71°45′ N. 102° E., and his study of petrographic collections made earlier by others. Magmatic activities in the region are outlined. The magmatic series of melanocratic nepheline basalt, limburgite, ankaratrite, and augite, and the appearance of these minerals in vein facies are described. The maymechite mineral-bearing series discovered by IU. M. Sheĭnmann and P. S. Fomin in 1943–44 is outlined. The chemical properties of the magmatic rocks are discussed and results of analyses are tabulated and diagrammed. The dunite-peridotite-bearing intrusion of the Sabyda-Gulya River area and its vein facies are treated; the tectonics, especially of magmatic intrusions, are reviewed.

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BUTAKOVA, E. L., *see also* Tkachenko, B. V., *and others.* Geologicheskoe stroenie . . . *1957.* No. 55460.

BUTKOVICH, T. R., *see* Bader, H., *and others.* Excavations and installations . . . *1957.* No. 49471.

50028. BUTLER, EVELYN I., *and* **G. A. DALE.** Alaska, the land and the people. New York, Viking Press, 1957. 159 p., approx. 100 illus., maps.

Popular description of Alaska and the native population, with impressions from 12 years experience in educational and welfare activities, much of it in active field work as members of the Alaska Native Service. ***Copy seen:*** DLC.

50029. BUTORIN, D. A. Razvivat' promysel belukhi. (Rybnoe khozĭaĭstvo Feb. 1957. god 33, no. 2, p. 21–25) Text in Russian. ***Title tr.:*** Develop the beluga industry.

Information is presented on the distribution of this whale (arctic and Far Eastern waters); migrations; methods of hunt; harpooning, netting; advantages and disadvantages of the various methods; metal nets and their value; reserves of this species; industrial prospects; parts utilized. ***Copy seen:*** DLC.

BUTSCH, ROBERT S., *see* Humphrey, P. S., *and* R. S. Butsch. The anatomy of the Labrador duck . . . *1958.* No. 51848.

50030. BUTSON, ARTHUR RICHARD CECIL. Utilisation of high-fat diet at low temperatures. (Lancet, May 27, 1950. v. 258, p. 993–94, tables.) 12 refs.

Report on investigation of the sledging ration of the Falkland Islands Dependencies Survey in the Antarctic. A 4,000-calorie diet containing 40.5% fat with a ketonic/antiketonic ratio of 0.73 was well tolerated at temperatures around 0° F. but not at temperatures around 32° F. It produced high total-fat faeces with reversal of the normal split/unsplit fat proportions. However, as the diet gave little residue, this does not indicate poor fat utilization.

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50031. BUTTERS, FREDERIC KING, 1878–1945. Taxonomic studies in the genus *Majanthemum.* (Minnesota studies in plant science, 1927. no. 3, p. 429–44, 4 illus.)

This genus of the lily family consists of three species, *M. bifolium* of Europe and *Siberia, M. dilatatum* which extends from Japan to California (occurring on Bering Island and in Alaska), and *M. canadense* of Eastern North America.

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BUTTERS, FREDERIC KING, 1878–1945, *see* Rosendahl, C. O., *and others.* A monograph . . . *Heuchera. 1936.* No. 54386.

50032. BUTTERWORTH, BERNARD B. Molt patterns in the Barrow ground squirrel. (Journal of mammalogy, Feb. 1958. v. 39, no. 1, p. 92–97, illus.) 4 refs.

Description of molting patterns for spring, winter and juvenal molts of *Spermophilus undulatus kennicotti.* Spring and winter molts occur in five months' summer activity; the former proceeding nose to posterior, with definite lines, the latter, posterior to nose, without lines and rapidly. The juvenal molt is only a partial hair replacement. This species appears

to be unique in the genus in completing two molts in such a short time.

Copy seen: DLC.

50033. BYCHKOVA, N. V. Pis'ma I͡A. M. Sverdlova iz ssylki; 1911–1916 gg. (Akademiĭa nauk SSSR. Institut istorii. Istoricheskiĭ arkhiv, Sept.–Oct. 1956, no. 5, p. 105–129.) Ref. Text in Russian. ***Title tr.:*** I͡A. M. Sverdlov's letters from exile; 1911–1916.

A short biographical introduction is followed by a series of letters (personal and political) by this known revolutionist and early communist leader. Some (p. 114–27) were written from his places of exile on the lower Yenisey River: Kureyka, Selivanikha and Monastyrskoye, now Turukhansk. ***Copy seen:*** DLC.

50034. BYERS, DOUGLAS S., 1903– . The Bering bridge, some speculations. (Ethnos, 1957. v. 22, no. 1–2, p. 20–26, map) 5 refs.

Discusses the theories expounded by Dr. Sigvald Linné (No. 46381) and speculates on the time and route used for the foot-crossing from Asia to the American mainland. Submarine topography, theories on the rise and submergence of land masses during various phases of the glacial periods, etc., are considered. The shallower Cape Chaplina—St. Lawrence Island—Norton Sound area is favored above the shorter Cape Dezhneva—Cape Prince of Wales route. A date prior to 20,000 yrs. ago is suggested for the crossing.

Copy seen: DLC.

50035. BYERS, FRANK MILTON, 1916– . Tungsten deposits in the Fairbanks district, Alaska. (*In:* U.S. Geological Survey. Mineral Resources of Alaska, 1954–55. *Its:* Bulletin, 1957. no. 1024–I, p. 179–216, 7 maps, incl. 6 fold., 6 tables.) 10 refs.

Describes three deposits of scheelite, 10–20 miles northeast of Fairbanks. Location, accessibility, topography, etc., are noted, geologic features of the district described, and the tungsten deposits treated in detail. Analysis of 88 samples from one lode showed an average of 6.1% tungsten trioxide (WO_3); other lodes in the area contain less WO_3. During 1942–1944, 60 tons of ore produced 273 units, and 38 tons of concentrates and middlings produced 1923 units of WO_3. No mining is being carried on now. Scheelite-bearing lodes, as yet undiscovered in the Fairbanks district, are also considered; favorable factors are noted, and two areas are recommended for study. ***Copy seen:*** DGS.

50036. *BYGGNADSINDUSTRIN.* Brorekord norr om polcirkeln. (Byggnadsindustrin, Apr. 25, 1958. årg. 28, nr. 7, p. 229, 231, illus.) Text in Swedish. ***Title tr.:*** Bridge record north of the Arctic Circle.

Describes briefly project to connect the Norwegian city of Tromsø (69°40′ N. 18°58′ E.) with the mainland. The 1,016 m. -long and 8 m. -wide bridge, largest in Scandinavia, is to be completed by 1960. Free height will be 40 m. Tidal fluctuations of up to three m. in 24 hrs., creating a stream with 500 kg./m² pressure effect, together with severe winter conditions, present a challenge to the contractors of the all-reinforced-concrete construction. ***Copy seen:*** DLC.

50037. *BYGGNADSINDUSTRIN.* Göteborgare ser på vinterbyggen. (Byggnadsindustrin, Sept. 25, 1952. årg. 22, häfte15, p. 381–84, illus.) Text in Swedish. ***Title tr.:*** Göteburgers look at winter constructions.

Presents impressions from a group of construction technicians' visit in Mar. 1952 to sites in Dalarna and Medelpad, Sweden (60°–63° N.), to observe bricklaying and concreting practices in winter. Building activities were carried on as usual at freezing temperatures by use of heated concrete aggregates and protection of new casts by straw and snow. Recommendations for winter construction in southern Sweden, where the climate is more humid than in Norrland, are summarized. ***Copy seen:*** DLC.

50038. *BYGGNADSINDUSTRIN.* Uttorkning av vinterbygget. (Byggnadsindustrin, Nov. 10, 1953. årg. 23, häfte 18, p. 492–93, illus.) Text in Swedish. ***Title tr.:*** Dry-out of the winter construction.

Discusses various types of dryers for concrete (interior walls). The dryer should be fully automatic, transportable, and oil heated; it should separate carbonic oxide and produce a large quantity of air.

Copy seen: DLC.

50039. BYKHOREV, N. A. Prirodnye bogatstva Vostochnoĭ Sibiri na sluzhbu rodine. (Razvedka i okhrana nedr, Oct. 1958. god 24, no. 10, p. 59–61.) Text in Russian. ***Title tr.:*** The natural

wealth of Eastern Siberia in the service of the homeland.

Reports a recent interdepartmental conference at Irkutsk with regional conferences at Krasnoyarsk, Yakutsk, etc.; their purpose: resource exploration and development. New discoveries are indicated of coking coal in southern Yakut A. S. S. R.; natural gas in Lower Permian deposits of the lower Vilyuy basin; oil and fuel gas in the Ust'-Yenisey and Khatanga depressions; hematite ore in the Angara-Pit basin; iron ore in Krasnoyarskiy Kray, etc. Their potential reserves are enumerated and prospects of industrial expansion reviewed.

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50040. BYKOV, N. Pis'mo iz Murmanska. (Sovetskaîa muzyka, Mar. 1958. god 22, no. 3, p. 126–27.) Text in Russian. ***Title tr.:*** A letter from Murmansk.

Describes the town's musical life, performances (including television) of the vocal-chorus group of the Korov club, and guest appearances of the Northern Russian folksong chorus, song and dance ensemble of the Northern Fleet, etc.

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50041. BYLINSKIĬ. E. N. O zakonomernostiâkh cheredovaniîa suzheniĭ i rasshireniĭ rechnykh dolin sredne-sibirskogo ploskogor'îa v predelakh basseĭnov rek Nizhneĭ Tunguski i verkhov'ev Katangi. (Moskva. Universitet. Uchenye zapiski, 1956. vyp. 182, Geomorfologiîa, p. 177–86, diagrs., table.) 2 refs. Text in Russian. ***Title tr.:*** Regularities in the successive narrowing and widening of river valleys in the central Siberian plateau in the area of the Nizhnyaya Tunguska and upper Katanga River basins.

Geomorphic analysis of changes in valley width of the Nizhnyaya Tunguska and its tributaries, the Yeka, Pirda, Ilimpeya, Kochechuma, Turu, Dzhelindukon, and of the Tetere and Katanga (60°50′ N. 97°20′ E.) in the Podkamennaya Tunguska system. Causes and types of the succession of broad by narrow valleys and the interrelation between the main hydrographic characteristics of the river and rocks of the valley are discussed. Data are tabulated to show changes of valley width and its relation to width of the river bed. ***Copy seen:*** DLC.

BYRNÄS, IVAR, *see* Helmers, U., *and* I. Byrnäs. Skogodlingsarbete . . . *1952.* No. 51675.

50042. BYRNE, J. C. Rayrock in production. (Western miner and oil review, July 1957. v. 30, no. 7, p. 60.)

Reports surface and underground development, construction, production potential, and financial status of Rayrock Mines Ltd., uranium mine and mill located about 35 mi. from Marian Lake, Mackenzie District. Milling started May 31, 1957; overall recovery of 94% is expected. ***Copy seen:*** DI.

50043. BYRNE, NORMAN W. The Rayrock story. (Western miner and oil review, Apr. 1957. v. 30, no. 4, p. 71–77, illus., maps.)

Describes the geology, exploration, plant construction, milling process, mining costs, and freighting methods of the Rayrock Mines Ltd. Its property is on Sherman Lake (62°27′ N. 116°31′ W.) in the Marian River area of Mackenzie District. Uranium occurrences were first discovered in 1948; production is to begin in June. Living facilities, and some personnel are indicated.

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CADE, TOM J., *see* Kessel, B., *and* T. J. Cade. Birds of the Colville River . . . *1958.* No. 52247.

50044. CAHN, J., *and* **M. HÉROLD.** Métabolisme cardiaque sous hypothermie. (Société de Biologie, Paris. Comptes rendus, 1956. t. 150, no. 10, p. 1689–93, tables.) 3 refs. Text in French. ***Title tr.:*** Cardiac metabolism during hypothermia.

Account of investigations on dogs made hypothermic with pharmaca ("artificial hibernation") or by external cooling. Changes were studied and compared in both groups and in normothermic animals in regard to hemodynamics, glucose, lactate and pyruvate utilization. Mild hypothermia only (down to 27° C.) was applied. ***Copy seen:*** DNLM.

50045. CAHN, J., *and* **M. HÉROLD.** Métabolisme cardiaque sous hypothermie; effets de l'hormone somatotrope, STH. (Société de Biologie, Paris. Comptes rendus, 1956. t. 150, no. 11, p. 1879–81, table) 4 refs. Text in French. ***Title tr.:*** Cardiac metabolism during hypothermia; effects of the somatotropic hormone, STH.

Account of experiments on dogs, with normothermic animals as controls. At 26° body temperature, STH reduced cardiac utilization of glucose and pyruvate, and raised that of lactate. Animals given lytic cocktail showed at 28° C. a higher utilization of glucose than at normal body temperature, with pyruvate utilization slightly and that of lactate considerably reduced.

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50046. CAHN, J., *and* **M. HÉROLD.** Métabolisme cardiaque sous hypothermie, 3; effets du rythme idioventriculaire et de l'arrêt total de la circulation veineuse de retour. (Société de Biologie, Paris. Comptes rendus, 1956. t. 150, no. 11, p. 1932–34, table) 4 refs. Text in French. ***Title tr.:*** Cardiac metabolism during hypothermia, 3; effects of idioventricular rhythm and of total arrest of venous return circulation.

In the "hibernating" dog (29° to 27° C.) total arrest of venous return circulation caused a reduction of the coronary debit. Xylocaine infiltration into the sinus node evoked the appearance of idioventricular rhythm and of bradycardia accompanied by a reduction of coronary debit; complete arrest of circulation also caused a fall in coronary deficiency. The metabolic effects of these conditions are also discussed.

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50047. CAILLEUX, ANDRÉ, 1907– , *and* **G. TAYLOR.** Code expolaire. Paris, N. Boubée, 1952? 19 p., fold. diagrs. 3 refs. Text in French.

Presents a simple handy code to identify and designate the color of soil and rocks in the field, based on experience during Expéditions Polaires Françaises in Greenland. Data from observations in Africa were added. Instructions for use, color names, tables of comparison with the Seguy, Ostwald, and Munsell codes are supplied. Color card is included, providing altogether 259 colors; 240 to 250 of these are found in soils. ***Copy seen:*** DLC.

CAIN, ANNE B., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

CAIN, JOSEPH CARTER, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

50048. CAIN, ROY FRANKLIN, 1906– , *and* **L. K. WERESUB.** Studies of coprophilous Ascomycetes, V.; *Sphaeronaemella fimicola*. (Canadian journal of botany, Jan. 1957. v. 35, no. 1, p. 119–31, 33 illus.) 11 refs.

Contains an amended description of *S. fimicola*, Marchal, with both perfect and imperfect stages, found on dung of wolf in the Ungava Peninsula. The species is culturable, growing more consistently on V-8 vegetable juice agar than on other media. cf. No. 44239, 50049.

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50049. CAIN, ROY FRANKLIN, 1906– . Studies of coprophilous Ascomycetes, VI; species from the Hudson Bay area. (Canadian journal of botany, May 1957. v. 35, no. 3, p. 255–68, 14 illus.) 10 refs.

Contains an annotated list of 26 species in 12 genera, and descriptions of four new species. Among them: *Sordaria arctica* n. sp. on wolf or fox dung in the tundra near Churchill, and *Sporormia polymera* n. sp. on dung of caribou in northern Quebec. A number of collections of dung from the Ungava Bay area of northern Quebec, Cornwallis Island and Churchill, were examined. ***Copy seen:*** DLC.

50050. CALDER, J. A. Notes on the genus *Carex*, I; a new species of *Carex* from western Canada. (Rhodora, Oct. 1952. v. 54, no. 646, p. 246–50, text map.) Contrib. no. 1190, Div. of Botany and Plant Pathology, Science Service, Canadian Dept. of Agriculture.

Describes in Latin and English *Carex raymondii* n. sp., native to Alaska, Yukon Territory and Mackenzie District. It is compared with a related species *C. atratiformis* (northern Quebec and Labrador). ***Copy seen:*** DA.

50051. CALDER, J. A. Vascular flora of the Melville Peninsula, Franklin District, N.W.T. (Canadian field-naturalist, Sept.–Oct. 1951. v. 65, no. 5, p. 180–84.) 6 refs.

Contains general notes on the flora of the region (68° N. 84° W.), followed by a systematic list of about 150 species and forms. ***Copy seen:*** DA.

50052. CALDER, RITCHIE, 1906– . Men against the frozen North. London, Allen & Unwin, 1957. 279 p. illus., maps. *Also pub.* by Nelson, Toronto and Macmillan, N.Y.

Journalist's impressions from trips in the northern Canadian mainland and islands, accompanying scientists, doctors, R.C.M.P., etc. in 1955. Norman Wells,

Aklavik, Resolute, Fort Simpson Agricultural Research Station, Yellowknife mines, Churchill, Cornwallis Island, etc., and Thule in northwest Greenland are described. Resource developments are appraised, specifically their effects on native population. Good photographs, including one of the North Pole area augment the text. ***Copy seen:*** DLC.

CALEY, J. F., *see* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

50053. CALLEN, E. O. Studies in the genus *Euphrasia* L.: I, III. (Journal of botany, Sept. 1940. v. 78, no. 933, p. 213–18; Rhodora, May 1952. v. 54, no. 641, p. 145–56.) 20 refs.

Contains (in pt. 1) descriptions of two new species, one new variety and four hybrids from Europe and North America, including *E. pennellii* var. *naicna* n. var. (Fairbanks, Alaska). Pt. 3 is a study of *E. arctica* complex, with redescription of *E. arctica* (The Faeroes, Iceland, Greenland and northeastern Canada), also synonymy and critical notes on *E. a. arctica* (Greenland), *E. a.* var. *obtusata* n. comb. (northern Norway, Labrador, Greenland), *E. a.* var. *submollis* n. comb. (North Norway, Baffin Island, Hudson Strait) and *E. a.* var. *inundata* n. comb. (Tromsø, Norway, Wilson Island, Hudson Bay). Pt. 2 (1941) of this paper does not contain arctic material.

Copy seen: DA.

CALTABIANO, S., *see* Grassi, B., *and* S. Caltabiano. Effetto della fatica . . . *1956.* No. 51334.

50054. CAMERON, AUSTIN W. Canadian mammals. Illus. by John Crosby. Ottawa, Dept. of Northern Affairs and National Resources, 1958. 81 p. illus., maps.

A lucid handbook for general use, on about 70 common Canadian mammals. Illus., a map of geographic distribution, habitat, natural history, food propagation, economic value, etc. are given for each in turn, together with morphology, color, size, and outstanding characteristics. Most of the forms treated extend to or inhabit the far North.

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CAMERON, RICHARD L., *see* Schytt, V. Glaciological investigations . . . Thule . . . *1957.* No. 54640.

50055. CAMERON, THOMAS WRIGHT MOIR, 1894– . Parasitology and the Arctic. (Royal Society of Canada. Transactions, June 1957. v. 51, ser. 3, sect. 5, p. 1–10.)

Notes on parasites found in northern Canada, their life cycles, the manner in which they infect men and animals, and resulting diseases. Included are *Trichina* with an infection incidence of about 30% among some Eskimo groups; *Echinococcus* with a 40% rate of infection among Indians in some parts of Northwest Territories and the Yukon; and fish parasites such as the tapeworm of the genus *Diphyllobothrium*. The trematode *Metorchis conjunctus* infects dogs and so does *Uncinaria* (or *Dochmoides*) *stenocephala*. The pinworm, *Enterobius vermicularis*, and a parasite of small rodents *Capillaria hepatica* infects man or domestic animals. ***Copy seen:*** DLC.

CAMPBELL, ÅKE, 1891– , *see* Arctica, essays. . . *1956.* No. 49365.

CAMPBELL, ÅKE, 1891– , *see* Odenius, O. Contributions . . . Campbell's bibliography. *1956.* No. 53698.

CAMPBELL, DAN HAMPTON, 1908– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

CAMPBELL, DAN HAMPTON, 1908– , *see* Sutherland, G. B., *and others.* Cold adapted animals, 2 . . . plasma . . . elements . . . blood . . . cold. *1958.* No. 55240.

50056. CAMPBELL, JAMES, 1907– , *and others.* Effect of exposure to cold on the coenzyme A content of liver tissue. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 22.) *Other authors:* G. R. Green, E. Schönbaum, *and* H. Socol.

Rats exposed to cold showed an elevation of coenzyme A content of the liver. This increase occurred early during adaptation and persisted up to 24 days of exposure. The response also took place in animals fed a diet deficient in pantothenic acid. ***Copy seen:*** DNLM.

CAMPBELL, JOHN M., *see* Harp, E. Arctic. *1958.* No. 51596.

50057. CAMPBELL, N. J., *and* **A. E. COLLIN.** The discoloration of Foxe Basin ice. (Canada. Fisheries Research Board. Journal, Nov. 1958. v. 15, no. 6, p. 1175–88, illus., tables, maps.) 13 refs.

511326—60——13

Account of studies conducted in 1955 from HMCS *Labrador*. Of the two main theories on discoloration of this ice: air-borne deposition of dirt and suspension-freezing of sediments, the latter is considered as "more complete and answering the arguments that the wind theory fails to take into account." Mineralogically the ice and bottom sediments show common origin; however, the Foraminifera found in the ice samples were benthonic forms. A list of these Foraminifera is appended.

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50058. CAMPBELL, WILLIAM J. The arctic jet stream. Seattle, Wash., July 1958. 41 p. 2 tables, 8 graphs. (Washington, *State*. University, Dept. of Meteorology and Climatology. Arctic meteorology—climatology, occasional report no. 10. Scientific report no. 1, AF contract 19 (604)-3063) 15 refs. Sponsored by the Geophysics Research Directorate of the U.S. Air Force Cambridge Research Center, Air Research and Development Command.

A model of the arctic jet stream is constructed, using a new method for averaging temperature and wind fields. Characteristic temperature and wind distribution from the surface to about 13 km. and from 61°N. to 81°N., is shown on graphs. Jet streams ordinarily are not single entities, ordered and regular in movement, but multiple, splitting and coalescing and meandering over wide areas. They are closely related to the frontal zones and probably occur as often in the Arctic as in temperate latitudes. ***Copy seen:*** DWB.

CAMPBELL, WILLIAM J., *see also* IUGG. Symposium on polar meteorology. *1958*. No. 51947.

50059. CANADA. BOARD OF GEOGRAPHICAL NAMES. Gazetteer of Canada: Northwest Territories and Yukon; provisional. Ottawa, Queen's Printer, 1958. 89 p.

Lists names of approx. 10,000 populated places and physical features, with geographic coordinates, most are names approved by the Board.

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50060. CANADA. BUREAU OF STATISTICS. Monthly review of Canadian fisheries statistics, Ottawa, 1, 1947– *in progress*.

Contains statistical data on landings, by provinces and species of sea fish, including such from arctic waters of the northwest Atlantic, their quantity and value, disposition, etc. Similar information is given on fresh-water fish from Northwest Territories, Quebec and Ontario. Subsequent sections present data on processing, including by-products (meal, oil, skins, etc.); stocks of sea and fresh-water fish, frozen, salted and otherwise preserved; imports; exports; prices; as received by fishermen; wholesale, retail, price indexes. The detailed statistics are preceded by a summary review for the month. ***File seen:*** DLC.

50061. CANADA. DEFENCE RESEARCH BOARD. Operation Hazen; narrative and preliminary reports for the 1957 season. Ottawa, Jan. 1958. 3, 57 p. illus., 3 maps incl. 2 fold., diagr. (*Its:* Operation Hazen no. 2.)

Describes work of a nine-man expedition, the first to the Lake Hazen area of northern Ellesmere I. since 1935 (No. 11700), part of the Canadian IGY program. Led by glaciologist G. F. Hattersley-Smith, expedition carried out field investigations in meteorology, glaciology, geology, geophysics, wildlife, and on equipment and food, May 2–Aug. 18. Base camp on north shore of Lake Hazen, and Gilman Glacier camp, at approx. 3400 ft. elev. 25 mi. northeast of the base, were starting points for several trips by boat, aircraft, dog team, tractor, and on foot. An introductory review of work in the area, by G. F. Hattersley-Smith (p. 1–2), is followed by topical reports:

Lake Hazen base camp: chronology, by R. E. Deane (p. 3–4);

Gilman Glacier camp: narrative, by G. F. Hattersley-Smith (p. 5–8) of activities of glacier camp party;

Sealift, by J. P. Croal (p. 9–12), transportation of personnel, equipment and supplies to Thule and thence to Lake Hazen, by icebreaker, plane, and helicopter;

Hydrographic information, by J. P. Croal (p. 13–15, fold. map), soundings and other hydrographic data on Conybeare Bay and Chandler Fiord;

Bedrock geology, by R. L. Christie (p. 16–18), reconnaissance survey May 15–Aug. 15;

Pleistocene geology and limnology, by R. E. Deane (p. 19–23, fold. map), glacial deposits, notes on streams and Lake Hazen;

Geophysics, by F. S. Grant (p. 24–25), six profiles of bedrock topography under Gilman Glacier;

Glaciology, by G. F. Hattersley-Smith (p. 26–31), regime of the highland ice;

Meteorology, by J. R. Lotz (p. 32–37), summary of observations May 14–Aug. 8: temperature, relative humidity, wind, pressure, clouds and cloudiness, fog, sunshine, precipitation accumulation and ablation on Gilman.

Survey, by K. C. Arnold (p. 38–40), determination of positions and elevations of seismic and gravity observation points, movement of Gilman Glacier;

Wildlife, by R. L. Christie and G. F. Hattersley-Smith (p. 41–44), numbers of mammals, birds, etc., observed at each camp site, with notes.

Meteorological equipment, by J. R. Lotz (p. 45–52, diagr.), list of instruments, performance, disposition;

Selected items of army clothing and equipment by G. F. Hattersley-Smith (p. 53–55), use and performance.

Selected items of food, by G. F. Hattersley-Smith (p. 56–57) use, palatability, performance. ***Copy seen:*** CaMAI.

50062. CANADA. DEPT. OF EXTERNAL AFFAIRS. North Pacific fur seals convention. (*Its:* External affairs, May 1957. v. 9, no. 5, p. 176–78, illus.)

Notes success of the North Pacific Fur Seal Conference, held in Washington, Nov. 1955–Feb. 1957. An Interim Convention signed by Canada, Japan, U.S.S.R. and the United States (replacing the North Pacific Fur Seal Convention of 1911–1941 and the bilateral Canadian-American agreement since 1942) provides for a co-ordinated six yr. research program to determine herd management and the seals' damage to commercial fishing. During this period, pelagic sealing is restricted to controlled annual kills made on island breeding grounds by United States and U.S.S.R., with shares based on a 15% formula to Canada and Japan. Activities are to be co-ordinated by a Joint Commission which will make recommendations, based on the research data, for a permanent convention. Fur seal population is approx. 1,800,000 on the Pribilofs and 100,000 on Komandorskiye and Tyuleniy Islands. ***Copy seen:*** DLC.

50063. CANADA. DEPT. OF FISHERIES. Accomplishments of I.N.P.F.C. (*Its:* Trade news, May 1958. v. 10, no. 11, p. 7–8, 10, illus.)

Information is presented on the size of the area covered by the International North Pacific Fisheries Convention; intermingling of North American and Asian salmon populations; oceanographic conditions and salmon movements and distribution; British Columbia salmon caught in the sea; etc. ***Copy seen:*** DLC.

50064. CANADA. DEPT. OF FISHERIES. Atlantic seal fishery. (*Its:* Trade news, Feb. 1957. v. 9, no. 8, p. 18.)

Contains information on the number of Canadian, Newfoundland and Norwegian vessels participating in the 1957 sealing, comparisons with 1956, yields; whaling prospects generally. ***Copy seen:*** DI.

50065. CANADA. DEPT. OF FISHERIES. Fur seal investigation. (*Its:* Trade news, Feb. 1958. v. 10, no. 8, p. 19–20.)

Information on the first Canadian research group on North Pacific fur seal and their immediate activity; the North Pacific Fur Seal Convention and its provisions; distinction between hair seal and fur seal. ***Copy seen:*** DI.

50066. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. Annual report for the fiscal year 1956–57. Ottawa. Queen's Printer, 1957. 133 p. illus., tables.

Contains reports of the Surveys and Mapping Branch, Geological Survey, Mines Branch, Dominion Observatories and Geographical Branch, each including work in the Arctic and sub-Arctic. During 1956, the Geodetic Survey, using shoran, extended framework of survey control northward to the 75th parallel, and plans to complete the network over the Arctic Islands in 1957. The Topographical Survey completed control for the 1:250,000 mapping of Yukon, started in 1944. The CGS. *Baffin*, designed for arctic work, was added to the Hydrographic Service fleet. Twelve aeronautical charts of areas in Ellesmere Island and the Sverdrup Islands were being sketched. New maps (1066) printed by the department, included many of arctic areas. Five geological field parties were in the Northwest Territories and Yukon, and others in northern Quebec. Dominion Observatories carried on extensive magnetic studies in preparation for the IGY. The Geographical Branch field surveys in the Northwest Territories, and study

on sea-ice conditions in Hudson Bay and Strait are noted. ***Copy seen:*** DGS.

50067. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. Minerals, Canada and the world. Ottawa, 1957. 2 pt.: 247, 114 p., illus. (*Its:* Mineral Resources Division. Mines Branch Report no. 860.)

Relates Canada's mineral industry to the world's by means of proportional circle maps, bar charts and line graphs of production and trade of 35 metals, nonmetals and mineral fuels. Maps show locations of producing areas, areas being developed for production, major known occurrences not currently under development, smelters and refineries. Present and future development in Canada is noted for each of the 35 minerals. Statistical data from which the maps, graphs and charts were prepared are tabulated in supplement (114 p.) without areal breakdown. ***Copy seen:*** DGS.

CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS, *see also Canadian weekly bulletin.* News notes. *1958.* No. 50123.

50068. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. GEOGRAPHICAL BRANCH. Atlas of Canada. Ottawa, 1958. 1 v.: 450 maps on 110 sheets, 20 x 27½ in. Basic projection: Lambert conformal conic, standard parallels 49° N. and 77° N.

Basic work: cartographic compendium of the geography of the country, including exploration (1), map coverage (4, 5, 8), bathymetry and physiography (9–13), geology (15–17), seismology, magnetism and tides (18) meteorology (19–32), hydrology (33–34), soils (35), insects (37), vegetation (38–41), fauna (42–45), population (46–55), furs, whaling and fish (58), industry and mineral resources (61–76), electric power (77–78), transportation (82–88), trade, finance and construction (89), shipping (90), communications, hospitals and education (91–93), populated places, census and electoral district (95–108), political evolution (109); also Canada and the world, polar projection (110). Scales of maps showing arctic areas are chiefly 1:5,000,000, 1:10,000,000, 1:20,000,000; a few are 1:30,000,000, or 1:50,000,000. Most maps are in color. ***Copy seen:*** DLC.

50069. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. GEOGRAPHICAL BRANCH. Canadian maps 1955–1956. Ottawa, 1958. 40 p. (*Its:* Bibliographical series no. 21.) In sequence to No. 44254.

Lists selected maps of Canada, the provinces and territories; part 2 is a comprehensive list of map sheets in federal topographical series published or revised in 1955–1956. Map sheets at scale 1:50,000, 1:250,000, 1:506,880 for parts of the Yukon, Northwest Territories, northern parts of Manitoba, Ontario, Quebec are included. Detailed geologic maps, aeronautical charts and certain special maps are not included; but aeromagnetic maps (at scale 1:63,360) and hydrographic charts are listed.

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50070. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. GEOGRAPHICAL BRANCH. Selected bibliography on sea ice distribution in the coastal waters of Canada. Ottawa, Queen's Printer, 1957. 50 p. 2 fold. maps. (*Its:* Bibliographical series, no. 18.)

Lists source materials from the catalog of the Canadian Ice Distribution Survey. Reference numbers designating areas accompany the listings.

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50071. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. MINERAL RESOURCES DIVISION, *and* **GEOLOGICAL SURVEY.** Canada, principal mineral areas. Map 900A, 8th edition. Ottawa, 1958. Printed by the Surveys and Mapping Branch.

Fold. col. map, 33 × 36 in., scale 1:7,603,200. 1 in.=120 mi. Marginal indices to principal mineral-producing areas and companies; oil and gas fields, smelters or refineries, iron blast furnaces and primary ferro-alloy plants. The Knob Lake, Lynn Lake, Flin Flon, Sherridon, North Rankin, Port Radium, Yellowknife, Forty-mile, Dawson, Keno Hill, Norman Wells areas are included. Small marginal maps indicate producing areas of individual minerals, potential producing areas, etc. Rock type distribution is shown. Mineral production values, 1939–1957, are tabulated.

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50072. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. MINERAL RESOURCES DIVISION. Coal mines in Canada. Ottawa, Queen's

Printer, Jan. 1958. 38 p. (*Its*: Mineral resources operators list 4)

Contains operating data on coal producers in Canada, active and inactive. Includes one small, active bituminous mine, at Carmacks, Yukon Territory; two inactive mines at Kluane Lake and Great Bear Lake, are noted.

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50073. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. MINERAL RESOURCES DIVISION, *and* **MINES BRANCH.** Metal and industrial mineral mines in Canada. Ottawa, Queen's Printer, Jan. 1957. 37 p. (*Its:* Mineral resources operators list 2–1) Consolidation (since 1955) of several lists covering various such mines pub. at intervals since 1914.

Lists mines producing 13 metals or groups of metals, and mines producing 18 industrial minerals or groups of minerals, arranged by provinces. For each mine, location, operator, and remarks, mostly on production and secondary minerals, are given. At least 30 mines in arctic or subarctic areas are listed.

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50074. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. MINES BRANCH. The Canadian mineral industry, 1906–1955; reviews by the staff of the Mines Branch. Ottawa, 1909–1959. 32 v., approx. 275 p. each, tables. (*Its:* no. 26, 26A (1906), 58(1907–1908), 88(1909), 143(1910), 201, 265(1911), 262(1912), 320, 321(1913), 384, 415(1914), 426, 427(1915), 474, 475(1916), 504, 505(1917), 520, 521(1918), 545, 546(1919), 568, 569(1920); publ. by Dominion Bureau of Statistics, Mining, Metallurgical and Chemical Branch from 1921–1932; No. 749, 750(1933), 760(1934), 773(1935), 786(1936), 791(1937), 804 (1938), (1939) through (1943) not publ., 815(1944), 820(1945), 824(1946), 827(1947), 829-(1948), 830(1949), 835(1950), 841, 843-(1951), 844, 845(1952), 851, 853(1953), 857, 859(1954) 862(1955)) English and French editions.

Basic reference work: annual summary and review of metals and minerals produced on a commercial scale in Canada during calendar year. Latest volume (1955, pub. 1959) contains reviews for 25 metallics, 35 industrial minerals, and five mineral fuels; outstanding events and accomplishments in 1955 are noted, including (in the North) new nickel production from the Lynn Lake mine of Sherritt Gordon Mines Ltd., large-scale operations of the Iron Ore Company of Canada in Quebec-Labrador, uranium production in the Beaverlodge area of northern Saskatchewan and at Port Radium on Great Bear Lake, etc. During 1955, the industry achieved the largest annual advances in volume and value of output ever recorded, although Yukon and Northwest Territories showed small decreases compared with 1954.

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50075. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. SURVEYS AND MAPPING BRANCH. Catalogue of published maps. Ottawa, Dec. 31, 1958.

Pages are numbered according to scale and quadrangle number; maps of the National Topographic System (revised 1957) are listed in seven scales, ranging from 1:50,000 to 1:1,000,000; map number, name, province, latitude, longitude, year and edition, are given. Brief explanatory remarks precede the lists.

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50076. CANADA. DEPT. OF NATIONAL HEALTH AND WELFARE. Tuberculosis services in Canada. Ottawa Research Division, Dept. of National Health and Welfare, 1955. 65 p., graphs, tables (*Its:* General series, memorandum no. 11.)

A report covering Federal tuberculosis services, activities of voluntary agencies, provincial, specially control, programs and their costs. Federal services among Indians and Eskimos (p. 4–7) include case finding and diagnostic service; hospitals and hospitalization; itinerant, floating and flying services, etc.

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50077. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. Annual report, fiscal year 1957–1958. Ottawa, Queen's Printer, 1958. 122 p., illus., tables, fold. map. 9 appendices.

Fifth, similar in content to previous (cf. No. 39129) reports. Activities in the far North reported include highway and bridge construction, community building for Eskimos and Indians, mining exploration, study and development of water and water power resources, field work in natural and social sciences, etc. The department was represented at the International Conference on the Law of the Sea in Geneva, Feb.–Apr. 1958, and

obtained an agreement on rights to the Continental Shelf. Appendices B, G–I present statistics from the Northern Administration and Lands Branch; 1957–1958 publications of the Dept., several dealing with the Arctic; annual reports of the Commissioner of the Northwest Territories and of Yukon, including information in legislation, public works, health, education, welfare, conservation, finances, etc. ***Copy seen:*** DGS.

50078. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. WATER RESOURCES BRANCH. Water powers of Canada. Ottawa, Queen's Printer, 1958. 76 p., illus., 4 diagrs., 10 maps, incl. 1 fold., tables. Map legends in English and French.

Eight principal river basins are described, noting their suitability for power development; included are the Yukon, Mackenzie, Nelson, and Hamilton. Available and developed water power resources are reviewed (Yukon Territory has 23,190, and Northwest Territories 13,050 hp. developed); increasing use of hydro-electric power and its effect on industry is reported; principal hydro-electric and hydraulic developments with turbine capacities Dec. 31, 1957, are tabulated, including four in Yukon and Northwest Territories.

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50079. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. WATER RESOURCES DIVISION. Surface water supply of Canada. Arctic and western Hudson Bay drainage, and Mississippi drainage in Canada, climatic years 1953–54 and 1954–55. Ottawa, Queen's Printer, 1958. 613 p. text map, tables. (*Its:* Water resources paper, no. 117.)

Includes hydrometric data for Mackenzie River at Simpson and Norman Wells, Slave River at Bell Rock, Great Slave Lake basin, Liard River basin, Great Bear Lake basin, Nelson and Churchill River basins. Data include monthly and daily discharge, monthly summaries of lake levels, inflow and outflow, for years ended Sept. 30, 1954 and 1955. Earlier reports on these river basins are listed as No. 21104, 33873. ***Copy seen:*** DGS.

50080. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. WATER RESOURCES DIVISION. Surface water supply of Canada. Pacific drainage, British Columbia and Yukon Territory, climatic years 1952–53 and 1953–54. Ottawa, Queen's Printer, 1957. 454 p. text map, tables (*Its*: Water resources paper, no. 118.)

Includes (p. 55–87) discharge data for the Aishihik River near Whitehorse; for the Dezadeash at Haines Junction; the Yukon at Whitehorse, Hootalinqua, Carmacks, and Dawson; Atlin Lake at Atlin; Takhini River near Whitehorse; Teslin Lake and River near Teslin; Big Salmon River near Carmacks; the Pelly at two points; Kluane Lake and River near Burwash Landing; and Stewart River near Mayo, all in Yukon Territory. Data for most streams include monthly and daily discharge for climatic years ending Sept. 30, 1953 and 1954; data for lakes include daily elevations in ft. for same period. For previous reports, see No. 39131. ***Copy seen:*** DGS.

50081. CANADA. DEPT. OF TRANSPORT. Aerial ice survey, Hudson Bay and Strait, 1958. Ottawa, June 10, 1958 7 p., mimeo.

Contains plans and directives for survey, July 14–Aug. 31, 1958, of recognized shipping track from port of Churchill to Resolution Island, covering the north and south side of Hudson Strait, west coast of Ungava Bay as far as Gyrfalcon Islands (approx. 59° N. 69° W.), and Frobisher Bay. Five schedules show: proposed flights of chartered plane from base at Churchill; general directive; communications; radio broadcasts of ice conditions; distribution of reports from Ottawa.

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50082. CANADA. DEPT. OF TRANSPORT. Navigation conditions on the Hudson Bay Route from the Atlantic Seaboard to the port of Churchill. Season of navigation 1956. Ottawa, Queen's Printer, 1957. 138 p. text maps, illus., tables, diagrs. (*Its:* Annual report, no. 28.)

Contains brief notes on navigation aids, shipping, reports from masters, and an aerial survey made in 1956; an historical account of Hudson Bay shipping by N. L. Nicholson; hydrographic information; tables of radio coast and direction-finding stations, and lights; reports from vessels using the route; glossary of ice navigation terms; radar reports and an analysis of ice conditions by A. D. Head. Weather reports from seven shore stations and four ships for all or part of period

July 1–Oct. 31, 1956, are tabulated and summarized. ***Copy seen:*** DN–HO.

50083. CANADA. DEPT. OF TRANSPORT. Navigation conditions on the Hudson Bay Route from the Atlantic Seaboard to the port of Churchill. Season of navigation, 1957. Ottawa, Queen's Printer, 1958. 132 p. text maps, illus., tables, diagrs. (*Its:* Annual report, no. 29.)

Contents similar to those of No. 50082. Summary stresses the thirty-mile ice belt extending northeast from Cape Hopes Advance, and the large quantity of drift ice on the steamer track in Hudson Bay. Fifth and final analysis of radar ice reports by A. D. Hood, notes value and limitations of radar for navigation in Hudson Bay; during the five-year survey, general area of dangerous navigation has been well defined. Most meteorological stations reported above-normal temperatures generally, Feb. through Oct. Precipitation varied from none to twice normal.

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CANADA. DEPT. OF TRANSPORT, *see also: Canadian weekly bulletin.* News notes. *1958.* No. 50123.

50084. CANADA. FISHERIES RESEARCH BOARD. Annual report 1956–1957, for the fiscal year ending March 31, 1957. Ottawa, Queen's Printer, 1957. 195 p., illus., tables.

Contains reports covering the period Jan. 1, 1956–Mar. 31, 1957. Of arctic interest are primarily the sections on the Arctic Unit, Montreal (p. 111–14) and on oceanography (p. 115–25). The first covers fisheries investigations of the Mackenzie delta, the Pelly and Garry Lakes and Back River, Northwest Territories; investigations of marine mammals, plankton, hydrography, etc. The second deals with fisheries oceanography, including surveys of the Beaufort Sea, Hudson Bay and Strait, Foxe Basin and Channel, and other arctic waters. Sea ice research, primarily as related to shipping, and Canadian cooperation in the IGY are also reported. ***Copy seen:*** DI.

CANADA. FISHERIES RESEARCH BOARD, *see also* Bishop, Y., *and others.* Index . . . publications . . . Fisheries Research Board of Canada, 1901–1954. *1957.* No. 49742.

50085. CANADA. FISHERIES RESEARCH BOARD. ATLANTIC OCEANOGRAPHIC GROUP. Oceanographic stations, arctic areas only, occupied by H.M.C.S. "Labrador" 1954 to 1957. Ottawa, 1958. Fold. map, scale 1 in.=approx. 75 mi. Produced and printed by the Surveys and Mapping Branch for the Defence Research Board of Canada.

Shows location of 701 oceanographic stations in the area from Baffin Bay-Davis Strait westward to Beaufort Sea, including Hudson Strait. Legend gives pertinent data: number of bathythermographs; salinity, oxygen, phosphate and silicate, and bottom samples obtained; plankton hauls, etc. ***Copy seen:*** DN–HO.

50086. CANADA. GEOLOGICAL SURVEY. Aeromagnetic maps published 1947–1955. Ottawa, 1956. 28 p., fold. map. Mimeo. (*Its:* Geophysics paper no. 304).

Lists by province or territory, maps published by the Survey during this eight-year period; includes 40 in the Northwest Territories.

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50087. CANADA. GEOLOGICAL SURVEY. Geology and economic minerals of Canada. Ottawa, Queen's Printer, 1957. xiii, 517 p. illus., plates, maps, incl. 4 fold. in pocket, diagrs., tables, incl. 7 fold. in pocket. (*Its:* Economic geology series no. 1, 4th edition, C. H. Stockwell, editor.) Refs. Third edition, 1947, was listed as No. 2781.

Basic source of information on the geology and the mineral industry. Recent developments noted include: rise of petroleum to first place in value of output in 1953; iron ore production in Labrador and Quebec; uranium production extended from one (Eldorado) to nine mines; activities in base metals, etc. Following a general introduction by C. S. Lord, each of the major physiographic regions is described in turn, viz,: the Canadian shield mainland by J. M. Harrison; the Appalachian region by L. J. Weeks; the St. Lawrence and Hudson Bay Lowlands and Palaeozoic outliers by J. F. Caley and B. A. Liberty; the Interior plains by R. T. D. Wickenden; the Cordilleran region, by H. S. Bostock, R. Mulligan and R. J. Douglas; and the Arctic Archipelago, by Y. O. Fortier. Physical features, previous exploration, stratigraphic, structural, and economic geology are treated, selected references added. A final chapter, Pleistocene geology and surficial deposits, by V. K. Prest, deals with glacial events

and glacial and allied deposits. Plates, maps, and diagrams illustrate, and tables summarize, the information given in the text. A colored geological map of Canada, scale 1 in.: 120 mi. shows distribution and age of rocks, classified as sedimentary, volcanic, or intrusive.

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CANADA. GEOLOGICAL SURVEY, *see also: Canadian weekly bulletin.* News notes. *1958.* No. 50123.

50088. CANADA. HYDROGRAPHIC SERVICE. Atlantic coast tide and current tables, 1959. Ottawa, Queen's Printer, 1958. 261 p. tables. (*Its:* Tidal publication no. 1.)

Annual forecast (in changed format) includes compilation of tide and tidal current tables for coast of Labrador (nine ports), tide tables for Hudson Bay and arctic waters (61 ports), tidal current information on Hudson Strait and Digges Sound. ***Copy seen:*** DN–HO.

50089. CANADA. HYDROGRAPHIC SERVICE. Great Slave Lake and Mackenzie River pilot. First edition. Ottawa, Queen's Printer, 1958. xix, 85 p. 2 fold. maps, tables. Prepared by E. J. Cooper.

Contains introductory notes on charts and navigation in general, lights and buoyage, signal systems and distress, urgency and safety signaling procedures; distances (17 points on the Lake and River); meteorological tables for Fort Smith (60°00′ N. 111°52′ W.), Aklavik (68°14′ N. 134°50′ W.), Fort Good Hope (66°15′ N. 128°38′ W.), Fort Simpson (61°52′ N. 121°15′ W.), and Fort Resolution (61°09′ N. 113°37′ W.), Chapters (11) follow on administration, products, etc., ice; sailing directions for Great Slave Lake: western shore, Slave Point to Fort Rae, Yellowknife Bay to Gros Cap, Stony Island to the Mackenzie River entrance, including the Slave River. Directions for Mackenzie River cover: Great Slave Lake to Fort Simpson, to Fort Norman, to Arctic Red River, to Mackenzie and Kugmallit Bays, including a description of the Mackenzie and Peel River deltas. Settlements, trading posts, port facilities, tributary streams, shore terrain, etc., are described briefly; data on navigation conditions, directions, etc., are given in detail. A useful index is added.

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50090. CANADA. HYDROGRAPHIC SERVICE. Labrador and Hudson Bay pilot; supplement no. 2 to the 1954 edition. Ottawa, Queen's Printer, 1958. 27 p.

Contains additions and corrections through Mar. 5, 1958 to No. 39136, including *Notice to mariners* no. 22 of 1958. ***Copy seen:*** DN–HO.

50091. CANADA. METEOROLOGICAL BRANCH. Canada location identifiers. Fifth ed., effec. Oct. 1, 1958. Replaces circular 2767, Mar. 23, 1956, and revisions. 30 p. (*Its*: Circular-3092, no. 409.)

Lists alphabetically and numerically, aerodromes, weather observing stations, radio range stations and aeronautical radio beacon stations, including those in Yukon Territory, Northwest Territories, northern Manitoba, Ontario, and Quebec. Prepared for needs of weather, communications, and air traffic control services in relation to air navigation.

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50092. CANADA. METEOROLOGICAL BRANCH, *and* **U.S. WEATHER BUREAU.** Climatological summary, Isachsen, N.W.T., Canada. May 1948 to December 1953. Toronto, 1958. 99 p., 4 text maps, diagrs., tables.

Contains meteorological data from Isachsen (78°47′ N. 103°32′ W.); with summaries from four other stations, viz., Alert, Eureka, Mould Bay and Resolute, established 1947–1950 by the Meteorological Branch and the U.S. Weather Bureau; the compilation constitutes first comprehensive data published for the northern part of the Canadian Arctic Islands. Station location and instruments are described. Tables are in three sections: summarized surface data; daily surface data; summarized upper-air data. Notes on relocation of instruments and resulting corrections are included. Establishment and resupply of the station is outlined. ***Copy seen:*** DN–HO.

50093. CANADA. METEOROLOGICAL BRANCH. Climatological summary, Mould Bay, N.W.T., Canada. Toronto, 1957. 92 p., 2 text maps, 9 diagrs., tables. (Joint Arctic Weather Stations: Canada, Meteorological Branch, and U.S. Weather Bureau.)

Describes station site and instruments. Some surface data are summarized for period Jan. 1949–Dec. 1953; other surface data tabulated by days. Upper air

data from twice-daily observations are tabulated by months and summarized graphically. Mould Bay station is located on Prince Patrick Island, at 76°14′ N. 119°20′ W.

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50094. CANADA. METEOROLOGICAL BRANCH. Manice; manual of standard procedures and practices for ice reconnaissance. Provisional edition. Toronto, June 16, 1958. 32 p., 2 fold. maps. (*Its:* Circular 3061.)

Ice observing, recording and reporting procedures, etc., to be followed till World Meteorological Organization standards published. Terminology is noted; information to be shown on ice track charts is listed; format of ice messages is prescribed; observational techniques from shipboard are described. Appendices list ice symbols for track chart; give an example of chart; show coverage of observer's charts; list abbreviations used in messages. ***Copy seen:*** DN–HO.

50095. CANADA. METEOROLOGICAL BRANCH. Monthly record of meteorological observations in Canada. Sept. 1944–June 1956. Toronto, 1950–1959. In sequence to No. 2800. June 1956 issue: 99 p. maps, tables, refs. in text.

Records of: daily max. and min. temperature; daily precipitation; summary of observations of pressure, temperature, humidity, cloud, visibility and wind; temperature and precipitaion summaries; summary of winds at hourly weather reporting stations; summary of hourly winds; daily bright sunshine; mean percentage of bright sunshine registered in each hour of the day; summary of sunshine records; total daily solar radiation received on a horizontal surface. Maps show temperature departures (2° F. interval) and total precipitation (1-in. interval). Northern stations recording these elements were located, June 1956, in Yukon Territory (1–11 stations), Northwest Territories (6–39), District of Franklin, i.e., Arctic Islands (15), Northern Manitoba (0–5), Northern Ontario (0–3), Northern Quebec (2–18), and in Labrador (0 to 9 stations).

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50096. CANADA. NATIONAL ADVISORY COMMITTEE ON RESEARCH IN THE GEOLOGICAL SCIENCES. Annual report 1950/51–1957/58. Ottawa, 1951–1958, *in progress.* 8 v. approx. 125 p. each. Refs. Mimeographed.

Contains a summary of the Committee's work; reports of seven subcommittees covering the different fields of geology; a survey of current geological research in Canada, including various projects in subarctic and arctic areas.

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CANADA. NATIONAL FILM BOARD, *see* Muir, D. The National Film Board Expedition to Eureka. *1958.* No. 53442.

CANADA. NATIONAL MUSEUM, *see Canadian weekly bulletin.* News notes. *1958.* No. 50123.

50097. CANADA. ROYAL COMMISSION ON CANADA'S ECONOMIC PROSPECTS. The outlook for the Canadian forest industries, by the Forestry Study Group. March 1957. Ottawa, Queen's Printer, 1957. ix, 261 p. maps, diagrs., tables. Refs.

Discusses development, structure and economic outlook of the wood industries, with scattered references to northern forests: opening-up of new areas (p. iv, 7–9); new pulp and paper mills between Lake Mistassini and James Bay in northwestern Quebec (p. 175); increase in lumber production in Northwest Territories and northern Alberta due to recent leases of sawtimber limits (p. 176). Statistics (not otherwise presented regionally) are given for Yukon and Northwest Territories among others (p. 164–71) on progress in forest inventories, forested areas, merchantable volume, and estimates of allowable cut.

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CANADA. ROYAL COMMISSION ON CANADA'S ECONOMIC PROSPECTS, *see also* Lessard, J. C. Transportation in Canada. *1957.* No. 52773.

50098. *CANADIAN AVIATION.* Army tries Cold Duck. (Canadian aviation, May 1958. v. 31, no. 5, p. 36, illus.)

Describes 14-day cold weather exercise by the Canadian Army. 35 servicemen participated; five Cessna L-19 observation planes and a new reconnaissance camera were tested. ***Copy seen:*** DLC.

50099. *CANADIAN GEOGRAPHICAL JOURNAL.* Journal articles on the Canadian North. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. vii.)

Lists title, author, month and date of the more important articles which have appeared in this publication.

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50100. ***CANADIAN GEOGRAPHICAL JOURNAL.*** The largest island, Greenland. (Canadian geographical journal, Nov. 1958. v. 57, no. 5, p. 166–71, illus.)

Description and photographs of the life of Greenland Eskimos. The Canadian Government's plans to send Canadian Eskimos to Greenland to observe their progress are noted. ***Copy seen:*** DGS.

50101. CANADIAN MINES HANDBOOK, 1958. Toronto, Northern Miner Press, Ltd., July 1958. 324 p. incl. tables, maps.

Basic reference work for Canada, includes: active and inactive mining companies, producers of leading metals, range of mining share prices 1951–July 1958, maps of mining areas (special map of Yellowknife area). ***Copy seen:*** DGS.

50102. ***CANADIAN MINING AND METALLURGICAL BULLETIN.*** Geological Survey places 77 parties in the field. (Canadian mining and metallurgical bulletin, July 1958. v. 51, no. 555, p. 414.)

The 1958 program includes projects on submarine geology of the continental shelf, exploration in the Western Arctic islands, reconnaissance in the mountains of Yukon, stratigraphic studies in western Canada, etc.; preparations are noted for three large aircraft-supported operations in 1959, to survey 205,000 sq. mi. of the Canadian North, two of them, the Pelly and Coppermine Operations, in Yukon and Northwest Territories, are to have helicopter support; the third will take geologists to Banks and Victoria Islands. Using light aircraft, 1958 parties will explore Melville, Brock, Borden and Mackenzie King Islands; Operation Fort George, started in 1957, will continue, mapping about 35,000 sq. mi. between James and Hudson Bays and the Labrador Trough. ***Copy seen:*** DGS.

50103. ***CANADIAN MINING JOURNAL.*** North Rankin nickel mines. (Canadian mining journal, Aug. 1957. v. 78, no. 8, p. 93–97, diagr., tables.)

Contains description of new nickel mine, located at 62°49′ N. 92°05′ W., on Rankin Inlet, west side of Hudson Bay, 320 air miles north of Churchill. Access, topography, history, geology, metallurgy (tabular analysis of test samples, and of copper-nickel concentrate), also water supply, power, surface equipment, mining method (cross section, flow sheet) and milling are dealt with. Personnel is given; general conditions, as permafrost, Eskimo workers, etc., are discussed. ***Copy seen:*** DGS.

50104. ***CANADIAN MINING JOURNAL.*** World's biggest ore-dressing plant helps double Lapland iron ore output. (Canadian mining journal, Mar. 1957. v. 78, no. 3, p. 82–83, diagr.)

Describes ore-dressing plant at Kiruna, northern Sweden, to be inaugurated Oct. 1, 1957. When completed, it will have eight pairs of magnetic dressing sections, each with capacity of 500 tn/hr. This plant is part of an improvement project set up by the nationalized company, LKAB (Luossavaara-Kiirunavaara Aktiebolaget). Climatic problems choice of materials to withstand extreme cold, and effective insulation are factors in construction. ***Copy seen:*** DGS.

50105. ***CANADIAN SHIPPING.*** Arctic two-way trade is established by brokerage-shipping combination. (Canadian shipping, Oct. 1957. v. 29, no. 1, p. 72, 74, illus.)

Notes establishment of scheduled cargo runs by Chimo Shipping Ltd./Gillespie-Munro Ltd. between eastern Canadian ports and Hudson Bay and Strait outposts. Northbound ships with machinery and supplies for mining properties, etc., are to return with mining products, grain screenings (port of Churchill), machinery used in construction of radar defenses, etc. ***Copy seen:*** DLC.

50106. ***CANADIAN SHIPPING.*** CGS. *Baffin* is new survey ship. (Canadian shipping, Apr. 1957. v. 28, no. 7, p. 34–37, illus.)

Describes ice-breaking vessel of 1,387 t.d.w. designed for hydrographic surveying in Canadian arctic waters and the St. Lawrence estuary. It is propelled by four 2,000 bhp diesel engines and has an action radius of 14,000 mi. Hydrographic equipment includes laboratories and a drawing office; two Bell helicopters and a fully equipped maintenance hangar are provided. ***Copy seen:*** DLC.

50107. ***CANADIAN SHIPPING.*** C. G. S. "d'Iberville" sails for arctic waters. (Canadian shipping, Aug. 1958. v. 29, no. 11, p. 72.)

The ice-breaker is to convoy five ships to Resolute Bay; then proceed to Eureka. An airborne reconnaissance patrol is to assist the convoy; the ships carry special equipment to speed landing of cargo at Resolute. ***Copy seen:*** DLC.

50108. ***CANADIAN SHIPPING.*** CGS Labrador in D. O. T. service. (Canadian shipping, Aug. 1958. v. 29, no. 11, p. 58–59, illus.)

Notes conversion of former Naval icebreaker to meet civil requirements, and its departure in July for arctic service.

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50109. ***CANADIAN SHIPPING.*** CGS Montcalm is in service; new D. O. T. icebreaker gives early promise of living up to expectation of wholly Canadian vessel. (Canadian shipping, Apr. 1957. v. 28, no. 7, p. 33, 54, illus.)

Describes the Canadian Dept. of Transport's combination ice-breaker - buoy-tender - lighthouse-service vessel. Twin propellers are driven by main propulsion machinery of two Vickers-Skinner direct-reversing Unaflow marine steam reciprocating engines, each developing 2,000 ihp. Deadweight is 1,116 tons, speed 13 knots.

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50110. ***CANADIAN SHIPPING.*** D. O. T. fleet lands huge cargoes. (Canadian shipping, Feb. 1958. v. 28, no. 5, p. 37, 44, illus.)

Notes operations of 49 commercial freighters and tankers, five ice-breakers, about 40 small craft, and 48 grain ships in the Canadian Arctic during 1956. Some 45,000 t. of supplies were delivered to the Mid-Canada and DEW Lines in addition to the (over 25,000 t.) annual re-supply of Canadian/U.S. weather stations in the Queen Elizabeth Islands.

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50111. ***CANADIAN SHIPPING.*** D. O. T. has built new dock at Frobisher Bay. (Canadian shipping, Sept. 1958. v. 29, no. 12, p. 47.)

Notes construction of a 750 ft. long, 40 ft. wide causeway to enable direct unloading of cargo ships; fuel is discharged from small tankers through a pipeline on the pier. ***Copy seen:*** DLC.

50112. ***CANADIAN SHIPPING.*** D. O. T. plans more ships. (Canadian shipping, Aug. 1958. v. 29, no. 11, p. 48–50, illus.)

Reviews Canadian Dept. of Transport's fleet in operation (123 vessels) and under construction (14); it has ten major vessels for northern duty. A fleet of smaller craft was converted in 1958 for landing operations in Foxe Basin, Hudson and Frobisher Bays. Areas of operation are indicated. ***Copy seen:*** DLC.

50113. ***CANADIAN SHIPPING.*** Large icebreaker is launched at Lauzon for Department of Transport fleet. (Canadian shipping, Nov. 1958. v. 30, no. 2, p. 41, illus.)

Notes launching, in Oct. 1958, of the *Sir Humphrey Gilbert*, a 220 ft., 4, 250 shp diesel-electric ice-breaker/supply and buoy tender, built at the Davie Shipbuilding yard. Main specifications are given; field of operation is to include service in the Arctic. ***Copy seen:*** DLC.

50114. ***CANADIAN SHIPPING.*** RCMP gets two patrol cruisers. (Canadian shipping, July 1958. v. 29, no. 10, p. 32.)

The 178 ft. cruisers, built by Geo. T. Davie & Sons of Lauzon and by Kingston Shipyards, have diesel engines (2) of 1,300 hp. and cruising range of 5,000 mi. They are designed for navigation in ice; and for use as medical vessels, with doctor's quarters, dispensary, X-ray equipment and arrangement to maintain cabin temperature at about 40° F. for transportation of Eskimos. Electrochemical treatment of sea water eliminates corrosion and clogging of suction pipes, condensers, etc. Both vessels (one named the *Wood*) are to be in service in 1958. ***Copy seen:*** DLC.

50115. ***CANADIAN SHIPPING.*** Two Department of Transport icebreakers will be added to already large fleet. (Canadian shipping, May 1957. v. 28, no. 8, p. 56, 58.)

Gives size and construction details on vessel of 3,380 t.d.w. and diesel-electric engines of 18,000 bhp. (three propellers), Canada's largest ice-breaker, being built by the Davie Shipbuilding Ltd., Lauzon, Quebec. The other, of 900 t.d.w., to operate on the west coast, is to be built by Yarrows Ltd., Victoria, B.C. Both vessels are equipped with helicopter flight decks. ***Copy seen:*** DLC.

50116. ***CANADIAN SHIPPING.*** U.S.S.R. develops atomic ice-breaker of 16,000 tons 44,000 HP. (Canadian shipping, Aug. 1957. v. 28, no. 11, p. 65, 76.)

The *Lenin* (launched in Leningrad Dec. 1957) is designed for convoy service on the Northern Sea Route. Six lbs. of uranium is adequate for a 10,000 mi. cruise. Greater cargo capacity and more economical operation are advantages of this powerful ice-breaker.

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50117. ***CANADIAN TRANSPORTATION.*** *Alexander Henry* launched at Port Arthur. (Canadian transportation, Nov. 1958. p. 62–63, illus.)

Notes launching in July 1958 of Canadian Government ice-breaking vessel built by the Port Arthur Shipbuilding Co. Two diesel engines of 1,775 hp. give the 2,440 t. vessel a cruising speed of 12 knots with a 6,000 mi. radius of action. Auxiliary equipment includes a helicopter and a 20 t. derrick for use in the inspection and maintenance service of buoys. Each propeller shaft has a built-in shock absorber to reduce effects on the machinery while ice-breaking; full stop is made from 150 rpm. in one revolution.

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50118. ***CANADIAN TRANSPORTATION.*** Deliver 8,000 tons of supplies to Arctic. (Canadian transportation, Jan. 1958. p. 61–62, illus.)

Notes completion of Operation NORS '57, during which five ships carried 8,000 t. of supplies from Quebec City to Resolute and Eureka. The ice-breaker *d'Iberville* and the supply ship *C. D. Howe* participated. ***Copy seen:*** DLC.

50119. ***CANADIAN TRANSPORTATION.*** Great Slave controversy. (Canadian transportation, July 1958. p. 34–35, map.)

Discusses choice of Waterways or Grimshaw, Alta., as terminus of a proposed railroad from Pine Point on Great Slave Lake. If Waterways is favored by the federal government, Grimshaw interests may be compensated by expansion and improvement of the Mackenzie Highway between Grimshaw and the Lake.

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50120. ***CANADIAN TRANSPORTATION.*** The ONR, quiet consistent service. (Canadian transportation, July 1958. p. 25–28, illus.)

Contains brief survey of financial status, equipment, and recent improvements of the Ontario Northland Railroad, operating over some 723 mi. with Moosonee (51°16′ N. 80°39′ W.) on James Bay as the northern terminus.

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50121. ***CANADIAN TRANSPORTATION.*** A unique rubber developed by G. E. (Canadian transportation, Oct. 1958. p. 65–77.)

Notes discovery by General Electric of an oil-resistant nitrile silicone rubber which maintains its physical properties at temperatures from −100° to +500° F.

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50122. ***CANADIAN WEEKLY BULLETIN.*** News notes. (Canadian weekly bulletin, Ottawa, 1957. v. 12, no. 1–52.)

Current news releases on:

Administration: plans for large publicly-operated day schools in the North for native and white children, replacing mission schools, and activities in public health and welfare work (no. 4, p. 3–4); third biennial summer school for teachers in Mackenzie District held at Yellowknife, late Aug.–early Sept. 1957 (no. 35, p. 2); cooperation by U.S. and Canadian governments with regard to DEW and Mid-Canada radar lines, cold-weather testing of weapons at Churchill, Man. (no. 47, p. 1–2); projected building by Canada of $650,000 "forward scatter" station near Gander, Nfld., and participation with some countries in joint financing of other stations of the N. Atlantic network in Greenland (Narssarssuaq) and Iceland (no. 14, p. 1–2).

Eskimos and Indians: three-month mechanical training course at Leduc, Alta., for 30 Eskimos to take responsible jobs on the DEW line, part of a long-term program for Eskimos' employment (no. 13, p. 3); savings of approx. $200,000 banked by some 235 Eskimos working on radar defences; their first use of banking facilities (no. 18, p. 4); all-Eskimo tape-recorded program and film to be shown aboard the *C. D. Howe* during Eastern Arctic patrol, summer 1957 (no. 28, p. 3); Eskimo carvings in Canadian Pavilion at Brussels Exhibition 1958 (no. 40, p. 8); Canadian Eskimo arts and crafts exhibit to tour Greenland settlements for two years (no. 28, p. 5); carving by Oshaweetuk from Cape Dorset, Baffin Island, presented to Nehru (no. 19, p. 5); employment of Indians in resource development and defense projects including Mid-Canada radar line, iron mines at Knob Lake, mining developments in northern Manitoba (no. 44, p. 5–6); 34 scholarships (over $25,000) for vocational and higher schools, available to Canadian Indians (no. 20, p. 5);

Expeditions, surveys, patrols 1957: Canadian Dept. of Transport's Operation NORS '57, the resupply of U.S.-Canadian arctic weather stations, hydrographic and aerial surveys, was carried out in 50 days, by five vessels (no. 27, p. 3–4; no. 48, p. 5); with helicopters based on

C. D. Howe and *d'Iberville* ice-scouting ahead (no. 52, p. 5–6); operation by Royal Canadian Navy of radio station at Frobisher, Baffin Island, July 1–Oct. 15, in support of seaborne supply of DEW Line sites (no. 48, p. 6); arctic patrol of HMCS *Labrador*, June–Oct. 1957, to survey DEW line supply routes and landing beach areas, to resupply sites, and carry out hydrographic and oceanographic surveys; its discovery of one deep-draft channel through Bellot Strait between Somerset Island and Boothia Peninsula, another between Resor and Pike Islands leading into Frobisher Bay, Baffin Island (no. 24, p. 4; no. 36, p. 5; no. 37, p. 5); Hudson Bay Route patrol throughout navigation season 1957 by icebreaker *N. B. McLean*, also, due to increased shipping, by the *Montcalm* (no. 29, p. 4–5); Canadian participation in IGY is mainly in the Arctic, with study of aurora, rockets at Ft. Churchill, and Operation Hazen, Defence Research Board's eight-man geophysical, geological and climatological expedition to the Lake Hazen area of northern Ellesmere, led by G. Hattersley-Smith (no. 5, p. 4; no. 18, p. 3; no. 27, p. 1–2, 6); summer field work by 72 parties of the Canadian Geological Survey, including Operations Mackenzie and Fort George (reconnaissance mapping by helicopter in the upper Mackenzie basin and northern Quebec); aeromagnetic mapping along the Manitoba-Northwest Territories boundary (no. 24, p. 3); geodetic, topographic, legal, and hydrographic surveys by the Surveys and Mapping Branch, Dept. of Mines and Technical Surveys, in Hudson Bay and Strait, Northwest Territories, northern Quebec, Canadian Arctic Islands and waters; completion of shoran network of geodetic control in northern regions; maiden arctic tour of Department's new ship *Baffin* (no. 28, p. 4); summer field work by National Museum parties in Labrador and Ungava Peninsula (mammals), muskeg area west of James Bay, northern Ontario (botany), Pelly Bay area of Keewatin (mammals, birds, plants), Whitehorse region, Yukon (mosses), Teslin Lake area, Yukon-B.C., Payne Lake in Ungava Peninsula, and northern Ontario (archeology), Fort Good Hope and Colville Lakes region of Mackenzie District (ethnology), Great Whale River area of northern Quebec (anthropology, sociology) (no. 25, p. 5–6); exploratory soil surveys by the Dept. of Agriculture in Yukon and Northwest Territories since 1943 indicate most promising areas are larger valleys of southern Yukon, Slave and Liard and upper Mackenzie valleys (no. 11, p. 3); traces of six cultures found in 97 ancient camp-sites (containing Mongolian-type artifacts) during R. S. MacNeish's survey of approx. 62,000 sq. mi. between Dawson and Whitehorse, Yukon (no. 44, p. 4, 6);

Natural resources: iron ore mining at Knob Lake, Quebec-Labrador, nickel-copper mining at Lynn Lake, N. Manitoba (no. 30, p. 1–3, 5–6); iron ore shipments from Knob Lake area in 1956, exploration and drilling for iron from the west coast of Ungava Bay south to Wabush Lake (no. 26, p. 5–6; no. 33, p. 4); water power resources in Labrador, Yukon, and Northwest Territories (no. 19, p. 5).

Wildlife: Convention for the Conservation of North Pacific Fur Seals signed in Washington Feb. 9, 1957, by U.S., Canada, Japan and U.S.S.R., prohibiting pelagic sealing, providing for scientific investigation of seals, controlling catches made on the Pribilof, Commander, and Robben Islands (no. 8, p. 5; no. 51, p. 2); Canadian and Norwegian seal fisheries off northeast Newfoundland and in Gulf of St. Lawrence with over 406,000 seals taken in 1956 (no. 15, p. 3); International North Pacific Fisheries Commission meetings in Tokyo, Mar. 1957, dealt with salmon, herring and halibut fisheries along coasts of Alaska, B.C. and U.S., the 1957 research program extended 1955–1956 programs from latitude of San Francisco to Bering Strait and west to Asian shores (no. 13, p. 3); Canadian Fisheries Research Board investigations into reserves in the Northwest Atlantic, including Grand Banks region (no. 6, p. 5), and in the North Pacific (no. 4, p. 10); Canadian Wildlife Service plans for 18-month observation of a caribou herd to study causes of population decline (no. 12, p. 3); Dewey Soper Bird Sanctuary established on southwest Baffin Island, first in far North (no. 34, p. 2); nine whooping cranes seen in Wood Buffalo Park June 1957, five on nests (no. 25, p. 2).

Miscellaneous: Canada's largest icebreaker to be built at Lauzon, Quebec, a 315 ft. ocean-going vessel with 20,000 mi. cruising range, suitable for arctic conditions (no. 16, p. 6); Dept. of Transport's ionosphere station at Resolute, Cornwallis Island, one of a network

including Baker Lake, Churchill, Winnipeg and Ottawa (no. 51, p. 4–5); Frobisher, Baffin Island and its air traffic development (no. 46, p. 4–5); Supt. H. A. Larsen to represent Canada at unveiling of monument to Otto Sverdrup, at Steinkjer, Norway, July 21, 1957 (no. 28, p. 6); Prime Minister J. C. Diefenbaker stresses importance of Canadian Arctic, Sept. 3, 1957 (no. 37, p. 4).

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50123. ***CANADIAN WEEKLY BULLETIN.*** News notes. (Canadian weekly bulletin, Ottawa, 1958. v. 13, no. 1–53.)

Current news releases on:

Administration: opening of a 20-classroom Federal school and hostel at Fort Smith, its vocational training program (no. 4, p. 5); Fort Churchill test-fire of guided missiles; NATO troops complete 4½ week training course, including 10 days' tactical exercises with high (2,390) wind chill factor (no. 6, p. 3; no. 7, p. 8; no. 10, p. 6); new public health service for the Yukon, by Dept. of National Health and Welfare with the territorial government (no. 9, p. 5); appropriation ($591,000) to expand Canadian Broadcasting Corporation's service to the North, including community stations and a 50-kw. shortwave station for programs to the Yukon and Mackenzie District (no. 25, p. 3); Northwest Territories Council: members, organization and functions, its 15th session, July 1958 (no. 28, p. 6); Inuvik, new site of Aklavik, its planned facilities (no. 30, p. 6); Princess Margaret Range on Axel Heiberg Island (no. 34, p. 1); Dept. of Transport's Aeradio Marine Radio station opened at Churchill to serve shipping, aviation, and areas outside the present communications network (no. 50, p. 6); schools opened at Resolute on Cornwallis Island and Spence Bay on Boothia Peninsula include adult education classes (no. 51, p. 2).

Eskimos: employment at Rankin Inlet nickel mines, and inland from west coast of Hudson Bay, at Coppermine, Baffin and Belcher Islands (no. 4, p. 4); 1958 Eastern Arctic Patrol to visit 28 settlements, transfer Port Harrison Eskimos to resettle at Grise Fiord, health services, moving pictures, origin and background of the annual Patrols (no. 27, p. 1–2); arctic char (*Silvelinus alpinus*) fishing at Frobisher Bay as part of Northern Affairs program to extend Eskimos' activities, shipments to southern markets (no. 33, p. 4); Canadian Eskimos' and administrators' visit to West Greenland in Sept. 1958 (no. 36, p. 6).

Expeditions, surveys, patrols: Canadian IGY activities at Fort Churchill, in Lake Hazen area of northern Ellesmere (no. 2, p. 6; no. 48, p. 3–4); Geological Survey mapping in 1957 of 10,000 sq. mi. in the oil and gas exploration area of the upper Mackenzie River drainage basin; 1958 projects include geologic mapping by helicopter of the Wholdaia area, southeast Mackenzie; air explorations of Melville, Brock, Borden and Mackenzie King Islands; mapping of 35,000 sq. mi. between James and Hudson Bays and the Labrador Trough as continuation of Operation Fort George 1957; preparations for three 1959 aircraft-supported projects: Operation Pelly in the Yukon; Operation Coppermine, to map approx. 60,000 sq. mi. in northern Mackenzie District; reconnaissance of stratigraphic and structural features of some 125,000 sq. mi. on Banks and Victoria Islands (no. 10, p. 1; no. 26, p. 5); Dept. of Mines and Technical Surveys prepares a six-year project to photograph 500,000 sq. mi. Arctic Islands area for later detailed topographic mapping; a similar mainland project completed is being mapped by the Topographical Survey at 4 mi.: 1 in.; Geodetic Survey's completion of shoran network for these projects (no. 10, p. 2); the *Baffin* added to hydrographic fleet of Dept. of Mines and Technical Surveys, work of the Hydrographic Service including charting of Hudson Bay and Strait routes for ore and concentrates shipments (no. 10, p. 2); plans to complete Saskatchewan-Northwest Territories boundary survey during winter 1958; experiment with tellurometer for electronic measurements of distance (no. 10, p. 3); Dept. of Transport's 1958 arctic supply mission (13 Dept. vessels, 22 chartered ships, 125 barges, landing craft, tugs) included DEW Line sites in the Foxe basin area, also Mid-Canada Line locations in Hudson Bay, joint Canadian-U.S. weather stations, other outposts (no. 20, p. 2; no. 32, p. 2; no. 49, p. 5); bird and animal life survey on Prince of Wales Island, by a National Museum party (no. 21, p. 4); Army Engineers survey of Wholdaia Lake-Fort Reliance region east of Great Slave Lake (no. 21, p. 5).

Transportation: model of a Canadian Army tracked vehicle designed for over-snow and tundra operations being tested

in a program of vehicle performance evaluation (no. 2, p. 6); use of nuclear power for ice-breaker propulsion under study by the Dept. of Transport (no. 5, p. 4); construction of 1,200 mi. of roads and six major bridges to further development of mineralized areas in Yukon and Northwest Territories (no. 14, p. 2–3); Navy initiates ice-forecasting service in Gulf of St. Lawrence, Hudson Bay and Strait, and the arctic coast, to be taken over by Dept. of Transport in 1959, summer stations to be set up at Churchill, Cambridge and Frobisher (no. 20, p. 3); causeway-type dock effects 50–75% savings in cargo-handling costs at Frobisher, now a stop on intercontinental air route (no. 38, p. 3).

Natural resources and economic development: Canol pipelines transfer from U.S. to Canadian ownership (no. 14, p. 6); oil exploration and development permits and programs (no. 18, p. 4; no. 47, p. 3; no. 49, p. 4); new edition of natural resources map of Canada, issued by Dept. of Mines and Technical Surveys, includes resources to northernmost Ellesmere (no. 34, p. 1–2); refinery for asphalt, and stove, diesel and bunker fuels established at Haines Junction by Alaska-Yukon Refiners and Distributors Ltd. (no. 45, p. 6); Ontario biologists to study the sturgeon fishery in U.S.S.R. (no. 50, p. 3); whooping cranes population up to 35 (no. 37, p. 6). ***Copy seen:*** DLC.

CANNARD, THOMAS H., *see* Zaimis, E., *and others.* Effects of lowered muscle temperature . . . man. *1958.* No. 56150.

CANTLON, JOHN EDWARD, *see* Tedrow, J. C. F., *and* J. E. Cantlon. Concepts of soil formation and classification . . . *1958.* No. 55363.

CANTONI, ARMANDO, *see* Uleri, G., *and* A. Cantoni. La diffusione apneica . . . *1958.* No. 55583.

50124. CARALP, RAYMONDE. Le chemin der fer du Labrador. (Annales de géographie, July-Aug. 1957. Année 66, no. 356, p. 364–67, text map.) 2 refs. Text in French. ***Title tr.:*** The Labrador railroad.

A railroad to the St. Lawrence was essential to development of ore deposits at Knob Lake. Problems of topography, soil, climate and accessibility in construction of the Quebec North Shore & Labrador Railway are reviewed. The line was completed in Feb. 1954; its terminus at Seven Islands, facilities at Knob Lake and Oreway (midway station), rolling stock and other equipment are noted, with discussion of its operation and maintenance. Construction of the town of Schefferville at Knob Lake is also sketched. ***Copy seen:*** DGS.

50125. CARALP, RAYMONDE. L'introduction de nouvelles régions dans l'économie mondiale. (Revue de géographie de Lyon, 1957. v. 32, no. 1, p. 1–20, 3 text maps.) 23 refs. Text in French. Summary in English. ***Title tr.:*** The introduction of new regions into the world economy.

Technical progress makes possible exploitation of natural resources in areas physically unfavorable to man. New transportation facilities link these regions with the traditional industrial centers. Role of aircraft and railroad in development of the Knob Lake iron ore region of Quebec-Labrador is cited (with map showing routes to U.S. ports). The Alaska Highway, highway to Great Slave Lake, route to the Kolyma mines in the U.S.S.R. are mentioned as well as other examples from tropic and desert areas. ***Copy seen:*** DGS.

50126. CARANNA, LEONARD J., *and others.* Effect of intravenous nutrient solution on ventricular fibrillation in the hypothermic dog. (Archives of surgery, Mar. 1958. v. 76, no. 3, p. 394–97, illus., table.) 11 refs. *Other authors:* F. J. P. Telmosse *and* H. Swan.

A study of five groups of dogs undergoing hypothermia of 23°–25° C. and a standard cardiac operation. Of five kinds of fluid administered to prevent fibrillation, nutrient fluid caused a significant increase in cooling time, a marked decrease in the incidence of ventricular fibrillation, and uniformly successful resuscitation. ***Copy seen:*** DNLM.

CARBERRY, W. J., *see* Pimlott, D. H., *and* W. J. Carberry. North American moose transplantations . . . techniques. *1958.* No. 53995.

CARBERY, WILLIAM, *see* Morales, P., *and others.* Alterations in renal function during hypothermia . . . *1957.* No. 53387.

50127. CARLBORG, GUNNAR. Ny länsjägmästare i Norrbottens län. (Skogen, *Stockholm,* May 2, 1958. årg. 45, nr. 9, p. 275, port.) Text in Swedish.

Title tr.: New chief forester in Norbotten county.

Interview with Gunnar Carlborg on forestry problems and plans for solving them. Forestry education with competent teachers, sufficient seed, local nurseries are required. Farm wood lots should be made economic and, in the hard-regenerative lappmarks, subsidized. Regulation of forest lots, essential, should be initiated by lot exchanges between state-owned and lumber company forests. Forestry should be represented in the county's agricultural board. Comments by Carl-Eric Dahlgren, q.v.

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CARLE, WILMER C., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

50128. CARLGREN, OSKAR HENRIK, 1865– . A survey of the Ptychodactiaria, Corallimorpharia, and Actiniaria; with a preface by T. A. Stephenson. Stockholm, Almqvist & Wiksell, 1949. 121 p. 4 plates. (Svenska vetenskapsakademien Handlingar, ser. 4, bd. 1, no. 1.) Approx. 330 refs.

Systematic classification of known sea anemones by one of the two leading authorities on the subject, with a preface by the other, who discusses their present agreement on the systematics and clarifies their earlier differences. All major groups of sea anemones are believed to be known but the classification is still to be enlarged. In the three orders described, 67 of the species representing 41 genera have arctic locations which range from the intertidal and littoral to depths of 3500 m. Several species are circumpolar. All the main polar areas are represented.

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50129. CARLQUIST, CARL-GUSTAF. Markberedning i höjdlägen. (Svenska skogsvårdsföreningen. Tidskrift, 1950. årg. 48, nr. 4, p. 426–29.) Text in Swedish. ***Title tr.:*** Soil preparation on high ground.

Forest regeneration was examined on areas in southern Lapland and in Ångermanland at 300-500 m. altitude which had been scarified without burning over for the last 10 years. It was found that essentials for successful regeneration on the cut-over areas included: presence of 25–50 seed trees/hectare; sufficient ripening of the raw humus after cutting; a good seed year after scarification; careful siting of the treated patches; and a method suited to the climate and other local conditions. Failure in regeneration was most frequent when too much of the bleached layer was exposed, and spring drought after autumn rains had hardened the surface too much for seeds to grow. Transplanting of young plants from patches with dense regeneration is considered preferable to creating unevenaged stands by a further and more thorough scarification where regeneration has failed. ***Copy seen:*** DA.

CARLSON, CLARENCE J., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

50130. CARLSON, KEITH A. Successful low temperature operation of hydraulic systems. (Applied hydraulics, Nov. 1957. v. 10, no. 11, p. 69–72, +, illus., graphs, tables.)

Offers advice on fluid heating, starting, and choice of fluids, packings, hoses and accumulator bladders. A fluid viscosity range of 4000–70 SSU is considered acceptable for operation of hydraulic systems down to −65° F. A low-viscosity-index fluid may be preferable in certain applications, provided the oil is pre-heated. Directions for installation of electrical immersion heaters and thermostats are given, and arrangements for removal of condensation water from the hydraulic fluid are discussed. ***Copy seen:*** DLC.

50131. CARLSON, LOREN DANIEL, 1915– , *and others.* The combined effects of ionizing radiation and low temperature on the metabolism, longevity and soft tissues of the white rat; metabolism and longevity. Mar. 1957. 7 p. illus., tables. (U.S. Air Force. School of Aviation Medicine, Randolph Field, Tex. Rept. no. 57-78) 21 refs. Also pub. in *Radiation research*, 1957. v. 7, no. 2, p. 190–97. *Other authors:* W. J. Scheyer *and* B. H. Jackson.

Account of investigations on rats kept at 25° and 5° C. and exposed to total body irradiation of 0.1 r/hr for eight hrs. daily, from the age of 4 to 16 months. The animals at both temperatures had an increased life expectancy and those at 25° C. showed a higher resting O_2-consumption. ***Copy seen:*** DNLM.

50132. CARLSON, LOREN DANIEL, 1915– , *and others.* Immersion in cold water and body tissue insulation. (Journal of aviation medicine, Feb. 1958. v. 29, no. 2, p. 145–52, illus., tables.)

16 refs. *Other authors:* A. C. L. Hsieh, F. Fullington, *and* R. W. Elsner.

Account of experiments with subjects in whom fat constituted 8–32% of the body weight; the temperature of the bath ranged between 9° and 33° C. It was found that body insulation, calculated by the Burton equation, varied directly with specific gravity. The results seem to explain the wide variation in survival in cold water immersion.

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50133. CARLSON, LOREN DANIEL, 1915– , *and* A. C. L. HSIEH. The role of the thyroid in the metabolic response to low temperature. Ladd Air Force Base, Alaska, May 1957. 12 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–1) 29 refs.

Account of experiments with rats curarized and exposed to 5° C. and 28° C. at varying periods following thyroidectomy. Metabolic response to cold was found not to depend on circulating thyroxin and persisted after thyroxin stores were depleted. Cold-adapted animals reduced food intake and lost weight after thyroidectomy, but maintained a high metabolism at 5° C.

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CARLSON, LOREN DANIEL, 1915– , *see also* American Physiological Society. Symposium on metabolic aspects of adaptation of warm-blooded animals to cold environment. *1958.* No. 49280.

CARLSON, LOREN DANIEL, 1915– , *see also* Hsieh, A. C. L., *and* L. D. Carlson. Role of sympathetic nervous system . . . regulation of heat production. *1957.* No. 51834.

CARLSON, LOREN DANIEL, 1915– , *see also* Hsieh, A. C. L., *and* L. D. Carlson. Role . . . thyroid in metabolic response to low temperature. *1957.* No. 51835.

50134. CARLSON, P. R., *and others.* Geology and mechanical stabilization of Cenozoic sediments near Point Barrow, Alaska. Ames, Iowa, Mar. 1, 1958. 78 p., plates, 34 maps, diagrs., tables. (Iowa. State College of Agriculture and Mechanic Arts. Ames. Engineering Experiment Station. Project 320–S. Final Report II. Contract Nonr–530(04), Geography Branch, Office of Naval Research) 47 refs. *Other authors:* K. M. Hussey, D. T. Davidson, R. L. Handy, and C. J. Roy.

Report on investigation, carried out during summers 1954, 1955, 1956, to integrate geological and engineering properties of construction materials in the vicinity of Barrow. Representative soil samples and pertinent field data were collected; five major quantity samples were tested in the soil-testing laboratory in Ames to determine mineralogical content, particle shape and size distribution, moisture-density and consistency relationships, and bearing strength values. The samples were composed of: clay, coarse gravel, fine gravel and sand, composite of all size gradations from gravel through clay, and sandy silt; all are evaluated for construction purposes. Location of the samples and geomorphic features of the Barrow area are shown (maps based on air photos). Climate, permafrost, inaccessibility and low trafficability are discussed as factors in the problems of the region; its stratigraphy, geomorphic features are outlined. Mechanical stabilization of locally available materials is recommended; also relatively well drained and naturally occurring sites, such as the beach and ancient beach ridges; a slightly dry soil mixture for greatest strength; avoiding crushing of gravel; and reduced subgrade strength in road and airfield construction.

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50135. CARLTON, PETER L., *and* R. A. MARKS. Cold exposure and heat reinforced operant behavior. (Science, Nov. 28, 1958. v. 128, no. 3335, p. 1344, illus.) 5 refs.

Six rats were trained to receive a brief period of heat when placed in a chamber with an ambient temperature of 2° C. When transferred to live at 2° C. the animals increased the number of heat presentations delivered to themselves. Controls at room temperature did not show such an increase.

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50136. CARLTON, PETER L., *and* R. A. MARKS. Heat reinforced operant behavior as a function of prolonged cold exposure. Fort Knox, Kentucky, Jan. 1958. 2, 9 p. illus., table (U.S. Army Medical Research Laboratory. Report no. 235.) 4 refs.

Rats kept at low temperature were trained to press a lever to receive short periods of heat, as reinforcement. When moved into a 2° C. environment, an

increase in both lever pressing and food intake, and a loss of weight were observed. ***Copy seen:*** DNLM.

CARMAN, ADRIAN MARTIN, *d.* 1634, *see* Grothe, W. Zur Vorgeschichte des Geophysikalischen Jahres: 2 . . . *1957.* No. 51400.

CAROZZA, A. THOMAS, *see* Linell, K. A., *and others.* Approach roads . . . *1957.* No. 52850.

50137. CARPENTER, DON. Alaska, sportsman's paradise. (American forests, Sept. 1958. v. 64, no. 9, p. 28–30, illus.)

Contains information on the exceptional features of Alaska (size, mountains, lakes and rivers, animals, etc.); fish and fishing conditions of freshwaters; sea fish good for angling; licenses; game animals and hunting; birds. ***Copy seen:*** DA.

50138. CARPENTER, EDMUND SNOW, 1918– . Ivory carvings of the Hudson Bay Eskimo. (Canadian art, summer 1958, p. 212–15, illus.)

Discusses the Eskimo's approach to art, his lack of distinction between functional and decorative artifacts, the absence of figure orientation in group carvings. The determinating influence of the size and shape of the raw material on the finished product is stressed. The difference between aboriginal Eskimo art and the developing souvenir-trade objects is noted. Profusely illustrated by photos and drawings. ***Copy seen:*** DLC.

50139. CARPENTER, KENN. Attempt on Mount McKinley. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 89–90.)

Notes attempt by eight-man party led by author and sponsored by the Mountaineers, on Mt. McKinley in late June 1957(?). Unusual obstacles (swift current in the McKinley River) and (crevasses on Muldrow Glacier) forced the climbers to return. Two days were spent at Gunsight Pass making observations, climbing Gunsight Peak and an unnamed peak to the south. ***Copy seen:*** DGS.

50140. CARR, F. S. New Canadian Coleoptera, I. (Canadian entomologist, Dec. 1930. v. 62, no. 12, p. 278–79.)

Two new species of beetles are described; *Agabus bryanti* n. sp. was collected by O. Bryant at Shingle Point on the Yukon Territory coast. ***Copy seen:*** DLC.

CARR, MARIE H., *see* Frank, H. A., *and* M. H. Carr. Adaptive changes in hypothermia . . . experimental . . . *1958.* No. 50967.

CARRAWAY, D. M., *see* Bender, T. A., *and others.* Bibliography . . . climate of Greenland. *1957.* No. 49646.

CARRERA, RICHARD N., *see* Honigmann, J. J., *and* R. N. Carrera. Cross-cultural . . . Machover's . . . test. *1957.* No. 51801.

CARRIGHAR, SALLY, *see* Scott, R. F. Resource planning . . . *1957.* No. 54647.

50141. CARROLL, JAMES A., 1893?– . The first ten years in Alaska; memoirs of a Fort Yukon trapper, 1911–1922. New York, Exposition Press, 1957. 120 p. plates.

Recounts experiences trapping, hunting, camping, on the trail, etc., in the upper Yukon - Porcupine River area, and Crow Flats in Yukon Territory. Encounters with animals, and a variety of individuals in post-gold rush Alaska, family life at Fort Yukon, etc., are described with anecdotes of pioneer and bush life. Caribou, moose, bear, wolverine and other fur-bearers, their habits, hunting, prices, salmon fishing, dogs and sledge travel are touched upon; 27 photographs, mostly from that period, amplify the text. ***Copy seen:*** DLC.

CARSOLA, ALFRED JAMES, 1919– , *see* Fisher, R. L., *and others.* Deep-sea bathymetry . . . Point Barrow. *1958.* No. 50907.

50142. CARSON, P. J. Ice bridges. (Polar record, Jan. 1958. v. 9, no. 58, p. 18–19, diagr., illus. facing p. 20.)

Describes construction, including measurements, and maintenance of 24 ft.-wide bridges built during winter to replace ferries. They consist of a layer of wooden planks 1 in. thick, laid lengthwise with the bridge, flooded and frozen, the layers repeated, etc. Such bridges are capable of carrying 60 20-ton vehicles a day for more than four months. They are used mainly on the Mayo-Dawson road traveled by mining company trucks. ***Copy seen:*** DLC.

50143. CARSTENS, C. W. Norges forråd av mutbare mineraler, stillingen i dag og utsiktene for framtiden. (Tidsskrift for kjemi, bergvesen og metallurgi,

Feb. 1950. årg. 10, nr. 2, p. 21–24.) Text in Norwegian.

Title tr.: Norway's supply of workable minerals; present-day conditions and future prospects.

Norway is well supplied with mineral resources. In 1939 iron ore and pyrites accounted for 80% of the production. Some accessory minerals were lost because only 35% of the ores were refined in Norway. The largest iron reserves are in Sydvaranger and Dunderlandsdalen; others, in the far North, are: a large reserve of low grade nickel at Rana near Narvik, large amounts of calcium and magnesium in limestone and dolomite; beryl in useful quantities; and rich titanium deposits; copper, cobalt, molybdenum, and zinc are noted; gold is panned in Finnmark. ***Copy seen:*** DLC.

50144. CARSTENS, HARALD. Investigations of titaniferous iron ore deposits; pt. I, gabbros and associated titaniferous iron ore in the West-Norwegian gneisses; pt. II, gabbro, anorthosite and titaniferous iron ore on Flakstad in Lofoten, northern Norway. Trondheim, 1957. 67, 24 p. illus., tables, fold. map. (Norske videnskabers selskab, Trondheim. Skrifter, 4, 5.)

Titaniferous iron ore deposits in the gneiss area of western Norway occur both in gabbroic and anorthositic rocks; they were formed twice during the differentiation of the gabbros. At the middle stages when an iron-rich magma, sufficiently oxidized, had been formed as a normal product of crystal fractionation at high levels in the earth's crust, concentration occurred for the first time due to the accumulation of early formed iron ore in some parts of the mobile magma. These residual magmas later intruded the gneisses and gave rise to apatite-bearing titaniferous iron ore deposits. They are strictly late-magmatic, and a process like that suggested by J. D. Bateman might have been active in concentrating this element still more, as the iron crystallized later than the silicates.—From conclusion.

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50145. CARSTENSEN, BO LENNART, 1896– . Blåsmasksjukan, en parasitsjukdom. (Samefolkets egen tidning, June-July 1958, nr. 6–7, p. 38–39, illus.) Text in Swedish. ***Title tr.:*** The bladder-worm disease, a parasitic disease.

Notes the occurrence in north Scandinavia of *Taenia echinococcus* infestation. The first case was diagnosed at Sandträsk sanatorium in north Sweden in 1937, and 52 more during 1937–1946. A mass X-ray examination in Finnmark, Norway, recently disclosed 29 cases, mostly among Lapps who handle reindeer and dogs. An examination of reindeer showed 5–10% of the animals affected. Some general information is given on the disease and different phases in development of the parasite. ***Copy seen:*** SPRI.

50146. CARTER, ADAMS. Ascents above the lower Muldrow Glacier, McKinley range. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 90–91.)

Recounts ascents and attempts by a party of eight, June 23–July 17, 1957. Unprecedented advance of the Muldrow Glacier prevented its use for travel; Mt. Mather (12,125 ft.) and three unnamed peaks were climbed. ***Copy seen:*** DGS.

CARTER, NEAL M., *see* Bishop, Y., *and others.* Index . . . publications . . . Fisheries Research Board of Canada, 1901–1954. 1957. No. 49742.

CARTWRIGHT, GEORGE, 1739–1819, *see* Kleivan, H. Eskimoer . . . *1957.* No. 52318.

CARWILE, NESBIT L., *see* Geil, G. W., *and* N. L. Carwile. Tensile properties of copper, nickel . . . alloys . . . *1952.* No. 51115.

50147. CASE, JAMES BOYCE. Mapping of glaciers in Alaska. (Photogrammetric engineering, Dec. 1958. v. 24, no. 5, p. 815–21, illus., maps, diagr.) 7 refs.

Describes field work of IGY Project Y 4.11, sponsored by the American Geographical Society to map the Worthington, West Gulkana, Polychrome, Salmon Creek, Skolai, Kilbuck, Porcupine, Lemon Creek, and McCall Glaciers, the maps to be used primarily in study of changes in relation to long-range weather changes. A pilot project was carried out on Lemon Creek Glacier in 1955, 1957. Terrestrial surveys are correlated with aerial photography (from 15,000 ft.) to produce map manuscripts at scales 1:5,000 and 1:10,000 with a contour interval of 5 m. Surveying procedures and equipment are described; aerial photogrammetry is compared favorably to terrestrial; plotting results with the Kelsh and Wild A–7 plotters are evaluated. ***Copy seen:*** DLC.

50148. CASE, JAMES BOYCE. Photogrammetric mapping of the Lemon Creek Glacier, Alaska. Columbus, Ohio, 1957. 58 p. illus., tables, maps, diagrs. 24 refs. M.S. thesis to Ohio State Univer.

"The procedures in preparing a precise map of the Lemon Creek Glacier using photogrammetric materials are discussed; the difficulties encountered are pointed out: and solutions are suggested. A field survey conducted on the glacier in 1955 is described, including the location of control points and camera stations, phototheodolite exposure records, terrestrial and aerial photographs, and errors in survey data and their correction. Terrestrial and aerial photography are compared and evaluated, the advantages and disadvantages of both methods are pointed out, and the value of existing photographs of Lemon Creek Glacier for mapping is examined. The method used in plotting a map of the glacier is described, and the map manuscript is included."—SIPRE. ***Copy seen:*** OU.

50149. CASENTINI, S. Rapporti tra acido pantotenico e stress da freddo. (Società italiana di Biologia sperimentale. Bolletino, Dec. 1956. v. 32. no. 12, p. 1419–22, illus. table.) 13 refs. Text in Italian. ***Title tr.:*** Relations between pantothenic acid and cold-stress.

Rats given high doses of pantothenic acid showed a much higher survival rate in continuous cold (0°±1° C.) than untreated controls. Adrenalectomized animals did not respond to pantothenic acid nor did administration of ascorbic acid or cholesterol elicit protection against cold. ***Copy seen:*** DNLM.

50150. CASS, JOHN T. Reconnaissance geologic map of the Kateel River quadrangle, Alaska. Washington, D.C., 1957. Map sheet 18 x 22 in. (U.S. Geological Survey. Miscellaneous geologic investigations. Map I–243.) 13 refs.

Map (1:250,000) covers area 65°–66° N. 156°–159° W., north of the Yukon River in the southern part of the Koyukuk Cretaceous basin. Volcanic rocks of unknown age, Cretaceous graywacke, shale, grit and conglomerate, mafic intrusive rocks of undetermined age, Quaternary alluvium and sand dunes, are depicted in color; other pertinent features are shown. Brief text reviews sources of information and describes structural features. ***Copy seen:*** DGS.

CASSELMAN, W. G. BRUCE, *see* Schönbaum, E., *and others.* Comparison of certain methods for assessing adrenocortical activity in rats . . . *1958.* No. 54617.

50151. CASTLE, HEMPSTEAD. A revision of the species of *Radula* of the United States and Canada. (Torrey Botanical Club. Bulletin, Nov. 1925. v. 52, no. 8, p. 409–445, 11 illus.)

Contains a key and description of 11 species, with type locality, habitats and distribution, illus., critical notes and records of specimens. Three species: *R. bolanderi*, *R. polyclada*, and *R. complanata*, are from Alaska. ***Copy seen:*** DA.

50152. CASTRÉN, VILJO. Naturliga och konstgjorda regleringsmagasin inom Finlands stamlinjesystem. (Teknisk ukeblad, Jan. 3, 1957. årg. 104, nr. 1, p. 13–16, table, diagr., text maps.) Text in Swedish. ***Title tr.:*** Natural and artificial dams in Finland's general line system.

Regulation plans for northern Finland are outlined (p. 15–16); artificial dams are to be concentrated along the Kemiälv; eight suitable sites located by air surveys are being mapped by air triangulation from 4000–6000 m. and 1000–3000 m. heights. Projected for a total capacity of 11 billion kwh, 4.8 billion stored in kinetic energy, the earth-fill dams and electric power plants are scheduled for completion in about ten years.

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50153. CATTANEO, ANGELO DOMENICO, *and others.* La resistenza cerebrale all'ipossia, 1; modificazioni della resistenza cerebrale all'ipossia indotte dall'inalazione di ossigeno ed ossigeno-anidride carbonica in condizioni di normotermia ed ipotermia. (Minerva anestesiologica, Apr. 1957. anno 23, no. 4, p. 83–90, illus. tables) 89 refs. Text in Italian. Summary in English. *Other authors:* M. Querci, G. B. Gemma, V. Levi, *and* B. Torchiana. ***Title tr.:*** Brain resistance to hypoxia, 1; modifications of brain resistance to hypoxia induced by inhalation of oxygen and oxygen-carbon dioxide under conditions of normothermia and hypothermia.

Account of experiments with rabbits which indicate that administration for long periods of pure O_2 reduces cerebral resistance to hypoxia, whilst a mixture of 95% O_2+5% CO_2 is better tolerated. Hypothermia was found to increase the

brain's tolerance of O_2-deficiency while controlled respiration had no definite effect. ***Copy seen:*** DNLM.

CAVALLERI, L., *see* Baldini, L., *and* L. Cavalleri. Su una caratteristica morfologica . . . *1956.* No. 49502.

50154. CAVALLI, E. Det svenska pansarvapnet. Stockholm, Folkförsvaret förlags ab., 1957. 116 p. illus. Text in Swedish. ***Title tr.:*** The Swedish armored force.

Deals (p. 9–67) with armored equipment, especially tanks and anti-tank weapons, foreign and Swedish: history, organization and materiel. The Swedish armored force is outlined (p. 68–114), its organization, training, etc., peacetime status. One of four peace-time units is the Norrbotten armored battalion (p. 113–14) to be established at Boden from 1957/58. ***Copy seen:*** DLC.

CAWLEY, JOHN H., *Jr., see* Snodgrass, J. M., *and* J. H. Cawley. Bathythermometer . . . *1957.* No. 55009.

CEDERSTROM, DAGFIN JOHN, 1908– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

CEGIELSKI, MIECZYSŁAW, *see* Oszacki, J., *and others.* Objętość wątroby . . . *1957.* No. 53809.

CEGIELSKI, MIECZYSŁAW, *see* Oszacki, J., *and others.* Wpływ krwotoku . . . *1957.* No. 53810.

50155. ČEKUOLIS, A. Per tris vandenynus. Vilnius, Valstybinė grozines literatūros leidykla, 1957. 173 p. 29 plates. Text in Lithuanian. ***Title tr.:*** Across three oceans.

Account of the transfer of 50 small fishing boats (seiners) via the Northern Sea Route to Petropavlovsk in Kamchatka, the author, a Lithuanian journalist, taking part in the voyage as a working seaman. The leader of the flotilla, the motor-vessel *Kholmsk*, left Kaliningrad (former Königsberg) in the Baltic Sea July 12, 1955(?) with some of the seiners, met the other vessels in the Barents Sea, and sailed via Murmansk, Yugorskiy Shar, Dikson; rounded Cape Chelyuskin with the ice-breakers *Sibirĉakov* and *Ermak;* visited Tiksi and Chaunskaya Bays, and with the ice-breakers, *Mikoĉan* and *Molotov* (the latter is not named in the text) negotiated the ice-packed De Long Strait, and rounded Cape Dezhneva. The vessels were overhauled in Provideniya Bay, made a trip to the Commander Islands, and arrived in best condition at Petropavlovsk. Events of the voyage and places visited (Murmansk, Kil'din Island and its Lake Mogil'noye, Dikson, Tiksi, etc.) are described; rescue of the crew of a wrecked Danish steamship, the *Haraldberg* in the Yenisey River mouth is recounted (p. 82–87). The network of polar stations, ice reconnaissance, ice-breaker aid and other facilities, industrial and cultural progress generally along the Northern Sea Route are emphasized, though alcoholism and diseases of Chukchis are also noted. From the visit to the Commander Islands (p. 147–61), the fur seal herd, sea lion hunting, sea otter preserve are described, also the smallest national group of the U.S.S.R., 383 Aleuts living on these islands. Reproduction of 58 photographs illustrate the text. A similar transfer of a hundred boats is said (p. 170) to be planned for the next (1956?) year. ***Copy seen:*** DLC.

50156. CENTKIEWICZ, CZESŁAW JACEK, 1904– . Die Insel der Nebel und Stürme; die erste polnische Expedition im Zweiten Internationalen Polarforschungsjahr 1932/33. Leipzig, Brockhaus, 1956. 242 p. illus. Text in German. ***Title tr.:*** The island of fog and storms; the first Polish expedition in the 2d International Polar Year 1932/33.

Describes preparations, voyage to Bjørnøya and daily life during the 13-month stay on the island. The expedition's three members carried out meteorological observations, photographed clouds and auroras, measured intensity of solar radiation, and recorded atmospheric noise, electricity and terrestrial magnetism. Equipment is described, and a brief history of Bjørnøya is included. Results, etc. were listed as No. 7765, 10414–10419. ***Copy seen:*** DLC.

50157. CHAGNON, J. C. Water-power investigations in northern Quebec. (Canadian surveyor, annual report, 1958. v. 14, no. 4, p. 148.)

Contains abstract of paper presented at the annual meeting of the Canadian Institute of Surveying on Jan. 29, 1958, outlining investigations since 1946 on the rivers of the north shore of the Gulf of St. Lawrence and those flowing into James and Ungava Bays. In the Ungava district, longitudinal profiles have been made of about 1650 mi., the drainage

area covered: about 159,000 sq. mi. Hydrological and topographic mapping was carried out along the Payne and Toms Rivers. Problems of heating, power, transportation, etc. encountered are described in some detail.

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CHAGOVETS, R. V., *see* Kuznetsova, L. N., *and others.* Vliianie okhlazhdeniia . . . obmen piridinovykh i tiaminovykh . . . *1956.* No. 52596.

CHAĬKA, L. A., *see* Dibner, V. D., and L. A. Chaĭka. K voprosu . . . gor Byrranga. *1958.* No. 50547.

50158. CHAĬKOVSKAIA, E. V. Bituminologicheskaia kharakteristika paleozoĭskikh porod Turukhanskogo i Noril'skikh raĭonov. (Izvestiia vysshikh uchebnykh zavedenii. Neft' i gaz, 1958. no. 9, p. 3–9.) Text in Russian. ***Title tr.:*** Bitumen characteristics of Paleozoic rocks of the Turukhansk and Noril'sk Districts.

Quantitative data are given on primary and secondary bitumen in Sinian, Cambrian, Ordivician, Silurian, Devonian and Lower Carboniferous rocks of the region, and discussed. Data are based on author and T. K. Bazhenova's analysis of some two thousand samples in the laboratory of Moscow University. The amount of bitumen fluctuates at 10^{-3} and 10^{-4}%; only in area of the Sukhaya Tunguska, D'yavol'skaya and Letnyaya Rivers, in Silurian rocks does it amount to 0.5%. ***Copy seen:*** DLC.

CHAMBERLAIN, E. B., Jr., *see* Grice, G. D., *and others.* An unexplained mortality of Canada geese. *1956.* No. 51368.

50159. CHAMBERLIN, RALPH VARY, 1879– , *and* W. J. GERTSCH. The spider family Dictynidae in America north of Mexico. (American Museum of Natural History, New York. Bulletin, Oct. 20, 1958. v. 116, art. 1, p. 1–152, 37 illus., 42 plates.)

Taxonomic treatment with keys to the genera and species, synomyms and diagnoses of about two hundred species, several described as new; type localities, distribution and selected records are provided. At least ten of the species are native to Alaska, Yukon Territory, Mackenzie District, Labrador, Newfoundland, Northwest Territories and Greenland. ***Copy seen:*** DLC.

50160. CHAMBERS, LESLIE A. Some properties of the community air supply in Anchorage, Alaska. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 84–88.)

A study of particulate matter in the air following the eruption of Mt. Spurr in 1953. The average particle load was not much higher than in some polluted industrial atmospheres of the United States. The chemical composition of the volcanic ash is also discussed.

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50161. CHANG, JEN-HU. Global distribution of the annual range in soil temperature. (American Geophysical Union. Transactions, Oct. 1957. v. 38, no. 5, p. 718–23, maps, graphs.) 9 refs.

Presents maps of annual range in soil temperature at 10, 30, and 120 cm. depths, based on data from 780 stations throughout the world, also temperature-range profile charts for 18 stations, including Cape Chelyuskin, Irkutsk, Resolute and Anchorage. Depth of invariable temperatures in middle and high latitudes is 15–20 m. Annual range in surface-soil temperature exceeds 45° C. in places in Siberia; thermal diffusivity is about 10–30% higher in frozen than in unfrozen ground. The rate of decrease of temperature range with depth tapers off abruptly at about ten cm. depth at Cape Chelyuskin; both the summer heating in the active layer and the radiational cooling in winter are limited to a thin layer. At Resolute and Anchorage the annual ranges of air temperature exceed those in the top layers because of the insulating effect of the snow cover.

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50162. CHANG, JEN-HU. World patterns of monthly soil temperature distribution. (Association of American Geographers. Annals, Sept. 1957. v. 47, no. 3, p. 241–49, 13 text maps, table.) 5 refs.

From data of 780 stations, soil temperatures at 10, 30, and 120 cm. depth are mapped for Jan., Apr., July, Oct. and briefly discussed. Distribution of stations is uneven: though several are in Alaska, northern Canada, Scandinavia and the U.S.S.R., large northern areas remain blank. Isotherms are spaced at 5° C. intervals (Fahrenheit equivalents given), but temperatures below 0° C. are represented only by actual values of selected stations in the North.

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50163. CHAPLIN, H., Jr., *and others.* Storage of red cells at sub-zero temperatures, further studies. (Clinical studies, 1957. v. 16, no. 4, p. 651–61, illus., tables) 10 refs. *Other authors:* P. J. Schmidt, *and* J. L. Steinfeld. "Further" to No. 44309.

Oxygenation of red cells suspended in citrate glycerol prior to storage at −20° C. caused increased hemolysis and loss of intracellular potassium. Anti-oxydants or use of a buffered suspension medium, abolished these deleterious effects. Survival of erythrocytes stored under the latter conditions at temperatures of −20° and −45° C. is discussed.

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50164. CHAPLYGIN, E. I. Novye obraztsy nekotorykh okeanograficheskikh priborov. (Problemy Arktiki, 1958. vyp. 3, p. 106–108, illus.) Text in Russian. ***Title tr.:*** New models of some oceanographic instruments.

Describes a modernized light bathometer, constructed by Ladoga Methodologic Station (Ladozhskaîa metodicheskaîa stantsiîa) of the Arctic Institute, and new type of plummet for measuring thickness of the ice in a hole bored by hand auger. ***Copy seen:*** DLC.

50165. CHAPMAN, ROBERT MILLS, 1918– . Formation and development of Bergh Lake, Mount McKinley Park, Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1751.)

Abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958: a lake was formed in Stony Creek valley (approx. 63°30′ N. 150°20′ W.) in 1953 as a result of damming by a landslide apparently triggered by an earth tremor; the impounded water began cutting an outlet channel, and the lake is gradually becoming lower, but it is not expected to be drained in the near future.

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50166. CHAPMAN, ROBERT MILLS, 1918– . Geochemical exploration in the Kantishna area, Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1751.)

Contains abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958. Describes analysis of soil and stream sediment samples from interior Alaska to determine the relation of their metal contents to ore deposits. ***Copy seen:*** DGS.

CHAPMAN, ROBERT MILLS, 1918– , *see also* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

50167. CHAPMAN, SYDNEY, 1888– , *and* **C. G. LITTLE.** The nondeviative absorption of high-frequency radio waves in auroral latitudes. (Journal of atmospheric and terrestrial physics, 1957. v. 10, p. 20–31, 3 tables.) 21 refs. *Also pub.* as: Alaska. University. Geophysical Institute. Contributions, ser. A, no. 27.

The nondeviate absorption in auroral latitudes is more irregular and often stronger than in subauroral latitudes. It is also greater and more frequent during the day than at night. Some suggestions are given as to possible contributing factors to this daytime absorption. It has been postulated that some of the primary bombarding particles generate X-rays which in turn penetrate further. A layer ionized by these X-rays may be an important factor in this absorption. Ionization of nitric oxide molecules may also contribute an appreciable amount. This ionization process occurs both during the day and even stronger at night but electron loss is offset by photodetachment which occurs only during the day. A tentative table for 30 Mc/s radio wave absorption at College, Alaska at noon and at midnight is given including values of the electron and ion densities and other atmospheric characteristics. ***Copy seen:*** DLC.

50168. CHARD, CHESTER STEVENS, 1915– . Archaeology in Soviet Asia, 1950–1951. (Kroeber Anthropological Society. Papers, Spring 1957. no. 16, p. 29–43.) Refs in text.

Includes (p. 32) A. P. Okladnikov's 1951 field work along the Angara and Lena Rivers, heading an expedition sponsored by the Institute of the History of Material Culture and others (No. 53728). The stratified habitation sites on the upper Angara confirm the Serovo-Glazkovo-bronze age sequences previously based only on burial complexes. Steatite fish lures (unique in Siberia) found in an upper Angara Kitoi-stage burial are said to resemble those used by Algonkian Indians. Neolithic burials at Verkholensk (upper Lena) support the postulated Isakovo-Serovo succession and show

earlier than previously supposed links with the middle Lena culture center.

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50169. CHARD, CHESTER STEVENS, 1915– . Check-stamped pottery in northern and eastern Asia. (Pacific Science Congress, 9th. *Bangkok, Thailand*, 1957. Abstract of papers, p. 14–15.)

Abstract of paper: the probable history and diffusion of prehistoric pottery decorated by check-stamping, crossed relief or pseudo-textile impressions is outlined. A single source of origin, in north-central China, is suggested and its subsequent spread southward and northward through the Amur region to the Lena, Yenisey and Kolyma Rivers and Bering Strait discussed.

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50170. CHARD, CHESTER STEVENS, 1915– . New World migration routes. (Alaska. University. Anthropological papers, Dec. 1958. v. 7, no. 1, p. 23–26.) 8 refs.

Postulates the existence of a dry passage between ice-free Asia and Alaska during the low sea-level stage of Wisconsin glaciation, 11,000–8,000 years ago. A southern migration route, termed by the author Koryak corridor, is preferred: starting from the Amur River mouth, it skirted the Sea of Okhotsk along a level coastal shelf, proceeded to Anadyr Gulf thence along a landbridge via St. Lawrence Island to Alaska (cf. No. 50034). Another, northern route, from the Lena River mouth along the arctic coast to Bering Strait is considered, but as less likely, because this route could have been open only during interglacial times, and a water barrier must have existed at the Strait. The Kuril Islands-Bering Sea and the Aleutian Islands routes are dismissed as highly improbable, the depth of the surrounding waters precluding the existence of any land bridges.

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50171. CHARD, CHESTER STEVENS, 1915- . Northeast Asia. (Asian perspectives. Far-Eastern Prehistory Association, American Branch. Bulletin, Summer 1957. v. 1, no. 1–2, p. 15–23.) Supplement to No. 50172.

Lists and evaluates fourteen recent (1953–1957) Russian and English publications and mss. mainly on Soviet Asia, among them No. 41686, 41687, 41688, 33551, 38786. ***Copy seen:*** DLC.

50172. CHARD, CHESTER STEVENS, 1915– . Northern Asia. Cambridge, Mass., Council for Old World Archaeology, 1957. 8 p. (COWA bibliography. Current publications in Old World Archaeology, 1957, no. 1, Area 18.)

Selected references of 1950–55 with short abstracts to accompany No. 50173. Some 15 listings are of particular interest (p. 1, 8) in general and on Eastern Siberia. ***Copy seen:*** DLC.

50173. CHARD, CHESTER STEVENS, 1915– . Northern Asia. Cambridge, Mass., Council for Old World Archaeology, 1957. 7 p. (COWA survey. Current work in Old World archaeology, 1957, no. 1, Area 18.)

Includes (p. 7) 1952–1954 field work in Eastern Siberia: A. P. Okladnikov continued the excavations of several neolithic through iron age stratified sites on the upper Angara River and islands; and extended his "shell mound" culture investigations of the Maritime Province to southern Sakhalin and upper Amur River, the latter revealing paleolithic and neolithic links with Yakutia. P. P. Khoroshikh explored caves on Ol'khon Island and points along the western Lake Baykal shore believed to have been inhabited in the 6th-10th centuries A.D. by the ancestors of the Yakuts (Kurykan culture). V. V. Naryshkin, working on the Chukchi Peninsula, investigated two sites and an underground dwelling at the mouth of the Kanchalan River.

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50174. CHARD, CHESTER STEVENS, 1915– . Observations on the Lena Neolithic. (Asian perspectives. Far-Eastern Prehistory Association, American Branch. Bulletin, summer 1957. v. 1, no. 1–2, p. 183–98.) 8 refs.

A discussion of the neolithic finds in the Lena River valley based on A. P. Okladnikov's excavations and 1945–1955 publications (No. 47160, 49168). Two distinct regional subdivisions are recognized: a northern, in the tundra and forest-tundra zones, characterized by temporary camps and stone workshops of nomad reindeer hunters; and a southern, in the taiga region, developed by sedentary fishermen, with permanent dwelling sites. The artifacts (pottery, stone adzes, burins, etc.) found mainly in Lena habitation sites are contrasted with those of Lake Baykal burials. Though no chronological subdivision in periods is as yet possible, some cross-

dating to Baykal neolithic sequences is attempted and a maximum date of 2,500 B. C. for the middle and 2,000 B. C. for the lower Lena cultures suggested. The similarity of Taymyr Peninsula and Kolyma River finds to those on the Lena are noted. ***Copy seen:*** DLC.

50175. CHARD, CHESTER STEVENS, 1915– . Organic tempering in northeast Asia and Alaska. (American antiquity, Oct. 1958. v. 24, no. 2, p. 193–94.) 16 refs.

Suggests a Siberian origin of organic material tempering techniques used for Alaskan pottery. Animal hair, fish scale, fiber, grass and leaf tempering was known on the middle and lower Lena River and in Chukotka since the neolithic and bronze age (1500-1000 B.C.); in America grass temper is reported from the Old Bering Sea stage; hair temper is later, the earliest occurrence being on the Kobuk River, from 1250 to 1400 A.D. Feather tempering, widespread in Alaska from around 1350 A.D. on, seems unknown in Siberia; it may be a transfer of the original animal hair technique "to a more satisfactory medium on the American side." ***Copy seen:*** DLC.

50176. CHARD, CHESTER STEVENS, 1915– . An outline of the prehistory of Siberia, part 1; the pre-metal periods. (Southwestern journal of anthropology, Spring 1958. v. 14, no. 1, p. 1–33). 66 refs.

Presents a broad outline and guide to basic literature on the Paleolithic, Mesolithic and Neolithic of RSFSR east of the Urals; includes some correlation with European culture stages. Approx. 150 Upper Paleolithic sites (none earlier) have been discovered mainly in the upper Ob' and Yenisey valleys, the Angara and Selenga River basins and up the Lena River to 61° N. Of the Siberian Mesolithic, little is yet known; Okladnikov's non-ceramic microlithic Khina complex (in the Angara River valley and three sites in the Amur-Maritime region) corresponds culturally to late Mesolithic manifestations in the west. The neolithic sites, including those of the Lake Baykal and Lena River area (p. 8–16) excavated by Okladnikov (No. 24814, 47160, 31085, 41687, 41688), are dealt with in detail. The Neolithic of northeastern Siberia, from the Amur basin to Bering Strait and west to Kolyma River (p. 25–28) is discussed. The presence of the original Bering Sea sequences on Chukotsk Peninsula and the absence of Ipiutak are noted. Archeological material on Kamchatka is so scanty at present as to preclude definite dating and classification. The Magadan sites (No. 31080) excavated by Okladnikov, Levin, et al., are seen as a link between the Ainu and Eskimos, and between the cultures of interior Siberia and North America. ***Copy seen:*** DLC.

50177. CHARD, CHESTER STEVENS, 1915– . Physical types of the Amur-Sakhalin region. (Kroeber Anthropological Society. Papers, 1955. no. 13, p. 105–115, tables.) 5 refs.

A summary of Soviet anthropological investigations based mainly on M. G. Levin's field work in 1947 (No. 23803, 52784); cf. also No. 52785. Three main racial types are discussed: the Sakhalin-Amur group represented by the Gilyaks and to some extent the Ul'chi, the Tungus-speaking Paleosiberians or Baykal group (the Orok, Negidal), and the Ainu. Levin's anthropometric findings are tabulated and arranged to correspond to Debets' data on northeastern Siberia (No. 21378 and 39228). ***Copy seen:*** DLC.

50178. CHARD, CHESTER STEVENS, 1915– . The southwestern frontier of Eskimo culture. (American antiquity, Jan. 1957. v. 22, no. 3, p. 304–305, illus.) 3 refs.

Discusses the underground houses, stone, bone and pottery finds excavated in an Eskimo-type complex at the mouth of the Kanchalan River (65° N. 177° E.) in 1953 by V. V. Naryshkin (No. 41689). The site, tentatively dated within the Christian era by Okladnikov, shows affinities with artifacts (proto-Koryak?) from his 1946 excavations near Magadan; it represents a maritime culture linked to those of other Asiatic coastal areas rather than interior Chukotka; and suggests the prehistoric classic Eskimo cultures' southwestern limit as on the north side of Anadyr Zaliv between the river mouth and Enmylen. ***Copy seen:*** DLC.

50179. CHARDON, GEORGES, *and* **D. BONNET.** Action de l'hypothermie provoquée sur l'excitabilité du cortex. (Société de Biologie, Paris. Comptes rendus, Oct. 1958. t. 152, no. 4, p. 582–84.) 3 refs. Text in French. ***Title tr.:*** Effect of induced hypothermia upon the excitability of the cortex.

Account of experiments with curarized dogs, using epileptic shock as criterion.

Hypothermia delayed the appearance of shock but caused a lowering of excitation voltage. The longer the hypothermic state lasted, the longer was the crisis. At 19–18° C. electro-shock did not produce convulsion. Conditions turn to normal upon rewarming.

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CHARDON, GEORGES, *see also* Malmejac, J., *and others.* Action de l'adrénaline . . . *1957.* No. 53081.

CHARDON, GEORGES, *see also* Malmejac, J., *and* G. Chardon. Mécanismes . . . de l'adrénaline . . . *1957.* No. 53084.

CHARDON, GEORGES, *see also* Malmejac, J., *and others.* Sur l'activité du coeur . . . *1957.* No. 53086.

CHARKEY, LOWELL W., *see* Wendel, O. W., & L. W. Charkey. Influence of environmental temperature and chlorpromazine . . . bowel shock. *1958.* No. 55990.

CHARLES, G. H., *see* Burdon-Jones, C., *and* G. H. Charles. Light reactions of littoral gastropods. *1958.* No. 50003.

50180. CHARLESWORTH, JOHN KAYE, 1889– . Cryoturbation. (*In his:* The Quaternary era, 1957. v. 1, p. 559–86, illus., maps.) 40 refs.

"The characteristics, origin, and distribution of permafrost, ground ice, periglacial and river- and lake-ice thrust phenomena are discussed. Two types of permafrost are distinguished, the passive type which is a relic, contains mammoth remains, and does not reappear when destroyed, and the active type, which corresponds to present conditions and reappears when destroyed. The existence of permafrost depends on air temperatures, ground drainage, elevation, ground cover, winter snow, and soil composition. Ground ice occurs as thin films, grains, veins, vertical wedges or horizontal sheets, and irregular masses of all sizes; it is widely distributed within the vertical and horizontal limits of frozen ground. Ground ice is believed to be a relic of glaciers or firn fields, flood ice, wind-driven snow, or snowdrift glaciers, or might have formed by sublimation and condensation or the freezing of water penetrating beneath peat and frozen ground. Solifluction, which may occur on slopes of as little as 2°–3°, is affected by the gradient and structure of the ground, the depth of the thawed layer, vegetation, precipitation, and daily temperature changes, and requires saturation either with repeated freezing and thawing or without regelation where precipitation is abundant. Solifluction gives rise on steep declivities to striped ground or stone stripes. Transition forms link this soil type with polygonal markings, which replace them on gentle slopes or nearly horizontal surfaces."—SIPRE.

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50181. CHARLESWORTH, JOHN KAYE, 1889– . Drift ice. (*In his:* The Quaternary era, 1957. v. 1, p. 177–208, illus., tables, graphs, maps.) 375 refs.

"The types, characteristics, and origin of drift ice are treated in detail. Two types are distinguished: land ice which is discharged into the sea and which comprises icebergs and river ice, and sea ice. The formation, structure, types, dimension, distribution, and weathering of icebergs sre discussed, and the effect of sea ice on the discharge of icebergs and their movement is considered. Sea ice is classified into: primary growth types comprising ice crystals, slush, ice-rind, sludge-ice, pancake-ice, fast ice, young or bay ice, level ice, shore-ice, and (partly) ice foot; and secondary types formed by deformation of primary types, including ice field, ice flow, glaçons, growlers, cakes, lumps or fragments, brash, honeycombed ice, hummocks, pack-ice, and paleocrystic ice. The processes of formation of each type are described. The formation of lake and river ice, their structural characteristics, and factors determining freeze-up and breakup are discussed, and special attention is given to anchor ice."—SIPRE.

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50182. CHARLESWORTH, JOHN KAYE, 1889– . Geological action of sea ice. (*In his:* The Quaternary era, 1957. v. 1, p. 587–91.) 75 refs.

"Material transport by floating ice, its erosive action, and deposits are discussed. The geological action of drift ice depends partly on its detritus, which it derives from falls from landslips, screes or avalanches, from steep hillsides, or by freezing on to beach shingles, sands, and shells when driven ashore. While drift-ice, on the whole, acts insignificantly on solid rock, it erodes greatly when driven into shoaling water by onshore winds, having the weight and force of the entire pack behind it. Sea ice striates rocks parallel

or perpendicular to the shore, depending on the type of ice. Bergs erode indirectly when calving or overturning by producing waves which cut cliffs and beaches and polish and smooth cliffs high above the high-water mark. Ice foot generally protects the coast against waves or floating ice, but sometimes is erosive when storm waves push it up the beach, where it erodes by plucking and nivation. Material carried by floes, bay ice, or bergs is either dropped along the coast or near the shore, or is deposited at sea as single erratics or shoals, banks, and islands."—SIPRE. ***Copy seen:*** DLC.

50183. CHARLESWORTH, JOHN KAYE, 1889– . The Quaternary era, with special reference to its glaciation. London, E. Arnold, 1957. 2 v. (xlvii, 1700 p.) illus., maps (1 fold.) charts, profiles. Approx. 2000 refs.

Encyclopedic reference work on the Quaternary era, in three parts: glaciology (208 p.) and glacial geology (p. 209–591) in v. 1; the Quaternary era in v. 2. In glaciology, the phenomena of precipitation, and the meteorological, physical, and chemical aspects of land ice and sea ice are dealt with. Glacial geology is treated under glacial erosion, glacial deposition, and periglacial processes. A few chapters in v. 1 are described separately, *supra et infra*. V. 2 presents historical and regional materials and reviews the development of thought and theory regarding major aspects of the Pleistocene. Source references on terminology are abundant, and conflicting views on many problems are discussed. General and systematic indexes are appended. Reviewed by R. F. Flint in *American journal of science*, June 1957, v. 255, no. 6, p. 440–42.
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50184. CHARLESWORTH, JOHN KAYE, 1889– . Transition ice. (*In his:* The Quaternary era, 1957. v. 1, p. 167–76, map, diagrs.) 106 refs.

The characteristics, types and distribution of transition ice are discussed. It is classified into: shelf ice, floating ice tongues, and ice foot. Shelf ice, which floats like sea ice but moves very slowly like land ice, consists of compressed snow and stratified, compact firn, whose grains grow and interlock downward more strongly due to mechanical settling and compaction without melting. The strata are horizontal and even, though the upper ones curve slightly to conform with surface irregularities of drifting snow. No solid ice is visible above the water line, except near pressure ridges in which firn has locally been converted into glacier ice. Shelf ice may owe its existence to snow drifted on an original sheet of sea ice or a piedmont of glacier ice, or to floating ice tongues expanding and coalescing to form rafts, cemented by interstitial sea ice and snow. Floating ice tongues are characterized by their surface convexity and triangular or rectangular cross section, depending on whether lateral calving takes place or not. Tongues are maintained by direct snowfall and glacier thrust from behind. The ice foot approaches glacier ice in structure but is distinguishable by its larger air inclusions, its salinity, and regular stratification. The various types of ice foot are noted.—From SIPRE.
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50185. CHARLEWOOD, GEOFFREY H., 1909– . Exploration for metals in Manitoba. (Precambrian, June 1957. v. 30, no. 6, p. 12–14, port.)

Belt most prospected since World War II is from Flin Flon east to Herb Lake (55°45′ N. 99°45′ W.), thence northeast, parallel to and north of the Hudson Bay Railway. East of Herb Lake, outcrops are scarce, structure is characterized by marked lineaments differing in strike from that prevailing in the adjacent area. Rocks are principally granite gneiss with long narrow belts of sedimentary and volcanic rocks and derived gneisses intruded by basic rocks, granite and pegmatite. Principal ore minerals are nickel sulfides. West of Herb Lake lies a more extensively-prospected region of complexly folded volcanic and sedimentary rocks. Principal ore minerals are copper and zinc sulfides and gold. Discoveries at Moak, Mystery and Thompson Lakes, at Snow Lake, Herb Lake, and Lynn Lake are noted. ***Copy seen:*** DGS.

50186. CHARLEWOOD, GEOFFREY H., 1909– . Exploration in Manitoba since late seventies. (Canadian mining journal, Apr. 1957. v. 78, no. 4, p. 147–49.) Paper read at the 25th anniversary meeting of the Canadian Prospectors and Developers Association, Toronto, 1957.

Records development of prospecting since early work of the Geological Survey of Canada. Change from individual prospecting to geophysical teams with modern tools is noted. Opening of areas near Flin Flon, and Herb, Lynn, Mystery, Moak, Cook (Thompson) Lakes, also

work done by Hudson Bay Mining and Smelting, Sherritt Gordon, International Nickel, and others are mentioned.

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50187. CHARUSHIN, G. V., *and* V. D. VOĬLOSHNIKOV. Novye naskal'nye risunki v Pribaĭkalie. (Sovetskaia arkheologiia, 1958. no. 3, p. 190–93, illus.) 5 refs. Text in Russian. ***Title tr.:*** New rock drawings in the Cisbaykal area.

Reports a discovery of pictographs during the 1955 geological survey of the Unga and Iya River valleys, Angara basin. The contour drawings carved high on sandstone cliffs depict hunting scenes, men on horseback, stags (maral), elk, camels, wild boar, etc. The Unga drawings are attributed to the late neolithic or early bronze age, the Iya to the old-Turkic (6th–10th century, A.D.) and old-Buryat (14th–16th century A.D.) cultures (see also No. 52275). The presence of wild boar suggests that taiga conditions existed in the Unga basin till the early centuries of our era and the change to steppe may have been due to subsequent deforestation.

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50188. CHASE, AGNES, 1869– . Notes on types of North American grasses. (American journal of botany, Jan. 1937. v. 24, no. 1, p. 33–35.)

Contains data on 20 type species investigated in European herbaria by the author in connection with her work on A. S. Hitchcock's *Manual of grasses of the United States*, 1935. Of *Calamagrostis hirtigluma* Steud. "Labrador (Mission. Albrecht) Groenlandia? Terra nova" (p. 34), two specimens were examined: one in Caen, labeled "Terra nova", the other in Paris "Missionarius Albrecht in Labrador." Both belong in *C. canadensis*, given as a synonym of *C. inexpansa*. ***Copy seen:*** DLC.

50189. CHASHCHIN, S. Lesnye kunitsy i belki. (Okhota i okhotnich'e khoziaĭstvo, Feb. 1958. god 4, no. 2, p. 29–30, illus.) Text in Russian.

Title tr.: Forest marten and squirrel.

Squirrel is claimed by some zoologists to be the basis of the marten's diet, and the latter responsible for the decrease in squirrel population noticed over several areas in the U.S.S.R. From observations carried out in several regions, including the Lapland and Pechora-Ilych preserves, the author combats these views: squirrels represent no more than 26.5% of the food of martens, and marten pelts are worth 25 times as much as squirrel. The decrease in the squirrel population is attributed to the poor cone crop which has occurred in several coniferous areas of the Soviet Union in the last four years. ***Copy seen:*** DLC.

CHATELAIN, EDWARD F., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

50190. CHATONNET, J., *and* M. TANCHE. Sur l'origine des réactions thermogénétiques déclenchées par ingestion d'eau glacée chez le chien. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 8–9, p. 1533–35, illus.) 9 refs. Text in French. ***Title tr.:*** The origin of thermogenetic reactions released in dogs by ingestion of ice water.

Ingestion of ice water was followed by brief shivering, while core temperatures fell by 2–3° C. and skin temperature remained unchanged. In animals treated with chlorpromazine, the fall of central temperatures was more pronounced and lasted several hours. ***Copy seen:*** DLC.

CHATONNET, J., *see also* Tanche, M., *and* J. Chatonnet. Sur l'influence . . . calorifique . . . reactions thermorégulatrices au froid. *1958*. No. 55330.

CHATTEN, C. K., *see* Hanok, M., *and others*. A comparison instruments . . . part I: hardness. *1957*. No. 51554.

CHATTEN, C. K., *see also* Hanok, M., *and others*. A comparison of instruments . . . stress decay. *1957*. No. 51555.

50191. CHAUDHRY, A. P., *and others*. Daily rhythms in rectal temperature and in epithelial mitoses of hamster pinna and pouch. (Journal of applied physiology, Mar. 1958. v. 12, no. 2, p. 221–24, illus.) 19 refs. *Other authors:* F. Halberg, C. E. Keenan, R. N. Harner, *and* J. J. Bittner.

Rectal temperatures were found to be higher during the dark period and higher in females than in males. Mitoses were highest in the middle of the light period, i.e. during the low in rectal temperature.

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CHEBOKSAROV, N. N., *see* Levin, M. G., *and* N. N. Cheboksarov. Khoziaĭstvenno-kul'turnye tipy . . . *1955*. No. 52789.

CHEBOKSAROV, N. N., *see also* Nesturkh, M. F. Chelovecheskie rasy. *1954.* No. 53548.

50192. CHEBOTAREVA, N. S., *and others.* Geomorfologiia i stratigrafiia chetvertichnykh otlozhenii srednego techeniia Leny i nizovii Aldana. (Akademiia nauk SSSR. Izvestiia, ser. geogr., May–June 1957. no. 3, p. 60–71, diagrs., map.) 13 refs. Text in Russian. *Other authors:* N. P. Kuprina *and* I. M. Khoreva. ***Title tr.:*** The geomorphology and stratigraphy of the Quaternary deposits of the middle Lena and lower Aldan.

Reports results of the Complex Central-Siberian Expedition of the Academy of Sciences' Geological Institute in 1952–55, in the Lena valley from the town of Vitim to Pokrovskoye, and in the Aldan basin from the Amga River down to the Lena. Lithologic, paleontologic and pollen analyses of deposits on all the valley terraces as from bank sands and lowlands to rocks of the upper terraces are reported and discussed. The scarcity of paleontologic remains in the Lena valley and their abundance in the Aldan are noted. ***Copy seen:*** DLC.

50193. CHEBOTAREVA, N. S., *and* N. P. KUPRINA. K istorii doliny Leny. (Akademiia nauk SSSR. Izvestiia, seriia geograficheskaia, Sept.–Oct. 1958, no. 5, p. 42–46, fold. cross-section.) 16 refs. Text in Russian. ***Title tr.:*** History of the Lena River valley.

Deals with the middle Lena between Vitim and Sinskoye (approx. 58° N. 114° E. –61°30′ N. 127° E.); based on recent investigations, new cartographic survey, and the authors' stratigraphic study of Quaternary deposits. This part of the valley is considered in three sections: Vitim-Olekminsk, Dzherby-Berezovsk, and Olekminsk-Pokrovsk. The morphologic structure of each is discussed in turn and their effect on the shaping of the valley is outlined. The presence of eight terraces is stressed, and their extent, character, and origin are described. The three sections considered are found to be of different antiquity; local geologic conditions have played a substantial role in this part of the Lena valley. ***Copy seen:*** DLC.

50194. CHEBOTAREVA, N. S. Soveshchanie po paleogeografii, chetvertichnoĭ geologii i geomorfologii severo-zapada evropeĭskoĭ chasti SSSR. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia, July–Aug. 1958. no. 4, p. 149–51.) Text in Russian. ***Title tr.:*** The conference on paleogeography, Quaternary geology, and geomorphology of the northwestern European part of the U.S.S.R.

Reports conference held in Leningrad Mar. 24–25, 1958, including papers on the Quaternary deposits of Kola Peninsula by M. A. Lavrova, and of Karelian A.S.S.R. by G. S. Biskė; reports by representatives of the Institute of Geology of the Arctic, N. P. Zagorskaia, S. A. Strelkov and S. L. Troĭtskiĭ on studies in northwestern and northeastern Siberia, Novaya Zemlya and other regions. ***Copy seen:*** DLC.

50195. CHEBYKINA, N. V. Agroproizvodstvennaia kharakteristika pochv. (*In:* Akademiia nauk SSSR. Komi filial. Pochvy Komi ASSR, 1958, p. 154–58.) Text in Russian. ***Title tr.:*** Agricultural characteristics of soils.

Soils in Komi ASSR are considered in five groups according to productivity, and characteristics of each are given. Most productive are those with a rich humus horizon (25–20 cm.), almost neutral reaction (pH 5.5 to 6.5), large ion concentration, sufficient nitrogen, phosphorus, potassium, suitable mechanical composition, favorable physical and chemical properties; other factors: relation to relief, exposure to the sun, proper drainage conditions, parent material, etc., are considered also. Soils of the other four groups have some unfavorable characteristics. Most tundra soils are in the group most expensive to cultivate and poorest in results. ***Copy seen:*** DGS.

50196. CHEBYKINA, N. V. Nekotorye priemy povysheniia plodorodiia pochvy. (*In:* Akademiia nauk SSSR. Komi filial. Pochvy Komi ASSR, 1958. p. 145–53; tables, diagrs.) Text in Russian. ***Title tr.:*** Some methods of improving soil fertility.

Describes generally some organic fertilizers (manure, peat, excrement, and green manure), mineral fertilizers (ammonium nitrate and sulfate, superphosphate, potassium), liming, and crop rotation. Specific methods cannot be recommended for each type of soil. The role of organic fertilizers is important since the fertilizer changes not only chemical, but physical properties of the soil (moisture, porosity, temperature regime) and increases activity of microorganisms. Use of peat is outlined with winter rye, wheat, oats, barley, potatoes,

clover, etc. Effectiveness of mineral fertilizers is exemplified. Crop rotation is stressed for summer wheat and oats.

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CHEBYKINA, N. V., *see also* Polynt͡seva, O. A., *and others.* Opisanie pochv. *1958.* No. 54069.

50197. CHEEVER, M. S. Construction on the DEW Line. (Engineering and contract record, Aug. 1957. v. 70, no. 8, p. 53–57, +, illus.)

Summarizes difficulties encountered and construction methods used in Alaska and Canada. Schedules, terrain, design conditions, building types, building and tower foundations, construction of garages, hangars and radomes, also mechanical and electrical designs are described. The importance of airstrips, the Canadian contracts, plans and achievements for 1955 and 1956 are reviewed.

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50198. CHEEVER, M. S. The DEW Line's construction seasons. (Engineering and contract record, Oct. 1957. v. 70, no. 10, p. 100–101, illus.)

Some of the special engineering problems resulting from the weather conditions, frost action, and permafrost are discussed briefly. Summer favors construction in the Arctic but the high frequency of fog delays transportation of key personnel between jobs; and soil thawing restricts wheeled vehicles to roads and requires special care with track-laying equipment. Much of the construction can continue during the winter but at high cost. The cold, high wind, and snow reduce efficiency, cause vehicle immobility, and generally increase the maintenance overhead. The problem of providing adequate drainage is particularly acute at the beginning of the melting season. ***Copy seen:*** DLC.

CHEFTEL, H., *see* Le Méhauté, P. J., *and others.* Glimrende resultater . . . *1935.* No. 52744.

CHEKUOLIS, A. *See* Čekuolis, A.

CHELUKHOVA, E. M., *see* Metelit͡sa, V. I., *and others.* Issledovanie gazoobmena pri gipotermii. *1956.* No. 53248.

50199. CHEMEKOV, I͡U. F. O chetvertichnoĭ istorii Okhotskogo mori͡a. (Vsesoi͡uznoe geograficheskoe obshchestvo. Izvesti͡a, May–June 1957. t. 89, vyp. 3, p. 203–220, tables, maps.) 32 refs. Text in Russian. ***Title tr.:*** The Quaternary history of the Sea of Okhotsk.

Summary of bathymetric, orographic, geotectonic, geologic and paleontologic data on the Okhotsk Sea bottom and adjacent areas, including Kamchatka, based on Soviet literature and on the author's studies carried out since 1946. The Okhotsk Sea depression is related to the Cenozoic folding of Kamchatka-Kuril geosyncline on the east, the Mesozoic folding on the southwest, and the middle-Paleozoic structure of Mongolian-Okhotsk geosyncline on the northwest. Successive marine transgressions and regressions are discussed, among them the "disastrously fast" transgression at the end of the Quaternary; and a dating is attempted of the bottom sediment layers in a 2610 cm. core taken at 3355 m. depth (p. 216–18). The available data are but fragmentary, further investigations are required. ***Copy seen:*** DLC.

50200. CHEMEZOV, VASILIĬ NAZAROVICH. Pervye shkoly ĭAkutii. (*In:* Akademi͡a nauk SSSR. ĭAkutskiĭ filial. Doklady, 1954, p. 37–43.) 13 refs. Text in Russian. ***Title tr.:*** The first schools of Yakutia.

Describes the "navigational" (navigat͡skie) schools in Okhotsk (1736), Yakutsk (1739) set up by Bering's second expedition in need of locally trained personnel. The importance of these and other secular and parochial schools for the introduction of literacy among the native population of Yakutia and Kamchatka is discussed, also the closing of schools on Kamchatka in the latter 18th century by an administration opposed to the spread of education among aboriginals.

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CHEMEZOV, VASILIĬ NAZAROVICH, *see* Akademi͡a nauk SSSR. ĭAkutskiĭ filial. Istori͡a ĭAkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957.* No. 49168.

50201. ***CHEMICAL WEEK.*** Process plants push Alaskan statehood. (Chemical week, Feb. 9, 1957. v. 80, no. 6, p. 34–36, map.)

Lists pulp and petroleum plants (one in operation, four under development), hydroelectric power potentials (in five areas), and route distances by ship, rail, and highway; map indicates location of major mineral resources.

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50202. CHERDANTSEV, GLEB NIKANOROVICH, 1885– , *Editor.* Ėkonomicheskaia geografiia SSSR: Rossiĭskaia Sovetskaia Federativnaia Sotsialisticheskaia Respublika. Moskva, Gos. uchebnopedagog. izd-vo, 1956. 490 p. maps and atlas (col. maps). Text in Russian. ***Title tr.:*** Economic geography of the U.S.S.R. Russian Soviet Federated Socialist Republic. Textbook authorized for geography faculties of pedagogical institutes.

Deals with economic regions and administrative units. For each region is given: general characteristics, natural conditions, climate, soils and natural resources, geographic development, population, rural economics, industry, transportation, and major localities. Within the economic frame all zones of the Soviet Arctic are covered. Murmansk Oblast (p. 168–75), and Karelian A.S.S.R. (175–86) by B. A. Tumykhin; V. V. Pokshishevskiĭ describes Arkhangel'sk and Vologda Oblasts and Komi A.S.S.R.; P. N. Stepanov, dealing with the Ural, touches upon the Polar Ural; M. I. Pomus outlines West Siberia and the arctic section between Bagdaratskaya Bay and the Yenisey; V. A. Kromov reviews Eastern Siberia (p. 404–452) and the arctic section between the Yenisey and Kolyma Rivers; V. V. Pokshishevskiĭ on the Far East (p. 453–90) includes the Anadyr basin, Kamchatka Peninsula, Magadan Oblast, and Chukotka.

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CHEREPANOV, A. I., *see* Pozdniakova, Z. V. Izuchenie . . . prirodnykh bogatstv Sibiri . . . *1957.* No. 54123.

50203. CHEREPANOV, F. Na okhrane taigi. (Kryl'ia rodiny, Mar. 1957. god 8, no. 3, p. 3). Text in Russian. ***Title tr.:*** Protection of the taiga.

Activities of a parachute team of firefighters in forests of northwest Siberia are sketched by the instructor. Hardships of the profession are stressed: often the men who jump in the northern taiga after fighting the fire, must break their way out, for hundreds of kilometers.

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50204. CHEREPANOV, N. V. Opredelenie vozrasta dreifuiushchikh l'dov metodom kristallooptícheskogo issledovaniia. (Problemy Arktiki, sbornik statei, 1957, vyp, 2, p. 179–84, illus., diagrs.) Ref. Text in Russian. ***Title tr.:*** Determination of the age of drift ice by the crystal optics method.

Data on the crystalline structure and thickness of ice collected from the drift station North Pole-4 in 1954–1956 are tabulated, and the effects of temperature, freezing, and melting on ice structure are analyzed. Microscopic study of ice slides from winter and summer ice showed large difference in structure; analysis of the drift-station ice indicated an age of about nine years with annual layers 25–48 cm. thick. An ice-cover thickness of about 3 m. is the maximum limit for the area traversed by the station, annual growth (occurring only at the lower surface) averages 30–35 cm.—From SIPRE. ***Copy seen:*** DLC.

50205. CHEREPANOV, V. A. O stratigrafii i vozraste pestrotsvetnoĭ tolshchi v verkhov'iakh r. Fad'iu-Kuda na tsentral'nom Taĭmyre. (Leningrad. Nauchno issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1957. vyp. 5, p. 41–42.) Text in Russian. ***Title tr.:*** On the stratigraphy and age of the variegated stratum in the upper Fad'yu - Kuda River in central Taymyr Peninsula.

Describes location, position, thickness, composition and stratigraphic division of the terrigenic stratum lying on the Permian layer. The presence of marine Pelecypoda suggests that the stratum developed between the Permian and Triassic periods. ***Copy seen:*** DGS.

CHEREPANOV, V. A., *see also* Pogrebitskiĭ, Iu. E. Rezul'taty uvíazochnorevizionnykh rabot . . . *1957.* No. 54031.

50206. CHEREVKOV, K. "Zaria" ukhodit v plavanie. (Ogonëk, Aug. 18, 1957. god 35, no. 34 (1575), p. 23, illus.) Text in Russian. ***Title tr.:*** The *Zaria* is going on a voyage.

A non-magnetic motor-sail schooner, specially built for study of earth magnetism, is briefly described. The vessel, made of wood, has bronze or brass accessories, including anchors, chains, trap doors, hand rails, windlass, hawsers, etc., with even the main motor parts of non-ferrous metal, where possible. The ship is equipped with modern navigating instruments, automatic steering apparatus and provided with two scientific laboratories. A ten-man research group headed by the mathematical physicist M. M. Ivanov is to carry out work in the IGY program, and it includes magnetic map-

ping of oceans. On her 18-month cruise, the *Zaria* starts from Leningrad, coasts Denmark, England, Canada, South America, India, Australia, China, Japan, and crosses the Atlantic and Indian Oceans a few times. ***Copy seen:*** DLC.

CHERKESOV, O. V., *see* Sychev, V. IÂ., *and others.* O stratigrafii mezozolskikh . . . Zhiganskogo . . . *1957.* No. 55291.

50207. CHERNENKO, A. K. Pervoe obshchee sobranie Sibirskogo otdeleniîa Akademii nauk SSSR. (Akademiîa nauk SSSR. Sibirskoe otdelenie. Izvestiîa, 1958, no. 8, p. 139–42.) Text in Russian. ***Title tr.:*** The first plenary meeting of the Siberian Division of the Academy of Sciences of the U.S.S.R.

Account of a meeting at Novosibirsk, May 15–19, 1958. The opening address of the chairman of the Presidium of Siberian Division (M. A. Lavrent'ev) and reports of branch chairmen and scientific directors are summarized. Several multi-purpose scientific expeditions were announced by N. N. Nekrasov, (chairman of the Siberian Council for Expeditionary Exploration), including three to Krasnoyarsk Province, the lower Ob' basin, and Kamchatka. Need for further development of permafrost studies in Yakutia was noted by P. F. Shvetsov. ***Copy seen:*** DLC.

50208. CHERNETSOV, VALERIÏ NIKOLAEVICH, 1905– . Nizhnee Priob'e v I tysîacheletii nashe͡ĭ ėry; obzor i klassifikatsiîa materiala. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Materialy i issledovaniîa po arkheologii SSSR, 1957. no. 58, p. 136–245, illus., maps, diagrs.) Approx. 50 refs. Text in Russian. ***Title tr.:*** The lower Ob' region in the first millennium A. D.; review and classification of the material.

Systematizes and establishes a chronological sequence for the archeological finds of the second through the 13th century A. D. relating to the Ugric population of the lower Irtysh, middle and lower Ob River systems and the Yamal Peninsula. The material belongs to a culture divided according to its pottery ornamentation into four consecutive stages. Originating in the Ust' Poluy culture (cf. No. 34124), it is attributed to the ancient Ostyaks; it remained free of foreign infiltration for at least 1,000 years. The pottery, bronze, iron, etc., artifacts, burials and habitation sites are dealt with; trade links with the Kama and Volga are noted. The material culture of these arctic hunters is likened to that of the Eskimos and settled Chukchis: locally-manufactured wooden, stone and bone artifacts, imported iron tools, kayak-like boats, seal and bird-skin clothing, whalebone-supported pithouses, etc. This aboriginal Yamal and lower Ob' population was conquered and assimilated in the second half of the second millennium A. D. by Samoyed tribes. ***Copy seen:*** DLC.

50209. CHERNETSOV, VALERIÏ NIKOLAEVICH, 1905– . Ornament lentochnogo tipa u obskikh ugrov. (Sovetskaîa ėtnografiîa, 1948, no. 1, p. 139–52, illus.) 12 refs. Text in Russian. ***Title tr.:*** Ribbon-type ornament of the Ob' River Ugrians.

Discusses the decorative motives used in stylized animal or plant designs still popular among the Ostyaks and Voguls of the Severnaya Dvina, Loz'va, Kazym, Vakh and Vas-Yugan River valleys. Exclusively a woman's art, this ornament is carved or chiselled into stained birch bark vessels or cut from contrasting fur, leather, fish-skin, felt, etc., and sewn on clothing. The original totemistic or magic importance of the animal representations are speculated upon. The ribbon-type ornamentation found on bone, metal and ceramic artifacts of the bronze and early iron age in the Ob' area and its diffusion in the Andronov culture region are noted.

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50210. CHERNETSOV, VALERIÏ NIKOLAEVICH, 1905– . Sokrashchennoe izlozhenie vystupleniîa. (Akademiîa nauk SSSR. Institut îazykoznaniîa. Doklady i soobshcheniîa, 1956. no. 9, p. 154–55.) Text in Russian. ***Title tr.:*** Resumé of address.

Analyzes the historical formation of the languages and dialects of the Ostyaks and Voguls by discussing the progressive settlement of the lower Ob' region in prehistoric times. First settled by tribes of the Lena and Angara basin, the region was overrun by several migratory waves from the south in the third through the first millennium B.C., resulting in the evolution of several Ugric groups. Traces of Paleoasiatic (Paleo-Siberian) elements are being discovered in Samoyed (Nenets and Sel'kup) and Ostyak languages. Summary of a paper read at the Feb.

17–19, 1955 session of the Learned Council of the Institute of Linguistics (Uchenyĭ sovet In-ta ĵazykoznaniĵa) of the Academy of Sciences U.S.S.R. devoted to the discussion of the theory of linguistic substrata. ***Copy seen:*** DLC.

50211. CHERNETSOV, VALERIĬ NIKOLAEVICH, 1905– , *and* V. I. MOSHINSKAĬA. V poiskakh drevneĭ rodiny ugorskikh narodov. (*In:* Po sledam drevnikh kul'tur, v. 3, 1954. p. 163–92, illus. incl. col.) 2 refs. Text in Russian. ***Title tr.:*** In search of the ancient homeland of Ugric peoples.

Discusses the Ust'-Poluy culture (4th century B.C.–1st century A.D.) at the confluence of the Poluy and Ob' Rivers (cf. No. 34124). The material culture of this hunting and fishing people, regarded as forebears of the Ostyaks and Voguls, is dealt with; their stone, bone, wood, bronze and iron artifacts and geometrically ornamented pottery are described: spears, bows and arrows, daggers and battle axes, harpoons and fishhooks, parka-like clothing, dog-driving, birchbark boats, rectangular pithouses with drainage ditches, fortified settlements suggesting frequent armed conflicts, etc. Though no burials were found, realistic sculptures and masks show both Europoid and Mongoloid features marking the lower Ob' as a meeting place of different ethnic groups, a fact confirmed by archeological analogies to Paleoasiatic (Eskimo, Yukaghir, Samoyed) and Ugric cultures. The middle courses of the Ob' and Irtysh Rivers are suggested as common ancestral land of all Ugric-speaking peoples. ***Copy seen:*** DLC.

CHERNĬAK, G. E., *see* Dedok, T. A. *and* G. E. Chernĭak. Kamennougol'nye otlozheniĵa . . . 1958. No. 50480.

50212. CHERNIGIN, N. F. Mekhanizatsiĵa razdelki golov lososevykh. (Rybnoe khozĵaĭstvo, Mar. 1958. god 34, no. 3, p. 47–52, illus., table.) Text in Russian. ***Title tr.:*** Mechanization of dressing the heads of salmon.

Lack of a method for utilizing the heads in canning Kamchatka salmon resulted in substantial losses. Dressing the heads by hand proved too slow and expensive. A mechanical set-up was built which enables efficient trimming and canning of the heads together with the rest of the fish. The machinery and its working are described and analyzed in detail. ***Copy seen:*** DLC.

50213. CHERNIGOV, V. A. K voprosu betonirovaniĵa fundamentov na mnogoletnemerzlykh osnovaniĵakh. (Akademiĵa nauk SSSR. Institut merzlotovedeniĵa. Trudy, 1958. t. 14, p. 108–118, graphs, diagrs.) Text in Russian. ***Title tr.:*** Concrete foundations on permafrost.

Investigations in Vorkuta in 1954–55 on the heat exchange between natural and artificially frozen ground and concrete during construction of various types of foundations on thermal cushions are described. Temperature variations at various depths below the foundations, in the foundations, and the cushions during the hardening of concrete are graphed; the ground temperature did not exceed 0.6° C. during the entire period. In April-Dec., the concrete should be preheated to 30°–40° C. and covered with thawed or frozen ground. Ground temperatures at the foundation level may be considered constant during the hardening period.—From SIPRE. ***Copy seen:*** DLC.

50214. CHERNIGOV, V. A. Ukazaniĵa i rekomendatsii po betonirovaniĵu fundamentov na mnogoletnemerzlykh osnovaniĵakh v zimnee vremĵa. (Akademiĵa nauk SSSR. Institut merzlotovedeniĵa. Trudy, 1958. t. 14, p. 119–28, tables.) 8 refs. Text in Russian. ***Title tr.:*** Directions and recommendations for winter-concreting of foundations on permafrost.

Preparation and pouring of concrete, base construction, and selection of concreting methods are discussed. The concreting method must be selected on the basis of the method of construction adopted, imposed time limits, size of foundation, type of material and power sources available, time of year, temperature conditions, thermal and hydrogeological permafrost characteristics and type of thermal cushion. The concrete should be poured over a freshly prepared cushion of loose, dry material sufficiently thick to prevent thawing. The bottom of the foundation pit should be frozen artificially where the depth of thaw exceeds the allowable limit. Methods of calculating the duration and course of concrete hardening, concrete heating requirements, thickness of the insulating cushion, concrete composition, and ground temperature conditions under which concrete may be poured, are outlined.—From SIPRE. ***Copy seen:*** DLC.

50215. CHERNOV, ALEKSANDR ALEKSANDROVICH, 1877– . Bogatstva Severa. (Geografiia v shkole, Jan.–Feb. 1958. god 21, no. 1, p. 63–64.) Text in Russian. ***Title tr.:*** Resources of the North. Summarized from *Pravda*, June 24, 1957.

Story of a coal discovery on the Vorkuta River bank in 1930, and explorations of the Pechora coal basin; discovery of petroleum and natural gas in the Ukhta region and the upper Pechora basin.

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50216. CHERNOV, ALEKSANDR ALEKSANDROVICH, 1877– . Geologicheskie issledovaniia severnogo Timana. Moskva, Izd-vo Moskovskogo obshchestva ispytatelei prirody, 1947. 96 p. illus. 9 text maps, cross sections. (Moskovskoe obshchestvo ispytatelei prirody. Materialy k poznaniiu geologicheskogo stroeniia SSSR, nov. seriia, vyp. 6(10)) 41 refs. Text in Russian. Summary in English. ***Title tr.:*** Geological investigation of the northern Timan.

Presents the results of the expedition carried out by the Academy of Sciences of the U.S.S.R. under leadership of the author, noted explorer of the Timan region. The main attention is given to the widespread Devonian deposits. The Middle Devonian consists mainly of sandstones and conglomerates, and the Upper, of basalts, which are distinguished into series. Distribution and cross-sections of the deposits are treated in detail. Outwash materials are studied and their conditions are discussed. As useful mineral barite cement is mentioned though it seems not of economic importance; coal-bearing deposits on the banks of the Volonga and Kumushka Rivers are described; a Volonga saline spring is discussed, also prospests for lead glance, chalcopyrite and wolframite.

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50217. CHERNOV, G. A. Pechorskie Al'py. (Fizkul'tura i sport, Sept. 1958. god 28, no. 9, p. 32–33, illus.) Text in Russian. ***Title tr.:*** The Pechora Alps.

Describes mountain trails and river routes in the northern and sub-polar Ural and the Pechora-Ilych nature reserve. Routes along the Pechora tributaries Shar-Yu, Ilych, Podcher'ye, Shchugor, Torgovaya, Vangyr, Kos'yu, Kozhim, etc., are sketched, distances given, mountain peaks indicated. ***Copy seen:*** DLC.

50218. CHERNOVA, N. Za polîarnym krugom. (Narodnoe obrazovanie, Dec. 1957, no. 12, p. 77–80, and 4 p. of illus.) Text in Russian. ***Title tr.:*** Beyond the Arctic Circle.

A photo-report of author's visit to several coeducational boarding schools of the Yamal-Nenets National District. Daily school life, studies, pioneer and shop work, recreational activities (hunting, trapping, fishing, skiing, etc.) are described and the children's summer work in reindeer-herding and fishing kolkhozes sketched.

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50219. CHERNOVSKAÎA, E. N. Gidrologicheskie i gidrokhimicheskie usloviîa na litorali vostochnogo Murmana i Belogo moriîa. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1956. 114 p. illus., tables, maps. 80 refs. Text in Russian. ***Title tr.:*** Hydrological and hydrochemical conditions of the East Murman and White Sea littoral.

Study based on material collected during 1947–1950, with introductory chapters on earlier work and literature, chemical and field methods and chemical values determined. General characteristics of the Barents Sea coastal waters, seasonal and diurnal changes in the hydrology and hydrochemistry of the East Murman littoral (temperature, salinity, pH, P-N-Si-content) conditions with depth, air temperatures, etc., are presented (p. 13–67). The White Sea conditions are treated similarly (p. 67–105). Summaries conclude each of these major chapters, with conclusions (p. 105–109) for the study as a whole. ***Copy seen:*** DN–HO.

50220. CHERNOVSKAÎA, E. N. Nekotorye dannye po khimizmu gruntovykh rastvorov litorali vostochnogo Murmana. (Akademiia nauk SSSR. Kol'skiĭ filial. Murmanskaîa biologicheskaîa stantsiia. Trudy, 1958. t. 4, p. 7–17, illus. tables.) 18 refs. Text in Russian. ***Title tr.:*** Some data on the chemism of bottom solutions of the east Murman littoral.

A study of bottom samples as to their physical nature, and of their solutions as to salinity, pH, content of phosphorus, silica and nitrogen. Considerable differences were found both between seasons and locations. The concentration of "biogenic" elements was often 5–10 or more times higher than in the sea water. The role of various beaches as source of these materials for sea water is discussed.

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50221. CHERNOVSKAÍA, E. N. Nekotorye svedeniíà po termike i gidrokhimii Mezenskogo zaliva. (Akademiíà nauk SSSR. Kol'skiĭ filial. Murmanskaíà biologicheskaíà stant͡siíà. Trudy, 1958. t. 4, p. 165–71, table, maps.) 7 refs. Text in Russian. ***Title tr.:*** Some information on the thermics and hydrochemistry of the Mezen Bay.

Reports investigation conducted during July 1952 in this bay near the White Sea narrows, concerning temperature and salinity, pH, O_2, P, N, transparency, etc. Currents and origin of water masses are discussed on the basis of the findings. The high content of phosphates and occasionally nitrates is attributed to fresh-water influx (rivers Kuloy, Mezen', etc.) and insufficient utilization by plants. ***Copy seen:*** DLC.

50222. CHERNOVSKAÍA, E. N. O gidrokhimicheskikh osobennostíàkh pribrezhnoĭ zony vostochnogo Murmana. (Akademiíà nauk SSSR. Murmanskaíà biologicheskaíà stant͡siíà. Trudy, 1957. t. 3, p. 33–52, illus., tables, maps.) 9 refs. Text in Russian. ***Title tr.:*** On hydrochemical features of the coastal zone of the eastern Murman.

A vertical and horizontal study of year-round conditions in a 20-mile-wide zone of this area. Temperature, salinity, O_2, pH, phosphates, nitrates and nitrites were determined in a long series of profiles. The material is presented on maps and also in detailed tabular form according to profiles. The dependence of this zone on conditions in the Barents Sea and those on the adjacent land is analyzed; the effect on biological changes is discussed. The survey covers a period of two years, 1953 and 1954. ***Copy seen:*** DLC.

50223. CHERNOVSKAÍA, E. N. Rezhim biogennykh ėlementov v pribrezhnoĭ zone vostochnogo Murmana. (*In:* Akademiíà nauk SSSR. Murmanskaíà biologicheskaíà stant͡siíà. Zakonomernosti skopleniĭ . . . 1958. p. 35–58, illus., tables, maps.) 11 refs. Text in Russian. ***Title tr.:*** The regimen of biogenic elements in the coastal zone of the eastern Murman.

Study of chemicals essential to life, especially plant growth, within a zone 20–30 miles wide from Kildin Island to Cape Svyatoy Nos (approx. 34°–40° E.). Dissolved O_2, pH, nitrites, nitrates and phosphates were determined periodically in water from various depths, thus offering a picture of seasonal and spatial changes. Two differing zones were established: a deeper one resembling conditions in the Barents Sea, and a shallow belt influenced by conditions on land. The effect of chemical condition upon the phytoplankton are indicated. ***Copy seen:*** DLC.

CHERNYSHEVA, N. E., *see* Demokidov, K. K., *and others.* Stratigrafiíà i fat͡sii kembriíà . . . *1958.* No. 50497.

50224. CHERSKIĬ, NIKOLAÍ VASIL'EVICH. O deíàtel'nosti ĭAkutskogo filiala AN SSSR. (Akademiíà nauk SSSR. Izvestiíà vostochnykh filialov, 1957, no. 8, p. 80–85.) Text in Russian. ***Title tr.:*** Activities of the Yakut Branch of the Academy of Sciences of the U.S.S.R.

Outlines history, organization and activities of the youngest branch (filial) of the Academy. Founded in 1947 as scientific base, it was reorganized into a branch in 1949. Its personnel (300 in 1957) is distributed among its three institutes (of Geology, of Biology, and of Language, Literature and History), its Cosmic Ray Laboratory, the Economics and Geography Section and the Yakut Complex Expedition, which was incorporated into the Yakut Branch in 1956. The organization, achievements and publications of these institutions are noted. ***Copy seen:*** DLC.

50225. CHERTOV, L. G. O nekotorykh problemakh i osobennostíàkh razvitiíà narodnogo khozíàĭstva evropeĭskogo Severa. (Vsesoíuznoe geograficheskoe obshchestvo. Izvestiíà, Nov.–Dec. 1958, no. 6, p. 497–506.) 10 refs. Text in Russian. ***Title tr.:*** Some problems and special features in the economic development of the European North.

Outlines the main problems and objectives in relation to plans for the 1959–65 period in the region including Arkhangel'sk and Vologda provinces and Komi A.S.S.R. Its resources, the Pechora coal basin, Dzhebol'skiy gas district, water power of the Severnaya Dvina, Sukhona, Pechora, etc., timber, and the transportation possibilities are reviewed. Priority of importance is given to regional planning along all lines on the basis of natural resources and means of transportation; continued improvement in solution of the main problems; development of a unified transportation system; and establishment of new industrial centers. ***Copy seen:*** DLC.

50226. CHESNOKOV, B. Frit'of Nansen. (Fizkul'tura i sport, Oct. 1958. god 28, no. 10, p. 34–35, illus., port.) Text in Russian.

Biographical sketch describing Nansen as sportsman, explorer, humanitarian.

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50227. CHEVALLIER, RAYMOND, *and* **S. MATHIEU.** Susceptibilité magnétique specifique de pyroxènes monocliniques. (Société chimique de France. Bulletin, May 1958. fasc. 5, p. 726–29, 2 tables.) 8 refs. Text in French. ***Title tr.:*** Specific magnetic susceptibility of monoclinic pyroxenes.

Variation of magnetic properties with chemical composition in monoclinic pyroxenes are studied on the basis of 14 samples from the Skaergaard intrusion (68°10′ N. 31°40′ W.) of East Greenland. The ferrogabbros of this intrusion are exceptionally rich in iron, hence the extracted monoclinic pyroxenes, which range from diopside through augite to hedenbergite, are of particular interest. Chemical analysis showed their magnetic ions were Fe^{2+}, Fe^{3+} and Mn^{2+}. From the known magnetic moments of these ions which were presumed to exist independently without interaction, the theoretic magnetic susceptibility of each sample at 20° C. was calculated according to the paramagnetic law of Langevin. Magnetic susceptibility was likewise measured, despite complications due to impurities (mainly exsolutions containing rods of magnetite). The calculated susceptibilities and measured values were compared and found in good agreement. The magnetic ions and especially Fe^{2+} contributed to the magnetization of the mineral with their habitual moments; there was no positive or negative interaction; and the susceptibility of the pyroxene followed Curie's Law except for the samples which had the greatest concentrations in the magnetic ions.

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50228. CHEVILLARD, LOUIS, *and others.* Action comparée de quelques vasodilatateurs sur la température corporelle et le métabolisme respiratoire chez le cobaye. (Société de Biologie, *Paris.* Comptes rendus, 1958. t. 152, no. 7, p. 1074–77, illus.) 15 refs. Text in French. *Other authors:* H. Giono *and* M. C. Laury. ***Title tr.:*** Comparative action of some vasodilators upon body temperature and respiratory metabolism of the guinea pig.

Report on the effect of four substances, including chlorpromazine. Vasodilators affecting circulation (peripherally, via sympatholysis or ganglioplegia) were found to have in common a property to reduce body temperature and to raise, within limits, the metabolism.

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50229. CHEVILLARD, LOUIS, *and others.* Activités respiratoire et cardiaque du rat refroidi. (Société de Biologie, *Paris.* Comptes rendus, 1958. t. 152, no. 2, p. 251–54, illus.) 8 refs. Text in French. *Other authors:* M. C. Arnal *and* H. Giono. ***Title tr.:*** Respiratory and cardiac activity of the cooled rat.

Account of observation of respiratory and cardiac frequency, arterial pressure and rectal temperature of rats chilled to 18°–16° C. The increase of the functions at the beginning of the drop in body temperature is noted and its physiological significance discussed.

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50230. CHEVILLARD, LOUIS, *and others.* Thermorégulation à la chaleur après hypothermie profonde chez le rat. (Société de Biologie, Paris. Comptes rendus, 1958. t. 152, no. 2, p. 303–305.) 8 refs. Text in French. *Other authors:* M. C. Arnal *and* H. Giono. ***Title tr.:*** Thermoregulation in heat after deep hypothermia of the rat.

Account of experiments with animals made hypothermic to 17–15° C. and after 24 hrs. gradually transferred into an environment of 43–44° C. Difficulties in thermoregulation to heat were observed in these rats, consisting mainly in poor heat loss through the lungs with diminished or suppressed polypnea.

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50231. CHEYMOL, JEAN, *and* **C. LEVASSORT.** Résistance à l'hypoxie et thermorégulation. (Société de Biologie, *Paris.* Comptes rendus, 1956. t. 150, no. 12, p. 2106–2109, illus.) 8 refs. Text in French. ***Title tr.:*** Resistance to hypoxia and thermoregulation.

Account of survival studies of rabbits exposed to hypoxia (6.4 percent of O_2 corresponding to 9,000 m. altitude) and cold environment. The core temperature of the animals is also recorded and discussed.

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50232. CHEZHIN, V. A. Uchet sil pucheniiâ pri proektirovanii vysokikh svaĭnykh rostverkov. (Transportnoe stroitel'stvo, Jan. 1958. t. 8, no. 1, p. 19–22, graph. diagrs.) 2 refs. Text in Russian. ***Title tr.:*** Consideration of heaving forces in the design of deep pile foundations.

"Factors affecting frost heaving in the clay soils of the North are examined, and formulas for calculating the proper structure and depth of pile foundations are given. Heaving is a function of the depth of frost penetration, and the composition, structure, and moisture content of the ground, as well as of the level of ground water. Maximum deformations can be calculated with sufficient accuracy from data on the max. depth of frost penetration and on the pore water, taking into account the moisture increase associated with its migration to frozen strata. The piles should be placed at slightly varying angles to increase heaving resistance."—SIPRE.

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CHHINA, G. S., *see* Anand, B. K., *and others.* Effect of hypothermia . . . *1958.* No. 49282.

50233. CHIASSON, ROBERT B. The dentition of the Alaskan fur seal. (Journal of mammalogy, Aug. 1957. v. 38, no. 3, p. 310–19, illus.) 14 refs.

A description and discussion of the teeth of *Callorhinus ursinus* from 49 animals of both sexes and all ages. For comparison, skulls of three other species were used. The investigation attempts to clarify the taxonomic position of the Pinnipedia and their dental characteristics including microstructure.

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CHICHAGOV, VASILIĬ ÎAKOVLEVICH, 1726–1809, *see* Lomonosov, M. V. Proėkt Lomonosova i ėkspeditsiiâ Chichagova. *1854.* No. 52907.

50234. CHICHERIN, I. A. Kompleksnoe ispol'zovanie lesosyr'evykh resursov v Novosibirskoĭ oblasti. (Lesnoe khoziâistvo, Mar. 1958. god 11, no. 3, p. 57–59.) Text in Russian. ***Title tr.:*** Complete utilization of raw materials of timber in Novosibirsk Province.

Utilization of wood waste at the cutting site is discussed in connection with the 1959–1965 lumber-procurement plan for the building and furniture industries. Saw mills and other temporary woodworking installations can be erected in conjunction with chemical distillation plants, and can be shifted to new sites as the cutting progresses. Provision also can be made for making boxes, crates, barrels and other packing accessories, and for producing oil and camphor from fir (needles and branches), also rosin from stumps. Birch and aspen (hitherto waste) can be cut up for skis, snow shoes, radio parts, rough furniture components, etc. These semi-finished products can be transported conveniently on trucks.

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CHIGHIZOLA, RENÉE, *see* Mouriquand G., *and others.* L'hypothermie . . . *1957.* No. 53427.

CHIGHIZOLA, RENÉE, *see also* Mouriquand, G., *and others.* L'hypothermie . . . physique . . . *1957.* No. 53426.

50235. CHILDERHOSE, R. J. Deliverum non dunkem. (Aircraft, June 1956. v. 18, no. 6, p. 16–17, +, illus.)

Describes flight Montreal - Europe via Goose Bay (53°20′ N. 60°25′ W.) and Narssarssuaq (61°09′ N. 45°25′ W.) with group of Sabre-6's for the RCAF in France. More than 500 Sabre aircraft have been delivered over this route since the Overseas Ferry Unit started its operation in Oct. 1953.

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50236. CHINARINA, A. D. Vozrastnoĭ i razmernyĭ sostav kosiâkov treski i pikshi. (*In:* Akademiiâ nauk SSSR. Murmanskaiâ biologicheskaiâ stanciiâ. Zakonomernosti skopleniĭ . . . 1958. p. 176–89, illus., tables.) 14 refs. Text in Russian. ***Title tr.:*** Age and size composition of cod and haddock shoals.

Reviews earlier studies, and presents information on age composition of spring and summer shoals, size and weight composition (1953–1955), also on average weights, sex composition, age distribution in relation to depth. Conclusions on best year class, period(s) of maximal weight, weight differences between the sexes, etc. are drawn.

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CHINKOV, G., *see Sibirskie ogni.* Poėty . . . *1957* No. 54861.

50237. CHIRIKHIN, ÎU. D. Gidrologicheskiĭ ocherk iûgo-vostochnoĭ chasti moriâ Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniiâ moreĭ SSSR, 1932. vyp.

15, p. 13–31, illus. tables, maps.) Text in Russian. Summary in German. ***Title tr.:*** Hydrological outline of the southeastern Laptev Sea.

Account of investigation of the coastal water, made in the summer 1925 from the schooner *Polûrnaîâ Zvezda*. Route, depth, nature of bottom and bottom deposits, water transparency and color, temperature and salinity and their distribution, ice conditions, tides and currents are presented in turn and data tabulated (p. 24–29). The effects of river water (from the Lena and Yana) and of the winds on temperature and salinity are also discussed.

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50238. CHISTÎAKOV, G. E. Vskrytie i zamerzanie r. Leny. (Meteorologiîa i gidrologiîa, Jan. 1958, no. 1, p. 44, table.) 2 refs. Text in Russian. ***Title tr.:*** Freeze-up and breakup of the Lena River.

Freeze-up and breakup dates are tabulated for the city of Yakutsk for the periods 1827–1899, 1900–1955, and 1827–1955. The latest breakup recorded was June 7 (1843); the earliest May 7 (1943). The mean breakup dates vary from the upper reaches to the mouth of the river: from May 1 at 3,985 km. upriver to June 6 at 215 km. from its mouth, the breakup front moving with a speed of 100 km./day. Breakup in the 20th century averaged one week earlier than in the 19th due to climatic warming. The freeze-up front moves three times faster than the breakup front.—From SIPRE.

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50239. CHISTÎAKOV, V. I. Kompleksnaîa mekhanizatsiîa ėkskavatornogo sposoba dobychi torfa. (Mekhanizatsiîa trudoemkikh i tîazhelykh rabot, Aug. 1958. god 12, no. 8, p. 13–16, illus.) Text in Russian. ***Title tr.:*** Mechanization of excavating methods in peat production.

Studies of peat-excavating, -collecting and -turning machines are analyzed with respect to productivity. Performance characteristics of two universal machines of new design are described. The axial-spinal crusher (MDO–2), installed on the single-row multi-bucket excavator (TEMP–2) is shown and compared with an old model. ***Copy seen:*** DLC.

50240. CHITTLEBOROUGH, R. G., *and* **K. GODFREY.** A review of whale marking and some trials of a modified whale mark. (Norsk hvalfangst-tidende, May 1957. årg. 46, nr. 5, p. 238–48, illus., tables.) Text in Norwegian and English. 10 refs.

The whale mark developed by *Discovery* investigations in 1926 and now in general use is criticized: it may cause serious injury to young animals and, being completely embedded in the body, it is frequently missed at the factory. Experiments carried out in Australia at Carnarvon in Sept. 1956 and Albany Dec. 1956, with a modified type are described in detail. The performance of the modified mark was considered satisfactory and further development is planned. ***Copy seen:*** DLC.

CHIZHIK, B. M., *see* Akademiîa nauk SSSR. IÂkutskiĭ filial. Za sovetskuîû vlast' . . . *1957*. No. 49170.

50241. CHLENOV, ANATOLIĬ. Kogda v tundru prikhodit osen'. (Vokrug sveta, Nov. 1958, no. 11, p. 18–21, illus.) Text in Russian. ***Title tr.:*** When autumn comes to the tundra.

Sketch of the change of season around the reindeer breeding kolkhoz "Turvaurgin" in Chukotka(?): changing color of the vegetation, snipe migration, walrus hunting, departure of reindeer herds to winter pastures, first new ice on the sea. ***Copy seen:*** DLC.

50242. CHLENOV, ANATOLIĬ. Tri patrona. (Fizkul'tura i sport, 1957. god 27, no. 12, p. 37–38, illus.) Text in Russian. ***Title tr.:*** Three bullets.

Describes a successful seal hunt by two men stranded by a snow storm on Chukotka without food and with only three rifle bullets. ***Copy seen:*** DLC.

50243. CHOW, BACON FIELD, 1909– . Protein metabolism under stressful conditions. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 91–97, tables.) 16 refs.

Account of experiments with rats submitted to three kinds of stress, including cold. The latter, as well as high temperature, caused increased destruction of tissue nitrogen. The effect of diet on performance is also discussed.

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50244. CHOW, KAO LIANG, *and others.* Degeneration of retinal ganglion cells in infant chimpanzees reared in

darkness. (Journal of comparative neurology, Feb. 1957. v. 107, no. 1, p. 27–42, illus., tables.) 10 refs. *Other authors:* A. H. Riesen, *and* F. W. Newell.

Account of histological findings in retinas of three chimpanzees reared in total or partial darkness. The retinas of the latter were "entirely normal;" those of the two animals reared in darkness showed a disappearance of ganglion cells, but intact bipolar and receptive cell layers. All three animals showed retardation of visual development and discrimination. ***Copy seen:*** DNLM.

50245. CHRISTELL, EINAR. Apropos Spetsbergen. (Sveriges flotta, Nov. 1957; Feb. 1958. årg. 53, nr. 11, p. 150–53; årg. 54, nr. 2, p. 29–30, illus.) Text in Swedish. ***Title tr.:*** Apropos Spitsbergen.

Contains brief notes on the role of Swedish ships in expeditions to Spitsbergen 1861–1908. Nordenskiöld's expedition to 81°42′ N. aboard the *Sofia* in 1868, his expeditions on the *Gladan* and *Ingegerd* to Greenland in 1871, and to Spitsbergen on the *Polhem* and *Gladan* 1872–73 are mentioned among others. The involuntary wintering of the 1872–73 expedition in Mossel Bay is described in the second part. ***Copy seen:*** DLC.

50246. CHRISTENSEN, HELGE. Grønlandske exlibris. (Grønland, Mar. 1957. nr. 3, p. 112–14, illus.) Text in Danish. ***Title tr.:*** Greenland ex libris.

Contains short biographical notes on the artist Jens Rosing (leader of the reindeer husbandry experiments in the Godthåb Fjord) and a description of some of his bookplates.

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50247. CHRISTENSEN, HELGE. Tre besøg i Grønland. København, Duplextrykkeriet, 1954. 40 p. 19 illus. Text in Danish. ***Title tr.:*** Three visits in Greenland.

Describes three different settlements on the West Greenland coast. One, a small, isolated community without occupations, medical care, or schooling, may be moved to join a larger community; the second has natural assets, developed to make it a thriving economic base; the third is the city of Godthåb. The Greenlanders are discussed with insight. Author is editor of *Grønlandsposten*. Pen sketches and a few water-colors by Alex Secher illustrate the text. ***Copy seen:*** DLC.

50248. CHRISTENSEN, K. N. Et 50 års jubilaeum. (Grønland, Feb. 1957. nr. 2, p. 73–80, illus.) Text in Danish. ***Title tr.:*** A 50th anniversary.

Reviews the Julianehåb district sheep farming in Greenland started by Jens Chemnitz in 1906. The present research station is at Upernaviarssuk, about 15 km. east of Julianehåb (60°43′ N. 46°08′ W.). About 25,000 ewes are the basis of the district's flocks. Sheep owners and their families (about 1,000 persons) constitute 20% of the population. In 1956 some 12,000 lambs were slaughtered; meat, wool and hide production amounted to one million D. kr.

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50249. CHRISTIAN, H. W., *Jr.* B–52 in the deep freeze. (Boeing magazine, Jan. 1957. v. 27, no. 1, p. 8–9, photos.)

Contains a brief semi-technical report of cold-weather tests performed on the U.S. Air Force's B–52 jet bomber under natural conditions at Eielson Air Force Base in Alaska and in the climatic hangar at Eglin A.F.B. in Florida. Temperatures in Alaska dropped to −55° F. during the test program. Few deficiencies were noted and all were corrected with minor adjustments. The plane proved one of the best, cold-weather aircraft in the Air Force. ***Copy seen:*** DLC.

50250. CHRISTIANSEN, ARTHUR, 1912– . Storfugle på langfart; tranerne på vej fra Lapland. (Naturens verden, Aug. 1957. årg. 41, p. 1–4, illus.) Text in Danish. ***Title tr.:*** Large birds on long journeys; cranes in passage from Lapland.

The passage of migrating cranes over Denmark from northern Fennoscandia is described. They start southward in family groups in Aug.–Sept., and collect in large numbers at selected grainfield sites in Denmark. The crane's survival is attributed to its extreme wariness.

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50251. CHRISTIANSEN, BENGT. Reker. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4), p. 13–16, illus.) Text in Norwegian. ***Title tr.:*** Prawns.

Describes the deep-sea prawn (*Pandalus borealis*), the only one of 40–50 species off the Norwegian coast of economic importance. A short survey of the fishing-grounds is given. In 1952, the Nordland catch was 116 tons, Troms 599 and Finnmark 14; 3,095 tons in all Norway,

where this fishery ranks seventh in value in the fishing industry.

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CHRISTIANSEN, H., *see* Diede, G., *and others.* Motorfracht . . . "Finnmarken." *1956.* No. 50557.

50252. CHRISTIANSEN, HANS C. Grønlandske fiskepriser kontra norske og andre priser. (Atuagagdliutit: Grønlandsposten, Sept. 12, 1957. Ukiut 97-iat, nr. 19, p. 4–7.) Text in Danish and Eskimo. ***Title tr.:*** Greenland fish prices versus Norwegian and other prices.

Discusses price differences and their causes. Norwegian fishermen's prices are generally higher than those paid in Greenland. ***Copy seen:*** DLC.

50253. CHRISTIANSEN, HANS C. Det grønlandske fiskeris økonomi. (Atuagagdliutit: Grønlandsposten, Aug. 15, 1957. Ukiut 97-iat, nr. 17, p. 6–7.) Text in Danish. ***Title tr.:*** The Greenland fisheries economy.

Discusses the deficit shown by the industry: 1,097,870 D. kr. in 1955, 1.5 million D. kr. estimated for 1956. It is attributed to the higher prices to the fishermen, increased expenses and a stagnant production. The fishermen's prices cannot be raised further.

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50254. CHRISTIANSEN, HANS C. Opdyrkning af hjemme-mark er fåreavlens centrale problem. (Atuagagdliutit: Grønlandsposten, Aug. 15, 1957. Ukiut 97-iat, nr. 17, p. 8–9, 17.) Text in Danish. ***Title tr.:*** Cultivation of grazing-ground is the central problem in the sheep farming industry.

The Greenland Trading Company has administered sheep farming since 1956. Due to the winter 1956–47 weather conditions, about a third of the flocks were lost, despite efforts to send fodder, grant extra loans, etc. ***Copy seen:*** DLC.

50255. CHRISTIANSEN, HANS C. Problemer omkring udstedernes vareforsyning. (Atuagagdliutit: Grønlandsposten, Aug. 29, 1957. Ukiut 97-iat, nr. 18, p. 6.) Text in Danish. ***Title tr.:*** Problems of merchandise supply to the settlements.

The small settlements in Greenland are to be grouped into four categories according to the range of merchandise held by the shops. Personnel problems are discussed. ***Copy seen:*** DLC.

50256. CHRISTIANSEN, HANS C. Skridtet fra kyst- til bankefiskeri tages naeppe de naermeste år. (Atuagagdliutit: Grønlandsposten, Aug. 1, 1957. Ukiut 97-iat, nr. 16, p. 7, 14–16.) Text in Danish and Eskimo. ***Title tr.:*** The step from coast to bank fishing will hardly be taken during the next few years.

Presents some 1956 figures on the Greenland fishing industry: 1,922 men employed (nine percent above 1954) and 1,741 boats (1,252 row, 489 motor) used. In 1950 and 1951, about five million cod were caught a year, in 1956 eight million, but smaller, so the total weight has remained steady. The industry has not been developing. The processing plant should be speeded up; some projects in progress are noted.

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50257. CHRISTIANSSON, HANS. Den kulturhistoriska expeditionen till Spetsbergen 1955. (Fornvännen, 1956. häfte 5–6, p. 286–89, illus.) 4 refs. Text in Swedish. ***Title tr.:*** The culture-history expedition to Spitsbergen 1955.

Contains preliminary report on excavation of a 200-sq. m. site near the mouth of Isfjord, July 22–Aug. 27. Named Russekeila, the site contained several well-built wooden huts, presumably brought to the island. The camp was apparently last used about 1760–70. Over a thousand artifacts (hunting- and fishing equipment, articles of personal and domestic use, etc.) were collected and given to the Tromsø Museum, which sponsored the expedition. The six-man party, headed by the writer, included scientists from all the Scandinavian countries. Their work is discussed by I. P. Shaskol'skiĭ, q.v. ***Copy seen:*** DLC.

50258. CHRISTIE, ROBERT L. Geological reconnaissance of the north coast of Ellesmere Island, District of Franklin, Northwest Territories. Ottawa. Queen's Printer, 1957. 40 p., 4 plates, fold. map, table. (Canada. Geological Survey. Paper 56–9.) 13 refs.

First field study of the Ellesmere Island north coast from Cape Columbia (83°10′ N. 70°30′ W.) to Lands Lokk (81°40′ N. 91° W.), made by the author, while member of the joint Canada-United States Northern Ellesmere Island Ice Shelf Expedition of 1954. Exploration of the area (accessible by dog team or aircraft), since Nares' British Arctic Expedition of 1875–76 is reviewed.

Methods of travel, topography, climate, vegetation and game are briefly described. General geology, including formations, rock types, fossils collected, age correlation, evidence of more extensive former glaciation, existing glaciers, and probable origin of ice islands, is given in greater detail. Structural features and a few mineral deposits are noted.

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50259. CHRISTIE, ROBERT L. Operation Hazen 1957. (Arctic circular, Aug. 1958. v. 11, no. 1, p. 2–7.)

Describes an eight-man expedition to northern Ellesmere Island in summer 1957, led by Dr. Geoffrey Hattersley-Smith and organized by the Defence Research Board as part of Canada's IGY program. Glaciological, geophysical, climatological, geological and limnological studies were made. A base camp was established at Lake Hazen north of Johns Island, and an icecap station near Gilman Glacier in the United States Range. Preliminary findings from geophysical and glaciological data collected, also the geology, are summarized.

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CHRISTIE, ROBERT L., *see also* Canada. Defence Research Board. Op. Hazen 1957. *1958.* No. 50061.

50260. CHRISTIE, ROBERT W. Bacterial variations in the nasopharynx and skin of isolated arctic scientists. (New England journal of medicine, Mar. 13, 1958. v. 258, no. 11, p. 531–33, tables.) 9 refs.

Report of a study of seven members of a Greenland icecap party during their isolation of 100 days. Changes in distribution of the bacterial flora are noted and correlated with earlier findings. *Baccillus subtilis* and staphylococci were ubiquitous, especially in the skin. Two members who did not wash during the period of observation showed no deleterious effects. ***Copy seen:*** DNLM.

50261. CHRISTIE, ROBERT W. Medical notes Greenland Ice Cap expedition. (American Medical Association. Journal, July 20, 1957. v. 164, no. 12, p. 1314–1317, tables.) 2 refs.

Notes of the physician of Project 12 of the Snow Ice Permafrost Research Establishment, a six-man party which traveled in weasels approx. 1,200 miles on the Inland Ice during a hundred days in 1955, collecting scientific data, altitude to approx. 12,000 ft., air temperature 31° F. to −30° F. Sinusitis and other respiratory disorders were the most common complaint. A sudden fall of hemoglobin and erythrocyte count became apparent in all members soon after setting out and despite excellent food. Diarrhea, possibly influenza and irritability made up other complaints. Drugs used and essentials for polar medical and emergency kits, are listed. ***Copy seen:*** DLC.

50262. CHRISTOFFERSEN, RAGNAR. Sulitjelma gruber. (Tidsskrift for kjemi, bergvesen og metallurgi, Mar. 1950. årg. 10, nr. 2B, p. 130–33, illus., graph.) Text in Norwegian. ***Title tr.:*** Sulitjelma mines.

The minerals at Sulitjelma are believed to have concentrated at the contact between a gabbro intrusive and Cambrosilurian slates in a local anticlinal structure during progressive metamorphism. The mineralized zone extends N/S over 20 km. distance. Recent investigations indicate a similar zone at a lower level. Mineralogic composition and variations of the pyrites, sulphides, copper and zincblende are described. Cobalt, antimony, and lead are also noted among 23 known minerals there. Eleven mines are cited. General features of the history, mining, concentration, smelting, and of the operational facilities are outlined. Production has risen steadily since 1894.

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50263. CHRONIC, BYRON JOHN, 1921– , *and* H. CHRONIC. Bibliography of theses written for advanced degrees in geology and related sciences at universities and colleges in the United States and Canada through 1957. Boulder, Colo., Pruett Press, 1958. Approx. 370 unnumb. pages.

Lists 11,091 theses, alphabetically by author, giving degree and date, and title. Index of geologic formations and subject-geographic index are appended. Some two hundred of the theses listed deal with northern areas. ***Copy seen:*** DGS.

CHRONIC, HALKA, *see* Chronic, B. J., *and* H. Chronic. Bibliography of theses . . . geology . . . *1958.* No. 50263.

50264. CHUBAROVA, R. V. K istorii drevneĭshego naseleniĭa Sakhalina. (Sovetskaĭa etnografiĭa, 1957, no. 4, p. 60–75, illus.) 19 refs. Text in Russian. ***Title tr.:*** The history of the ancient population of Sakhalin.

Discusses (p. 68–75) material cultural affinities of peoples on Sakhalin with those of Kamchatka, Chukotka, northwest America, etc. The late neolithic stone and bone implements and bone engravings of Sakhalin are close to those of the early Asiatic and American Eskimo cultures, especially Dorset. Finds of the Sakhalin detail of the Far Eastern expedition, viz. scrapers, axes, knives, toggle harpoons, arrow points, plaques with geometric design, are described and compared with corresponding implement types and decorative patterns of the Old Bering Sea, Ipiutak, Okvik, Punuk, Dorset and other cultures. Whether these analogies are due to cultural and economic contacts or to genetic ties is left open. ***Copy seen:*** DLC

CHUBAROVA, R. V., *see also* Levin, M. G. Raboty na Chukotke . . . *1958*. No. 52795.

CHUDINOV, GRIGORIĬ MIKHAĬLOVICH, *see* Adademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . [Akutskoĭ ASSR. *1958*. No. 49171.

50265. CHUDINOV, P. K. Zakhoronenie pelikozavrov na reke Pinege. (Akademiîa nauk SSSR. Doklady, Oct. 11, 1957. t. 116, no. 5, p. 859–62.) 8 refs. Text in Russian. ***Title tr.:*** The entombment of pelycosaurs on the Pinega River.

Contains brief characteristics of 13 layers of Permian deposits on the banks of Pinega River in Arkhangel'sk province, and descriptions of the remains (two skulls, lower jaws and miscellaneous bones) of these fossil reptiles discovered in the fall of 1955. This is the first large find of pelycosaurs in the U.S.S.R. The geological age of the deposits is probably the lower Ustinian series of the Permian system. ***Copy seen:*** DLC.

50266. CHUMAKOV, A. A., *and* **I. V. GINZBURG.** Novaîa redkometal'naîa geokhimicheskaîa provintsiîa na Kol'skom poluostrove. (Akademiîa nauk SSSR. Doklady, May 11, 1957. t. 114, no. 2, p. 400–403.) 5 refs. Text in Russian. ***Title tr.:*** A new rare-metal geochemical province on the Kola Peninsula.

Structural-geology and lithologic-stratigraphy of the "Voron'ye - Poros-ozero" formation are described. The first location of lithium was discovered by the authors in the region of Lake Poros in 1947 in pegmatitic rocks in association with leucocratic granites. The formation described is typical of complex rare-metal pegmatitic formations in this province with predominance of lithium. ***Copy seen:*** DLC.

50267. CHUMAKOV, A. A. O proiskhozhdenii shchelochnykh granitov Kelv. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 308–368, illus., plates, tables, incl. 1 fold., diagrs. incl. 1 fold.) Text in Russian. ***Title tr.:*** On the origin of the Keyvy alkaline granites.

Analyzes in detail the structural-geologic, mineralogic and petrochemical properties of the Keyvy alkaline granites, and outlines their origin and development. The author disagrees with those who consider that alkaline granitic magma erupted from depth in a single stage intrusion and provoked metasomatic transformation in the surrounding country rocks. He assumes that the Keyvy massif represents an independent geologic structure, and recognizes two phases of intrusion, of which the alkaline granites of the second, main phase, have to be considered as magmatic-siallite intrusive formation. According to structural-geologic criteria, the Keyvy alkaline granite complex is divided into three groups of rocks: strictly magmatic; alkaline and subalkaline; and gabbro syenite, syenite and alkaline syenite. Each group is treated in detail and a further division is made. Their mineralogic and petrochemical properties are analyzed. ***Copy seen:*** DLC.

50268. CHUMAKOV, E. I. Sel'skaîa srednîaîa shkola. (Narodnoe obrazovanie, Jan. 1954, no. 1, p. 58–62.) Text in Russian. ***Title tr.:*** Rural high-school.

Discusses the problems of secondary education in the northern districts taking as example a high-school at Verkhnyaya Toyma (62°15′ N. 45°05′ E.), on the Severnaya Dvina River, Arkhangel'skaya Oblast'. The school serves an area with a 100–150 km. radius, has boarding facilities and provides, in addition to regular courses, practical training in agriculture, agronomy, home economics, etc. The lack of transportation for non-residents and resulting curtailment of extra-curricular activities, vacation homeleaves for boarders, are discussed, also the summer work in kolkhozes and difficulties in attending classes during harvest time. An insufficient number of parallel grades necessitating rejection of applicants, and inadequate preparation pro-

vided by some rural elementary and junior-high schools, etc., are dealt with. The need of enlarging existing schools or building new ones in outlying northern taiga areas is stressed. ***Copy seen:*** DLC.

50269. CHUMAKOV, N. M. Novye dannye o geologicheskom stroenii ûgo-zapadnogo obramleniâ Vilûiskoĭ vpadiny. (Izvestiâ vysshikh uchebnykh zavedenil; Neft' i gaz, 1958, no. 3, p. 25–31, cross-sections, map.) 14 refs. Text in Russian. ***Title tr.:*** New data on the geological structure of southwestern border of the Vilyuy depression.

Outlines the stratigraphy and tectonics of the Nyuya River area of Yakut A.S.S.R. Study of the geological structure of this area (the Nyuya, left tributary of Lena, and its right tributaries, Bol'shoy and Malyy Patom, approx. 60° N. 111° E.) may throw light on underlying formations of the Vilyuy depression and facilitate the search for oil-bearing rocks.
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50270. CHUMAKOV, N. M. Tektonika ûgo-zapadnoĭ chasti Vilûiskoĭ vpadiny. (Akademiâ nauk SSSR. Doklady, July 21, 1957. t. 115, no. 3, p. 609–612, text map.) 11 refs. Text in Russian. ***Title tr.:*** The tectonics of the southwestern part of the Vilyuy depression.

This depression filled with Mesozoic deposits is between the slopes of the Anabar and Aldan shields. It is a lateral marginal structure connected with the Verkhoyansk folded zone, both of upper Paleozoic origin. Tectonic scheme (fig. 1) shows 21 initial structural formations and 11 secondary. It is suggested that a more ancient lateral marginal system, connected with the Baykal folding province, preceded the formation of the Mesozoic Vilyuy lateral flexure.
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CHUMAKOV, N. M., *see also* Komar, V. A., *and* N. M. Chumakov. Sredne- i verkhne paleozoĭskie otlozheniâ . . . *1957*. No. 52371.

50271. CHUPP, CHARLES. A monograph of the fungus genus *Cercospora*. Ithaca, N.Y., 1953. 667 p., 222 illus.

Contains a general discussion of the genus, a key to genera confused with *Cercospora*, followed by descriptions of some twelve hundred species, of which about sixty are described (in Latin and in English) as new; for the others, keys, brief descriptions and data on hosts, type specimens and geographic distribution are provided. *C. galii*, *C. angelicae*, and *C. selinigmelini*, native to Alaska and a few species extending to northern Canada, are included. Indices of host names and of *Cercospora* species are appended.
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50272. CHURCHILL, ETHAN D., *and* **H. C. HANSON.** The concept of climax in arctic and alpine vegetation. (Botanical review, Feb.–Mar. 1958. v. 24, no. 2–3, p. 127–91.) About 250 refs.

An analysis and discussion of some fundamental concepts in plant ecology and sociology with emphasis on alpine and arctic conditions. Environmental gradients and patterns of habitat, units of study, and types and rates of change are reviewed, followed by a critique of concepts of climax and succession, change and steady state. A number of arctic and alpine studies is reviewed with reference to change and applicability of climax and succession concepts and the character of these plant communities is outlined, according to the authors' concepts.
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50273. CHURCHILL, ETHAN D. Phytosociological and environmental characteristics of some plant communities in the Umiat region of Alaska. (Ecology, Oct. 1955. v. 36, no. 4, p. 606–627, illus., tables.) 23 refs. Ph. D. dissertation to Catholic University of America.

Study based on field work conducted in mid-summer 1951, on the Arctic Slope near the Colville River, at 69°22′ N. 152°08′ W., elevation ranging from 340 ft. on floodplain to 950 ft. on upland. The stand was considered as unit of investigation. The vegetation was found to be generally "6 to 12 inches high, consisting of dwarf heath shrubs, dwarf birches and willow, intermingled herbaceous species and, in places, alders and willows from 3 to 8 ft. high." Five types of stands are distinguished, some divided into subtypes. The environment was found to be rigorous (average annual temperature +10.7° F., lowest −63° in Feb., highest 85°, July) with low precipitation with no freeze-free season, and permafrost underlying at small depth. The frequency of the more common vascular plants is also discussed. ***Copy seen:*** DLC.

50274. CHURKINA, N. A. Dreĭf buev v Tsentral'noĭ Arktike i v arkticheskikh morâkh. (Problemy Severa, 1958, vyp. 1, p. 337–40, tables, map.) 4 refs. Text

in Russian. ***Title tr.:*** The drift of buoys in the Central Arctic and in the arctic seas.

Report on ten drift buoys released from Russian vessels during 1942–1948 and picked up during 1953–1955. Characteristics of the individual drifts are discussed and the general course of surface currents determined as largely towards and along the eastern coast of Greenland.

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50275. CIER, J. F. La régulation thermique, 1; la lutte contre le froid. (Presse médicale, Aug. 21, 1957. t. 65, no. 62, p. 1405–1406.) Text in French. ***Title tr.:*** Thermal regulation 1; the fight against cold.

Contains information on the physical basis of heat production in the organism; centers of thermogenesis; endocrinological factors and chemical thermoregulation (thyroid, adrenal and adrenaline, hypophysis); food and heat production; range of chemical thermoregulation. Physical thermoregulation is discussed from the aspect of radiation, isolation and vasomotor control of heat emission.

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50276. CIER, J. F. La régulation thermique, 2; lutte contre la chaleur et rôle du système nerveux. (Presse médicale, Aug. 31, 1957. t. 65, no. 63, p. 1421–23.) Text in French. ***Title tr.:*** Thermal regulation 2; the fight against heat and the role of the nervous system.

Continues with problems of physical thermoregulation (perspiration and evaporation through respiration; heat loss through radiation); chemical thermoregulation in the struggle against cold; extent of thermo-regulating mechanisms. The concluding section deals with the role of the nervous system in thermoregulation, viz.: thermo-regulatory reflexes, and centers of thermoregulation.

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CIER, J. F. *see also* Klepping, J., *and others.* La sécrétion médullosurrénale . . . *1957.* No. 52322.

CIGLAR, M., *see* Milin, R., *and* M. Ciglar. Die Wirkung der Dunkelheit . . . *1956.* No. 53291.

50277. CLARK, AUSTIN HOBART, 1880–1954. Morskie lilii Okhotskogo i Îaponskogo morei. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa morei SSSR, 1937. vyp. 23, p. 217–30.) Text in Russian and English.

Title tr.: The crinoids of the Okhotsk and Japanese Seas.

Contains descriptions and identification key of sea lilies from this area. Synonyms and location of finds are given; geographic, bathymetric and thermal range, also previous records, are discussed. Finally the ecology, associations of crinoid species and affinities of forms in the Okhotsk and Japanese Seas are considered.

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CLARK, DONALD, *see* Heizer, R. F. Archaeology of the Uyak site . . . *1956.* No. 51666.

50278. CLARK, GORDON M., *and others.* An epizootic among eider ducks involving an acanthocephalid worm. (Journal of wildlife management, Apr. 1958. v. 22, no. 2, p. 204–205, illus.) refs. *Other authors:* D. O'Meara *and* J. W. Van Weelden.

Examinations of these ducks made necessary by an epizootic in the northeastern United States, revealed heavy intestinal infection with the worm *Polymorphus botulus* (Van Cleave, 1916). Some birds were infested in addition with intestinal cestodes or trematodes. *P. botulus* may be a major factor in epizootics among eider; it is holarctic in distribution and recently reported from the Eurasian Arctic; its life cycle is not known. ***Copy seen:*** DLC.

50279. CLARK, JOHN R., *and others.* Summary of gear selection information for the Commission area. (International Commission for the Northwest Atlantic Fisheries. Annual proceedings, 1958. v. 8, p. 83–99, illus., tables.) 32 refs. *Other authors:* F. D. McCracken *and* W. R. Templeman.

A study of the gear used in Labrador, Greenland, Iceland, Newfoundland banks waters, with reference to the species caught. Only the intrinsic, or factors inherent in the gear, are considered. Included are the otter trawl, pair trawls, Danish seines, hooks, and traps. Selection was investigated for cod, haddock, and redfish among the arctic species. Size of mesh, material of netting, speed of tow, time of tow, etc., were considered in their effect upon escapement.

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CLARK, JOHN R., *see also* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

50280. CLARK, K. C., *and* G. J. ROMICK. An optics field site for auroral studies. College, Alaska, July 1958. 21 p. illus., 4 diagr. (Alaska. University. Geophysical Institute. Scientific report no. 1.) Ref.

Describes the conversion of a prefabricated walk-in refrigerator to an arctic field laboratory for optical auroral studies at the Geophysical Institute. This equipment includes a Hunten scanning spectrometer in a sky-scanning mount; an IGY patrol spectrograph; the College meridian mirror spectrograph; the zenith Hust prism spectrograph; and a Roach scanning photometer. Details of construction, layout, electrical circuits, and other facilities are given.—From authors' abstract. ***Copy seen:*** DWB.

50281. CLARK, LOIS, 1884– . Hepaticae collected by Svihla near Seward and Fairbanks, Alaska. (Bryologist, June 1958. v. 61, no. 2, p. 152–53.)

List of 21 species collected in the summer 1954, with notes on other forms associated, location, distribution, etc. The collection is at the University of Washington, Seattle. ***Copy seen:*** DA.

CLARK, MARGUERITE R., *see* Musacchia, X. J., *and* M. R. Clark. Effects of elevated temperatures . . . arctic sculpin . . . *1957*. No. 53469.

50282. CLARK, WEBSTER KIM. The land mammals of the Kodiak Islands. (Journal of mammalogy, Nov. 1958. v. 39, no. 4, p. 574–77, map.)

Contains descriptions of topography, vegetation and weather followed by account of six indigenous mammals (bat, vole, fox, bear, weasel, otter), including their abundance and distribution. A list of 14 introduced mammals, most of them established, is also presented.

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50283. CLARK, WEBSTER KIM. Seasonal food habits of the Kodiak bear. (North American Wildlife Conference. 22nd, Transactions, 1957. p. 145–51, tables.) 3 refs.

Account based on various sources (scat and stomach examinations, direct observation, etc.). Roughly, the food consisted of carrion or seaweeds in winter-early spring; greens in spring and early summer; greens and fish, midsummer; berries in later summer to mid-fall; cleanup in late fall-winter.

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CLARK, WEBSTER KIM, *see also* Mossman, A. S., *and* W. K. Clark. Winter records of bats in Alaska. *1958*. No. 53422.

CLARKE, D., *see* Wallerstein, G., *and* D. Clarke. Mountains . . . *1958*. No. 55931.

50284. CLARKE, J. R. Light-induced changes in some endocrine organs of the vole, *Microtus agrestis*. (Journal of endocrinology, July 1957. v. 15, no. 3, p. liv–lv.) 5 refs.

Report on experiments with laboratory animals given 15 hr. daily light ("summer" group) with their litter mates kept at 6-hr. daily light ("winter" group). The "summer" animals were better developed sexually having bigger penes, and heavier testes, with larger seminiferous tubules and abundant sperm. "Summer" adrenals were smaller. The group differences in pituitaries are also discussed. ***Copy seen:*** DNLM.

50285. CLARKE, R. S. J., *and others.* Cold vasodilatation in the human forearm. (Journal of physiology, Aug. 1957. v. 137. no. 3, p. 84P–85P.) 3 refs. *Other authors:* R. F. Hellon, *and* A. R. Lind.

Account of blood flow in the arm submerged in water of 2° to 42° C. "Blood flow fell with decreasing temperature, but below 14° C., it increased again until at 2° C. the flow was slightly greater than at 34° C." ***Copy seen:*** DNLM.

50286. CLARKE, R. S. J., *and others.* The duration of sustained contractions of the human forearm at different muscle temperatures. (Journal of physiology, Oct. 1958. v. 143, no. 3, p. 454–73, illus., table.) 33 refs. *Other authors:* R. F. Hellon *and* A. R. Lind.

Account of experiments with four subjects having their arm immersed in water of 2° to 42° C. Maximum tension that could be exerted was after immersion in water of 18° C. or more. In water below 18°, exerted tension fell with falling bath (and muscle) temperature, to some 40% in water of 2° C. An analysis of results suggests that at muscle temperatures below 27° C. the more superficial fibers do not contract owing to nervous or neuromuscular interference in transmission due to cooling.

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50287. CLARKE, R. S. J., *and others.* Hyperaemia following sustained con-

traction at different temperatures. (Journal of physiology, July 1957. v. 137, no. 2, p. 45P.) ref. *Other authors:* R. F. Hellon *and* A. R. Lind.

Summary of blood flow records at temperatures varying from 2° to 42° C. The direct relationship between the duration of post-exercise hyperemia and contraction was found to be independent at temperatures of 2° to 26° C.; at higher temperatures, blood flow was much greater for a given contraction, than at low temperatures. ***Copy seen:*** DLC.

50288. CLARKE, R. S. J., *and others.* Vascular reactions of the human forearm to cold. (Clinical science, 1958. v. 17, no. 1, p. 165–79, illus., table.) 32 refs. *Other authors:* R. F. Hellon *and* A. R. Lind.

Report on measurements of blood flow in the forearm, submerged in water of various low temperatures. The flow was found to increase below 18° C. with the greatest increase at 1° C. The response was gradual, with a plateau reached in about 30 min. Evidence was found suggesting that dilatation was largely in the muscle vessels of the forearm. The response was independent of blood pressure changes and hormonal factors.
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50289. CLARKE, ROBERT. Migrations of marine mammals. (Norsk hvalfangst-tidende, Nov. 1957. årg. 46, nr. 11, p. 609–630, illus., maps, diagrs.) Text in Norwegian and English. 76 refs.

The migratory habits of whales and seals are reviewed in detail. Species dealt with include whalebone whales (humpback, blue, fin, sei, minke, Pacific grey and right whales), toothed whales (sperm, pilot, bottlenose and white whales), northern fur seals, hair seals (harp, hooded and Caspian seals) and walruses. ***Copy seen:*** DLC.

50290. CLASON, M. Skogkongressen i Finnland. VIIIde nordiske skogkongress, ekskursjon nr. 11. (Skogbrukeren, Oct. 15, 1954. årg. 29, nr. 20, p. 327–30, illus.) Text in Norwegian. ***Title tr.:*** The forest congress in Finland: 8th Scandinavian Forest Congress, excursion no. 11.

Describes field trip to areas north, east and west of Rovaniemi (66°32′ N. 25°53′ E.) where large-scale reconstruction and reforestation programs are in progress: ditching of marshland areas with modern machinery, burning of virgin forests and degenerated soil, and thinning of forests to protect trees against snow damage, etc. The party visited the large and up-to-date forest experiment station at Kaihwa, 60 km. east of Rovaniemi, and some of the new hydroelectric power plants and resettlement communities established for refugees from areas ceded to the U.S.S.R. after World War II. ***Copy seen:*** DA.

50291. CLAUSEN, HANS. O. B. Bøggild, 1872–1956. (Dansk geologisk forening. Meddeleser, Jan. 1958. bd. 13, hefte 6, p. 531–36, port.) Text in Danish.

The scientific work of Ove Balthazar Bøggild is summarized. Among his published reports mentioned, are those on: bottom sediments of the Greenland Sea; the minerals and geology of Greenland. Bøggildite was named in his honor on his 80th birthday. ***Copy seen:*** DGS.

50292. CLAUSEN, ROBERT THEODORE, 1911– . A monograph of the Ophioglossaceae. Menasha, Wisc., G. Banta Pub. Co., 1938. 177 p. 33 illus. incl. 25 text maps. (Torrey Botanical Club. Memoirs, v. 19, no. 2.) 115 refs.

Contains notes on the nomenclature, history, study materials and procedure, followed by a systematic treatment of this fern family: keys, synonyms, descriptions of 52 species with data on habitat and geographic distribution. The species are arranged in three genera, *Botrychium, Helminthostachys* and *Ophioglossum*; two, also a subspecies and four varieties described as new; and at least ten native to Alaska, northern Canada, Greenland, Lapland and Kamchatka.
Copy seen: DA.

CLAVIJO, JORGE, *see* Villamil, A., *and others.* Electrocardiographic changes in artificial hibernation. *1957.* No. 55816.

50293. CLENDENNING, T. GEORGE, *and* **J. N. MUSTARD.** Notes on Ontario hydro's winter concreting; aspects of lab and field experience in improving cold-weather techniques. (Engineering and contract record, Oct. 1957. v. 70, no. 10, p. 91–95, illus.)

Some basic requirements for winter concreting and various effects of cold on concrete are given. Research and field experience have made it possible to utilize special materials, insulated forms, and new equipment to carry on necessary winter construction. Some procedures followed by the Ontario Hydro-Electric

Power Commission which is required by power demands to maintain such work, are outlined. ***Copy seen:*** DLC.

CLOSS, KARL, *see* Lunde, G., *and others.* Jodinnholdet i norsk fisk . . . *1928.* No. 52954.

50294. COACHMAN, LAWRENCE K., *and others.* Gases in glaciers. (Science, May 30, 1958. v. 127, no. 3309, p. 1288–89, illus., table.) 11 refs. *Other authors:* E. Hemmingsen *and* P. F. Scholander.

Contains information on the differences between gases contained in glaciers from polar and temperate regions; ice as preservative of enclosed air, and a method using radiocarbon dating for determining the age of CO_2 enclosed in ice. By this method, the age of ice on Storbreen, a glacier in north Norway was determined and found in agreement with the estimates of the Norsk Polarinstitutt. ***Copy seen:*** DLC.

COACHMAN, LAWRENCE K., *see also* Nutt, D. C., *and others.* Arctic Institute Greenland Expedition 1958; field report. *1958.* No. 53678.

COADY, M. L., *see* Parkins, W. M., *and others.* Induced visceral hypothermia . . . hemorrhagic . . . shock. *1957.* No. 53865.

50295. COATS, ROBERT ROY, 1910– . Past volcanic activity in the Aleutian arc. Washington, D.C., U.S. Govt. Print. Off., 1946. 18 p. illus., fold. map., 3 tables, 1 diagr. (U.S. Geological Survey, Alaskan Volcano Investigations, Report No. 1.) 7 refs.

First report in series listed as No. 31654, etc. ***Copy seen:*** DGS.

COBB, EDWARD HUNTINGTON, 1916— , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

COBB, EDWARD HUNTINGTON, 1916– , *see also* Miller, D. J., *and others.* Geology . . . petroleum provinces . . . *1957.* No. 53294.

COCCHIA, N., *see* Preziosi, P., *and others.* Sulla . . . modificazioni corticosurrenali . . . *1957.* No. 54137.

50296. COCKRILL, WILLIAM ROSS. Antarctic hazard. London, F. Muller, 1956. 230 p. plates, map.

Veterinarian's narrative of experiences on the floating factory *Southern Venturer* in 1948–49: describes the trip to Norway to pick up whalers, gunners, flensers, etc.; operations in the antarctic whaling grounds, especially the processes of catching and flensing, with photographs. Life aboard ship and among ships of the fleet, visit to another factory ship, etc., are recounted. ***Copy seen:*** DLC.

COFFMAN, BARTON C., *see* Horner, S. G. L., *and others.* Single sideband. *1957.* No. 51815.

50297. COFFMAN, FRANKLIN A. Cold-resistant oat varieties also resistant to heat. (Science, June 28, 1957. v. 125, no. 3261, p. 1298–99, table.) 5 refs.

Among 12 varieties or types of winterhardy oats, the author found a correlated heat resistance. Other characteristics of these plants valuable in farming are listed. The possibility is discussed of testing cold resistance by the cheaper and easier heat test. Exploratory investigations suggest that heat resistance and winter resistance may also be associated in barley and wheat. It is assumed that the physiological factors conditioning cold resistance also condition heat resistance. ***Copy seen:*** DLC.

50298. COFFMAN, JAY D., *and others.* Effect of cooling and smoking tobacco upon the blood flow of reactive hyperemia of the foot. (Circulation, Aug. 1958, v. 18, no. 2, p. 177–82, illus.) 13 refs. *Other authors:* J. E. Wood *and* R. W. Wilkins.

Smoking of two cigarettes decreased the blood flow of reactive hyperemia in six of 14 cool-room experiments. Cooling the environment (from 83° to 68° F.) definitely lowered such blood flow in 14 out of 17 cases. These investigations indicate that smoking and body cooling may have additive effects in reducing reactive hyperemia.

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50299. COHEN, DANIEL MORRIS, 1930– . The synonymy and distribution of *Leuroglossus stilbius* Gilbert, a North Pacific bathypelagic fish. (Stanford ichthyological bulletin, Aug. 1956. v. 7, no. 2, p. 19–23, illus.) 24 refs.

A discussion of the morphometry, synonyms, young stages and geographic distribution of this deep-sea fish. It is reported from the Okhotsk, Bering, and

Alaskan waters down the Pacific coast of America almost to the Equator.

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COHEN, DANIEL MORRIS, 1930– , *see* Bradbury, M. G., *and* D. M. Cohen. An illustration . . . Macropinna microstoma. *1958*. No. 49881.

50300. COLCORD, J. E. The TAF phototheodolite and its use in glacier surveys. (Photogrammetric engineering, June 1957. v. 23, no. 3, p. 552–57, illus., diagrs.) 2 refs.

Describes application of terrestrial photogrammetric surveying methods in measuring the advance of the Coleman Glacier, Wash. The Wild and TAF phototheodolites are compared, and field and computation procedures are explained. ***Copy seen:*** DLC.

COLE, J., *see* Blumer, W., *and others*. A technique . . . studying . . . drugs . . . hypothermia. *1957*. No. 49781.

50301. COLEMAN, LESLIE C. Mineralogy of the Giant Yellowknife gold mine, Yellowknife, N.W.T. (Economic geology, June–July 1957. v. 52, no. 4, p. 400–425, illus., 8 plans, sections and graphs, 2 tables.) 42 refs. Ph. D. thesis, Princeton Univ.

Deals with gold-bearing ores of the Giant Yellowknife property in Mackenzie District (approx. 62°27′ N. 114°21′ W.) with particular attention to the relationship of gold to other metallic minerals. It is concluded that there were three periods of mineralization from hydrothermal solutions of magmatic origin. Each period is characterized by its own group of minerals and environment of deposition. Conditions during mineralizations varied from high temperatures and pressures during the first period to relatively mild temperatures and pressures during the third period. Most of the gold was deposited during the first period of mineralization and the deposit of mineralization and the deposit is classed as hypothermal. The association of arsenopyrite with gold is thought to be a product of time and space rather than the result of chemical affinity. The rare aurostibite is believed to have formed by the interaction of S-deficient antimonial solutions with pre-existing gold.

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50302. COLES, D. R., *and* **K. E. COOPER.** The effect of cooling on the hyperemia following arterial occlusion and exercise in the human forearm. (Journal of physiology, Apr. 1957. v. 136, no. 2, p. 35P–36P.) Ref.

Hyperemic arm immersed in 34° water showed a deep muscle temperature of 34°–36° C.; when immersed in cold water, muscle temperature fell to 20–25° C. Cooling reduced both the skin and muscle components of reactive hyperemia. Hyperemia produced by exercise was not or only slightly reduced by cooling.

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COLLIN, A. E., *see* Campbell, N. J., *and* A. E. Collin. The discoloration of Foxe Basin ice. *1958*. No. 50057.

50303. COLLINDER, STEN. Sambandet mellan husbehovsförbrukningen av brännved och temperaturförhållandena. (Svenska skogsvårdsföreningen. Tidskrift, 1956. årg. 54, nr. 2, p. 195–200, tables.) Text in Swedish. ***Title tr.:*** The relationship between household use of firewood and temperature conditions.

Household use of firewood in Sweden is reported to have declined 30–40% over 20–30 years, in Norrland, about 30%. Improved heating systems and increased use of other fuels are important factors in the decline. The data of these reports are scrutinized for possible errors in both collection and evaluation; and the need suggested to consider winter temperatures as a factor of importance. The wood supply, normally calculated in the fall, should be correlated with the following winter's temperatures, ordinarily spread over the meteorological records for two consecutive years. Means of determining each of these interrelated factors must be improved before the results can be of value. ***Copy seen:*** DA.

50304. COLLINS, DAVID A., *and* **G. J. ROBERTS.** Mount Logan, east peak. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 31–38, plates.) 3 refs.

Describes first ascent of this peak in southern Yukon Territory July 19, 1957, by a party of five. Effectiveness of the air supply is noted; time used in preparation is compared with that for the 1925 ascent of the west peak (No. 9624). Four photos show several aspects of the mountain and route to east summit.

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50305. COLLINS, F. H. Roads projected for development of the Yukon Territory. (Roads and engineering con-

struction, May 1956. v. 94, no. 5, p. 46–47, +, illus., map.)

Discusses the Territorial administration brief to the Royal Commission on Canada's Economic Prospects, outlining mining potentials and road requirements. Wartime and postwar role of the Northwest Highway System, especially the Alaska Highway, and need now of branch highways for resource development are stated. Five proposed roads are specified, viz: Carmacks-Ross River; Watson Lake-Frances Lake-Ross River; Aishihik Airport northwestward; Dawson-Fort McPherson; and from Keno down the Wind River. For each route (cf. map) the economic potential of the locality is shown. ***Copy seen:*** DLC.

50306. COLLINS, FLORENCE RUCKER, *and* **H. R. BERGQUIST.** Test wells, Meade and Kaolak areas, Alaska, with micropaleontology of Meade Test well 1 and Kaolak test well 1, northern Alaska. Washington, D.C., U.S. Govt. Print. Off., 1958. p. 341–76, illus., 3 text maps, 2 diagrs., tables, fold. graphic log. (U.S. Geological Survey. Professional paper 305–F. Exploration of Naval Petroleum Reserve no. 4 and adjacent areas 1944–53. Part 5, subsurface geology and engineering data) Refs.

Contains lithologic, paleontologic, logistic, and engineering information obtained in drilling these tests; data presented graphically. The tests were drilled in 1950 (Meade, 70°02′ N. 157°29′ W.) and 1951 (Kaolak, 69°56′ N. 160°15′ W.). Cretaceous rocks were tested in little-known areas; both tests penetrated beds of the Nanushuk group, early Cretaceous; underlying this group, a formation of marine shale called the Topagoruk formation, was found. Both wells were abandoned. Microfossils identified by H. R. Bergquist included Foraminifera of the Verneuilinoides borealis faunal zone, found extensively in northern Alaska; many core samples were barren. Correlation of the two wells on the basis of fossils cannot be made. ***Copy seen:*** DGS.

50307. COLLINS, FLORENCE RUCKER, *and* **H. R. BERGQUIST.** Test wells, Topagoruk area, Alaska, with micropaleontologic study of the Topagoruk test wells, northern Alaska. Washington, D.C., Govt. Print. Off., 1958. p. iii, 265–316, 3 text maps, 2 graphic logs, graph, tables. (U.S. Geological Survey. Professional paper 305–D. Exploration of Naval Petroleum Reserve no. 4 and adjacent areas, northern Alaska, 1944–53. Part 5, Subsurface geology and engineering data) 13 refs.

Fourth and final report on subsurface geology and engineering data of Naval Petroleum Reserve no. 4, test wells, similar in treatment to No. 47619, 50308, 54346. Presents detailed geologic and engineering data obtained, 1950–1951, in drilling two test wells in the Topagoruk area (approx. 70°35′ N. 155°30′ W.), much of the data recorded by Arctic Contractors for the U.S. Navy. Stratigraphy, cores and cuttings, heavy mineral analysis, core analyses, tests of oil and gas, logistics, and drilling operations are treated in detail. Notes on hole deviation and electric logging and other surveys are also given, for each well. The micropaleontologic study appended (p. 311–14) discusses numerous species of Foraminifera and a few ammonites obtained from the cores. ***Copy seen:*** DGS.

50308. COLLINS, FLORENCE RUCKER, *and others.* Test wells, Umiat area Alaska. Washington, D.C., U.S. Govt. Print. Off., 1958. p. iv, 71–206, illus., plates, 2 text maps, tables, 4 plates, diagr. (U.S. Geological Survey. Professional paper 305–B. Exploration of Naval Petroleum Reserve no. 4 and adjacent areas, northern Alaska, 1944–53. Part 5, Subsurface geology and engineering data) 5 refs. *Other authors:* H. R. Bergquist, M. C. Brewer, and G. L. Gates.

Presents detailed geologic and engineering data obtained in drilling 11 test wells at Umiat, northern Alaska, 1945–1952. Stratigraphy of the area reveals the age of the rocks as Cretaceous, overlain by unconsolidated Quaternary sediments. Each test well is described in detail, with lithologic remarks on cores and cuttings, on oil and gas shows, with heavy mineral studies, petrographic analyses, formation tests, and oil analysis. Information is summarized in graphic logs. Notes from drilling records are included, also a temperature survey prepared by M. C. Brewer. Microfossils are described by H. R. Bergquist. ***Copy seen:*** DGS.

50309. COLLINS, FLORENCE RUCKER. Vegetated sand dunes in central Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1752.) Abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958.

Describes sand dunes, northwest and

southeast of the Kuskokwim Mts. Individual dunes average 40 ft. in height, and have crests from a few hundred ft. to several mi. in length. They are permafrost-free and support aspen or birch. The sand is overlain by a thin blanket of loess, and consists mostly of fine-grained, well-rounded chert; it was probably transported northward by streams from Alaska Range glaciers and then blown southwest.

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COLLINS, GEORGE L., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

COLLINS, GERALD B., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

50310. COLLINS, HENRY BASCOM, 1899– . Archaeological investigations on Southampton and Walrus Islands, N.W.T. (Canada. National Museum. Annual report for the fiscal year 1955–56, *pub.* 1957. Bulletin no. 147, p. 22–61, 13 plates.) 13 refs.

Reports on the 1955 phase of author's field work at Native Point, Southampton Island. Excavations of the Sadlermiut Eskimo site, last occupied in 1902–1903, yielded a large number of artifacts; but no cultural differences were noticed between recent and older layers. The large proportion (60%) of seal bones at the early or proto-Dorset T–1 site, shows seal the principal food animal. The artifacts, predominantly stone implements (micro-blades) with bird-bone needles coming next, are described and figured on plates. The cultural affinities of T–1 with Dorset sites and with pre-Dorset flint complexes to the west (Cape Denbigh, Anaktuvuk, etc.) and its connections to the neolithic and mesolithic sites in Siberia and Mongolia (cf. No. 41687) are noted. Dorset features present and absent at T–1 are enumerated, a Carbon-14 dating of 2060±230 years obtained from some charred bone samples is noted: the site's classification as formative or proto-Dorset is considered. Diggings were also conducted at the T–3 and T–2 sites. T–3 yielded micro-blades, harpoon heads, etc. of the same type as T–1, while T–2 showed highly characteristic Dorset traits (more advanced than those of T–1 or T–3), similar to the late Dorset site on Mill Island (No. 31052). The exploration of the granite boulder houses (six) on Walrus Island produced stone, bone and ivory artifacts, predominantly Dorset, and a few Sadlermiut articles. A secondary Sadlermiut occupation of this originally Dorset site is suggested.

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50311. COLLINS, HENRY BASCOM, 1899– . Archeological work in arctic Canada. (Smithsonian Institution. Annual report, 1956, *pub.* 1957, p. 509–528, illus., table, map.) 20 refs.

Describes author's 1954 and 1955 expeditions to Southampton Island and exploratory trips to Bencas, Coats and Walrus Islands (cf. No. 44424–44426). Two (out of 75) Sadlermiut sod-block and stone houses at Native Point, three near-by Dorset sites (T–1, –2, –3) and six granite-block houses on Walrus Island were excavated. First believed to be of Sadlermiut origin, these latter yielded predominantly typical Dorset stone artifacts. The distribution of the material indicated an originally Dorset occupation, the houses having been taken over by the Sadlermiut probably at the turn of the present century. This site provides the first adequate information on Dorset house types, and it confirms author's opinion on the Dorset origin of the Sadlermiut Eskimos: two of the houses are of cloverleaf shape characteristic for many Sadlermiut structures. The Native Point and Walrus Island finds give a continuous picture of the formation and development of Dorset culture, from the proto-Dorset site T–1, through T–3 to the classic T–2, and finally the Dorset-derived Sadlermiut culture. Photographs of the sites and finds are reproduced on 14 plates. Animal bones found at Native Point are described and the number and percentage of the identifiable mammal bones tabulated for the T–1 and Sadlermiut sites.

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50312. COLLINS, HENRY BASCOM, 1899– . Eskimo origins. (Archaeology, Sept. 1958. v. 11, no. 3, p. 217–18.)

An interview with Dr. H. B. Collins on the origin of the Eskimos. The microlithic artifacts found in Eskimo and pre-Eskimo sites of the American Arctic can be traced to the late mesolithic or early neolithic of Europe and Asia. The Lake Baykal and upper Lena River region are considered the most likely homeland of the Eskimo ancestors.

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50313. COLLINS, HENRY BASCOM, 1899– . Present status of the Dorset problem. (International Congress of

Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958, p. 557–60.)

Reviews past research of the Dorset culture and describes author's 1954 and 1955 excavations on Southampton, Coats and Walrus Islands. The relationship between Dorset and Thule cultures is discussed and the proto-Dorset finds of T-1 and Dorset-derived Sadlermiut Eskimo sites (both at Native Point) characterized. ***Copy seen:*** DSI.

COLLINS, WILLIAM F., *see* Stevenson, G. C., *and others*. Effects . . . hypothermia on subcortical . . . potentials . . . cat. *1958*. No. 55160.

50314. *COLLINS SIGNAL.* DEW line: the great electronic wall of the North. (Collins signal, Fall, 1957. v. 6, no. 3, p. 4–7, illus.)

Describes construction, equipment and operation of the chain of radar stations along the 70th parallel from Alaska to Baffin Island. Two main technological advances have made this system feasible: development of circuits extending automatic operation of the radar equipment, and development of scatter propagation of VHF and UHF to achieve radio communication beyond the horizon. Good air and sea transportation has been an essential to the success of the project. ***Copy seen:*** DLC.

50315. COLTON, SABIN W., *and* **E. J. FARRIS.** Low temperature preservation of human spermatozoa with practical implications. (Journal of urology, July 1958. v. 80, no. 1, p. 55–56, table.) 10 refs.

Report on preservation of 100 sperm samples from 100 men. Dilution with glycerol and freezing on dry ice were applied. Survival counts are made and the practical aspects of the method discussed. ***Copy seen:*** DNLM.

COMPTON, L. P., *see* Douglas, G. V., *and* L. P. Compton. A suggested interpretation . . . deposits. *1957*. No. 50610.

CONDON, W. H., *see* Lathram, E. H., *and others*. Progress . . . geologic mapping . . . *1958*. No. 52673.

CONEL, J. E., *see* Meier, M. F., *and others*. Preliminary . . . crevasse formation . . . *1957*. No. 53215.

CONGDON, C. C., *see* Schwartz, I. R., *and others*. Transplantation of bone marrow . . . preservation at −70° C. *1957*. No. 54638.

50316. CONGDON, RUSSELL T., *and* **MRS. CONGDON.** Hudsonian godwits found nesting again at Churchill. (Canadian field-naturalist, Sept.–Oct. 1952. v. 66, no. 5, p. 143–44, illus.)

Contains observations and a photograph of two downy young of *Limosa haemastica*, found in July 1952, in the tundra a few miles from Churchill. An earlier (1951) find: No. 28596. ***Copy seen:*** DLC.

CONNELL, M. F., *see* Greenberg, L., *and others*. An immunological study of the Canadian Indian. *1957*. No. 51348.

50317. CONRADI, L. A. Ballkoks fra Longyearkull. (Teknisk ukeblad, Apr. 1951. årg. 98, nr. 14, p. 253–61, 278–83, illus., graphs, tables.) 11 refs. Text in Norwegian. ***Title tr.:*** Coke balls from Longyear coal.

Presents results of investigations made at the Disco Co. laboratories in Pittsburgh, Penn., to evaluate the quality of two types of coke, Disco and Ore-Disco, produced from Vestspitsbergen coal. Both are made from bituminous coal by a low-temperature process. The Longyear coal gave favorable results. Data are included on the economy of setting up a refinery on Svalbard or in northern Norway. ***Copy seen:*** DLC.

50318. CONRADSEN, FRITZ R. Ornithologiske iagttagelser ved Daneborg, N.Ø. Grønland. (Dansk ornithologisk forening. Tidsskrift, Feb. 1957. årg. 51, hefte 1, p. 12–18, 4 illus. 2 plates.) Text in Danish. ***Title tr.:*** Ornithological observations at Daneborg, northeast Greenland.

Contains observations on the migration and phenology of birds, made while banding at this weather station (74°07′ N. 20°55′ W.), during May 9–Aug. 9, 1955. ***Copy seen:*** DA.

CONSOLAZIO, C. FRANK, *see* Welch, B. E., *and others*. Energy requirements . . . subarctic bivouac. *1957*. No. 55983.

50319. CONSTANCE, LINCOLN, 1909– , *and* R. H. SHAN. The genus *Osmorhiza*; Umbelliferae, a study in geographic affinities. (California. University. Publications in botany, 1948. v. 23, no. 3, p. 111–56, 5 illus., plates 26–29.) 23 refs.

Discussion of the natural division of the genus and its geographic distribution is followed by a systematic treatment, key, description of 11 species, with synonyms,

critical notes and lists of representative specimens. Included are *Osmorhiza purpurea* (type locality Sitka, Alaska), *O. chilensis* (Alaska and Aleutian Islands), and *O. obtusa* (Labrador, Newfoundland and Alaska). ***Copy seen:*** DLC.

50320. ***CONTRACTORS AND ENGINEERS.*** Arctic shelter of fir plywood adopted for use by U.S. Army. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 61, illus.)

The building developed by the U.S. Army Corps of Engineers' Research and Development Laboratories has been adopted for use as barracks and communications centers following successful tests at Fort Churchill and Fort Greely. The 20 x 48-ft. structure consists of 3-inch-thick stressed-covered panels with fir plywood surfaces glued to the wood edge bonding and interior framing. The void between members is filled with aluminum foil lining and fiberglass. The building, capable of withstanding 100 mph winds and snow loads of 75 lb./sq. ft., was erected in 65 man-hours at temperatures of −35° F. Illus. shows an erection crew at work.

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50321. ***CONTRACTORS AND ENGINEERS.*** Building of insulated panels withstands winter at mountaintop transmitting station. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 53, illus.)

A specially-designed building of panel construction to withstand extremely high winds and temperatures to −50° F. is described briefly. The building to be used as a transmitter studio atop Mt. Washington (New Hampshire) consists of fir plywood stressed-skin sandwich panels, insulated and cushioned against maximum impact, and bolted to a steel frame and permanent concrete piers. The roof panels are faced with heavy tar and gravel, underlaid with five layers of felt. A cushion sandwich panel beneath contains fiberglass insulation. Wall panels are similar in construction. Floor panels, though similar, were designed to handle 60 lb./sq. ft. in most of the building. ***Copy seen:*** DLC.

50322. ***CONTRACTORS AND ENGINEERS.*** Building's tarp coat protects work and men through winter job. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 78–82, illus.)

Illustrates the use of large canvas enclosures to permit winter construction. All steel for the building, located in downtown Chicago, had been erected by Nov. 1956, so it was decided to continue through the winter months with concreting and plastering. As many as five floors were canvassed off at a time. Oil heaters and propane pots were employed to maintain temperatures at about 70° F. even with outside temperatures below zero. Enough natural ventilation was present to keep CO levels below the allowable limit. ***Copy seen:*** DLC.

50323. ***CONTRACTORS AND ENGINEERS.*** Cold-weather technique removes asphalt from drums in less than one minute. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 58–60, illus., diagrs.)

An efficient method is described for removing solidified asphalt from 55-gallon metal drums which was developed during construction of the U.S. Air Force Base at Thule, Greenland. Tops of the drums were removed with a small air hammer. A vent was placed in the other end to prevent air lock. An induction coil supplied by a 50-kw. generator was lowered over the inverted drum of asphalt and electric current used to melt the asphalt free from the drum. Details of the equipment are diagrammed and illustrated. ***Copy seen:*** DLC.

50324. ***CONTRACTORS AND ENGINEERS.*** Corps studies excavating frozen grounds in Arctic. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 64.)

A commercially-developed truck-mounted earth auger has been undergoing laboratory tests at the U.S. Army Corps of Engineers' Research and Development Laboratories to determine its possible use in excavating frozen ground in the Arctic. A 4 x 4 x 7-ft. test block of silt and sandy loam frozen for four days at −55° F. was used in the initial experiments. The auger, operating on the centrifugal force principle, experienced difficulty in discharging the spoil.

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50325. ***CONTRACTORS AND ENGINEERS.*** Maintaining winter haul roads is easier when treated abrasives are stockpiled for use against ice and snow. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 46–47, illus.)

Offers practical advice on the handling and use of abrasives on construction sites.

Advantages in effectiveness and economy of treated vs. untreated abrasives are emphasized; 50–75 lbs. of calcium chloride to each cubic yard of cinders is recommended. Stockpiles should be placed at strategic points; a tarpaulin thrown over the storage pile is sufficient for protection.
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50326. *CONTRACTORS AND ENGINEERS.* 13 winter precautions for maintenance men. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 76–77.)

A 13-point check list for winter maintenance of operating equipment is given: special instructions for proper lubrication, fueling of vehicles, radiator and battery maintenance, and starting of diesel and gasoline engines. Special precautions should be taken to prevent crawler tractors from freezing to the ground, and tracks and rollers should be kept free of snow and frozen mud.
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50327. COOK, FRANK A. Selected bibliography on Canadian permafrost; annotations and abstracts. Ottawa, Queen's Printer, 1958. iv, 23 p. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Bibliographical series, no. 20.)

Lists (by author) 102 items with notes or abstracts of contents; a subject index is provided. ***Copy seen:*** DGS.

50328. COOK, JERRY. Building base camps for DEW Line, a saga of arctic construction. (Roads and engineering construction, Apr. 1956. v. 94, no. 4, p. 53, 166, illus.)

Describes a 600-mile hauling operation from Barter Island along the North Alaska coast. Construction equipment to build radar stations was delivered at seven selected sites along the coast, by a tractor train made up of 45 sleds, nine tractors and 19 men. At each site in turn, a 200 by 4,500–8,000 ft. air strip was cleared for reception of C–124's and C–46's with heavy equipment and supplies. The hauling operation was completed in 22 days (Mar. 28–Apr. 20), 17 of them in travel; the tractors averaged 40 mi./day pulling five sleds. Terrain (rough) and special adaptation of the tractors for the trip are indicated. ***Copy seen:*** DLC.

50329. COOK, JOHN CALL, 1918– . The design of a crevasse detector for polar exploration. (Franklin Institute, *Philadelphia.* Journal, Nov. 1957. v. 264, no. 5, p. 361–77, illus., diagrs.) 8 refs.

Describes in detail the principle and development (including recent improvements) of this unit consisting of a flexible array of 20-ft.-long timbers controlling a group of 43-in. dish-shaped electrode sleds which is pushed ahead of a weasel vehicle, additional electrodes dragged behind, and an electrical system including a signal-indicating ink recorder and an adjustable alarm system responding to abnormal signal levels. Experiences in the Arctic and Antarctic are summarized, and projected modifications are indicated.
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50330. COOK, MELVILLE THURSTON, 1869–1952. Lost in the Arctic. (New York Botanical Garden. Journal, Jan. 1950. v. 51, no. 601, p. 6–12, 2 illus., text map.)

Contains a general account of a pleasure trip to Alaska (Seattle-Ketchikan-Juneau-Fairbanks-Fort Yukon) in 1950, with scattered notes on the vegetation, forests, common plants, settlements, inhabitants, etc. List is included of a few plants collected in the Brooks Range, where the party spent six days at 3,200 ft. elevation after a forced landing during a flight from Fort Yukon to Circle Hot Springs.
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COOK, SHERBURNE FRIEND, 1896– , *see* Garcia, J. F., *and others.* Increase in red cell volume . . . cold. *1957.* No. 51081.

50331. COOKE, WILLIAM BRIDGE, 1908– , *and* C. G. SHAW. Notes on Alaskan fungi. (Washington. State College, Pullman. Research studies, Mar. 1952. v. 20, no. 1, p. 15–20). 12 refs. *Pub. also as:* Scientific paper no. 1094, Washington Agricultural Experimental Station, Pullman, Project no. 1047.

Contains an annotated systematic list of 38 fungi collected in 1950 by J. A. Klein on Prince of Wales Island, in the southern archipelago. ***Copy seen:*** DGS.

50332. COOKSON, BRIAN A., *and* J. R. Di PALMA. Effect of quaternary nitrogen compounds on the S.A. node in profound hypothermia. (American journal of physiology, Feb. 1957. v. 188, no. 2, p. 274–76, illus., table.) 14 refs.

Intravenous injection of Q.N.C. relieved acute failure of sinus activity associated with bradycardia in dogs

cooled to 19° C. The effective Q.N.C. are acetylcholine antagonists, and are either ganglionic blocking or neuromuscular blocking agents. They probably act directly on the sinus node.

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50333. COONRAD, WARREN L. Geologic reconnaissance in the Yukon-Kuskokwim delta region, Alaska. Washington, D.C., 1957. Map sheet with text, 29 x 29 in. (U.S. Geological Survey. Miscellaneous geologic investigations. Map I-223). 23 refs.

Map (1:500,000) covers about 21,000 sq. mi. in the Yukon-Kuskokwim delta west of Bethel, including Nelson and Nunivak Islands. Extent of five types of deposits, and other geologic features are designated. Based on reconnaissance field study in 1954, later data and interpretation of vertical aerial photographs. Brief remarks on general geology are followed by description of the deposits, predominantly deltaic and aeolian. Traces of folding and faulting are noted. Mineral resources of economic interest were not found, though thin coal beds are present at several places. Petroleum deposits in areas of probable Cretaceous rocks are a possibility. Ground water supplies from deep wells, below perennially frozen ground, are probably widely available. ***Copy seen:*** DGS.

COONRAD, WARREN L., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

COOPER, FREDERICK WILLIAM, 1916– , *see* Martin, J. D., *and others*. The utilization of hypothermia in early burn therapy. *1958*. No. 53157.

50334. COOPER, K. E., *and* **J. R. KENYON.** A comparison of temperatures measured in the rectum, oesophagus, and on the surface of the aorta during hypothermia in man. (British journal of surgery, May 1957. . v. 44, no. 188, p. 616–19, illus.) 5 refs.

The measurements were made on patients made hypothermic by surface cooling. Esophageal temperature was found to be a more reliable index of para-aortic temperature than was the rectal. This is also confirmed by animal experiments. ***Copy seen:*** DNLM.

COOPER, K. E., *see also* Coles, D. R., *and* K. E. Cooper. The effect of cooling . . . hyperemia . . . *1957*. No. 50302.

50335. COORDINATING RESEARCH COUNCIL. *Coordinating Lubricant and Equipment Research Committee.* Development and field testing of global greases, 1948–1954; final report on evaluation of all-purpose greases in terms of equipment performance, CRC project no. CLLG-39–48, CLV-5–54. Prepared by the Group on Global Grease. Rev. New York, 1957. 33 l.

Describes testing procedures and reports results of field tests of several specified greases, required to provide satisfactory lubrication of military motor vehicles at all ambient temperatures −70° F. to +120° F. Test vehicles (mainly ¼–5 ton trucks) were operated over the Alaska Highway to Fairbanks in the low temperature part of the program. Recommendations are given, based on inspection of bearings upon completion of each test run.

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50336. COPELAND, HERBERT FAULKNER, 1902– . Observations on the structure and classification of the Pyroleae. (Madroño, July 1947. v. 9, no. 3, p. 65–102, plates 9–17.) 62 refs.

Contains historical notes, a checklist of 12 species and two varieties of this herb (one described as new) and a microscopic-anatomic study of the group. Classification of Pyroleae is discussed as "a natural small group best construed as a tribe of Ericaceae, to be placed in subfamily Arbutoidea after tribe Andromedeae." *Ramischia secunda*, occurring on the Mendenhall Flats, near Juneau in Alaska, is included. ***Copy seen:*** DLC.

50337. COPELMAN, LOUIS S. Le rôle de l'hypophyse dans l'action du soleil sur la peau. (Revue de pathologie générale et comparée, Dec. 1956. année 56, no. 683, p. 1761–63.) 3 refs. Text in French. Summary in English. ***Title tr.:*** The role of the hypophysis in the action of the sun upon the skin.

Notes based on authors' and other studies. Light is claimed to stimulate melanophore production and they in turn influence the intermediary lobe of the hypophysis. Clinically light is considered to affect neuroglandular, notably glandular activity.

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50338. COPPINGER, R. W. Some experiments on conductive properties of ice, made in Discovery Bay, 1875–76. (Royal Society of London. Proceedings,

1878. v. 27, no. 186, p. 183–89, illus., tables, graph.)

Apparatus consisted of apertures holding an ice-bar, in which four thermometers were placed at four-inch intervals; a spirit-lamp at various (6–8 in.) distances from the end of the bar, supplied the heat; the tests were conducted in a closed-in ice-hut on a floe at the Discovery Harbour base, northeast Ellesmere, of the 1875–76 British Arctic Expedition. Sea ice and fresh-water ice were used in the tests; thermometer readings and temperature of the hut are tabulated for 15 min. intervals over a one-hour period; the relative conductivities are graphed.

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CORABOEUF, EDOUARD, *see* Kayser, C., *and others*. Recherches sur la repolarisation du myocarde . . . hypothermie. *1956*. No. 52212.

50339. CORBEL, JEAN, 1920– . Aspects régionaux de l'Inlandsis Groenlandais. (Norois, July–Sept. 1958. année 5, no. 19, p. 241–66, 8 text maps, 4 diagrs., table) 59 refs. Text in French. ***Title tr.:*** Regional aspects of the Greenland Inland Ice.

Compares glacial features of the northern and southern parts of the inland ice, geological features underlying the ice, also distribution of snow, total precipitation and temperature. The area is not homogeneous, but contains two distinct ice domes: joined but geologically different, the southern more active and in a state of equilibrium, the ice 3,500 m. at center; the northern 2,500 m. thick, stagnant and fossil. Two great ice rivers, Jakobshavns Isbrae and Rinks Isbrae, reach the west coast. Glaciers in the south move at 10 km./year, in the north at 10 m./year. Differences in precipitation: more snow in the east (with maximum in winter) than the west (with a summer max.), also in geology, and in state of ice in north and south are discussed. ***Copy seen:*** DGS.

50340. CORBEL, JEAN, 1920– . Climats et morphologie dans la Cordillère canadienne. (Revue canadienne de géographie, Jan.–June, 1958. v. 12, nos. 1–2, p. 14–45, 2 text maps, 7 diagrs.) Refs. Text in French. ***Title tr.:*** Climates and morphology in the Canadian Cordillera.

An essay in climatic geomorphology, considering the effect of climate on the land surface, and on the rate of erosion on different rocks. Includes discussion of the northern eastern Rocky Mts., and northern Middle Rockies. Erosion appears to be less in dry regions, such as the eastern border of the Rocky Mts.; it increases with precipitation such as occurs at higher levels in the Yukon. The rate and amount of erosion is affected by climate as well as by the character of the rocks. ***Copy seen:*** DGS.

50341. CORBEL, JEAN, 1920– . Esquimaux d'Amérique du Nord; deux cas d'évolution récente de groupements esquimaux. (Revue de géographie de Lyon, 1957. v. 32, no. 4, p. 365–73, maps, graphs.) Text in French. ***Title tr.:*** Eskimos of North America; two cases of recent evolution of Eskimo groupings.

Discusses some effects of mass infiltration of the white race upon the economy of Eskimos of the Thule-Pond Inlet area, and the Belcher Islands-northern Quebec-Labrador region. Data are given on climatic and sea ice conditions, northern limits of nomadism (map), etc. The Eskimos' dependence on hunting for subsistence and trade is stressed, with selected statistics (1925–1955) for blue fox, and for seal and whale catches at Pond Inlet. The average monthly income from fur sales in 1947 and 1955–56 (graphed) ranged from 50 to 1,200 francs respectively (the Belchers), to 1,000 and 5,000 (Thule). In the Quebec area generally, this trade is threatened as hunting diminishes with rise of a handicraft industry, and as the Eskimos are absorbed into the labor force of mining developments, etc. The military aspect of the U.S. Air Force Base at Thule favors the natives' fur trade, but it, like white economic penetration, poses a threat to the Eskimos' indigenous culture. ***Copy seen:*** DGS.

50342. CORBEL, JEAN, 1920– . Les Esquimaux dans le grand nord americain. (Revue de géographie de Lyon, 1958. v. 33, no. 3, p. 219–59, plates, maps, graphs.) 30 refs. Text in French. ***Title tr.:*** The Eskimos in the American far North.

Considers the economic, cultural and political problems of Eskimos in some detail. Discusses their hostile physical environment and the importance of milder areas, "Rivieras," in Alaska and West Greenland. Population numbers and distribution are given. White administration in Greenland, Canada and Alaska; natural resources and employ-

ment opportunities; police, medical and educational facilities are treated in turn. Growth of urban centers is discussed with Aklavik, Chesterfield Inlet, Frobisher Bay and West Greenland towns as examples. The problem of adjustment to white civilization is not to be solved by assimilation, nor by return to the old way of life, but by the Eskimos themselves taking part in developing northern resources and at the same time preserving and developing their own language and culture. The possibility is foreseen of an Eskimo nation. ***Copy seen:*** DGS.

50343. CORBEL, JEAN, 1920– . Hydrologie et morphologie du nord-ouest americain. (Revue de géomorphologie dynamique, Aug.–Sept. 1957. année 8, No. 7–8, p. 97–112, 4 text maps, diagrs., graph.) 17 refs. Text in French. Summary in English. ***Title tr.:*** Hydrology and morphology of the American Northwest.

Area discussed includes Alaska, Mackenzie District, Yukon Territory, British Columbia and Alberta. It consists of a western snowy mountains zone in which run-off may exceed 25 ft. locally, and an interior dry zone with cold winters, warm summers. In the humid western zone, morphology is mainly controlled by erosion; in the dry northeast, structure is the controlling factor. Rock resistance varies according to climatic conditions: in the west, sandstones and granites form ridges and limestones the lowest points; the reverse is true in the northeast. Rates of erosion can be measured when the average solid content of the water and the total run-off are known. Three main limestone landscape types are found, depending on rates of erosion: *1*, typical karst features (large caves, dolines, potholes, etc.) in very cold wet snowy climates; *2*, small karstic features and some underground streams in cold inland climates; *3*, in dry arctic climates frost action predominates on surface and permafrost prevents development of important underground drainage. Erosion of siliceous rocks is also briefly discussed.—*From* English summary.
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50344. CORBEL, JEAN, 1920– . Les karsts du nord-ouest de l'Europe et de quelques régions de comparaison; étude sur le rôle du climat dans l'erosion des calcaires. Lyon, 1957. 541 p. illus. incl. 100 photographs, text maps, diagrs., cross-sections, graphs, tables. (Lyon. Université. Institut des Études Rhodaniennes. Mémoires et documents 12.) 331 refs. Text in French. ***Title tr.:*** The karsts of northwest Europe and of some regions of comparison; study of the role of climate in the erosion of limestones.

Contains results of research during 1946–1956 between 42°–80° N. Purpose of the study was to present a detailed picture of karst regions of Svalbard and Lapland, until now almost unknown, and to deal more briefly with karsts of coastal northwest Europe; to acquire precise information about karstification under the arctic and temperate climates of these regions and to make comparisons with areas of different climates. Climatic and geologic factors relating to karst formation in northwest Europe are briefly discussed. Then follows detailed description of karsts of northern Vestspitsbergen and Nordaustlandet, southern Vestspitsbergen and Bjørnøya (p. 29–70); karst regions in northern Scandinavia and Finland (p. 71–239), including Tromsø, Sagelva (Salangen), Kvernmoen, Tysfjord, Sörfolda, Saltfjorden, Svartisen, Beiardalen. Southern Scandinavia, Iceland, Great Britain, Ireland, Belgium, northern Germany and Denmark are similarly treated, though in less detail. Comparisons are made briefly with Alpine regions. Author discusses karsts under glacial and periglacial conditions, in regions of temporarily frozen ground, in cool oceanic climates and warm climates. Morphological evolution of karst areas, deep and shallow forms, is considered. Karstification occurs most rapidly in cold, very humid climates of the Norwegian type. ***Copy seen:*** DGS.

50345. CORBEL, JEAN, 1920– . La neige dans les régions hautement polaires, Canada, Groenland, au delà du 80° latitude nord. (Revue de géographie alpine, 1958. t. 46, fasc. 2, p. 343–66, 5 illus., text map, 9 diagrs., table.) 17 refs. Text in French. ***Title tr.:*** Snow in the high polar regions, Canada, Greenland, beyond 80° N.

Parts of Axel Heiberg and Ellesmere Islands, and northernmost Greenland are considered, an area of approx. 250,000 sq. km., (100,000 sq. mi.). Topography and climate of the region are briefly described. Snowfall and total precipitation data, and detailed discussion of precipitation in winter and summer as recorded at Alert, Eureka and Thule, are given. Two main factors affect the

amount and character of snowfall and the disposition of the snow cover, viz: temperature and wind. Very low temperatures limit the amount of snowfall; a relation between temperature and shape and size of the crystals is suggested; wind deposits the snow very irregularly; some areas accumulating little or no snow and resultant meltwater; other areas have an abundance, despite the general dryness. Photos and diagrams illustrate the uneven snow cover. Wind-driven snow appears to have little erosive power. ***Copy seen:*** DGS.

CORBEL, JEAN, 1920– , *see also* Péguy, C. P., *and* J. Corbel. Chronique arctique. *1957*. No. 53916.

CORBEL, JEAN, 1920– , *see also* Péguy, C. P., *and* J. Corbel. Chronique arctique. *1958*. No. 53917.

50346. CORDDRY, CHARLES. The U.S. and Canadian radar warning chains. (Interavia, June 1957. v. 12, no. 6, p. 565–68, illus.)

Discusses briefly the operational effectiveness of the DEW, Mid-Canada, and Pine Tree lines, based on observations during a tour of the radar chains.

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50347. CORLETT, JOHN. Dry weight of plankton in the western Barents Sea 1953–1956. (International Council for the Study of the Sea. Annales biologiques, 1956, *pub.* 1958, v. 13, p. 39–40, tables, map) 3 refs.

Records of vertical hauls from water columns averaging 300 m. The year 1954 showed a high standing crop especially in summer and fall, comparable to 1949 and 1950 and probably exceeding them. Maximum standing crops appeared earlier over deep water than over shallow. ***Copy seen:*** DI.

50348. CORLETT, JOHN. Measurements of primary production in the Western Barents Sea. (*In*: Plankton Symposium 1957. *pub.* as International Council for the Exploration of the Sea. Rapports et procès-verbaux, Apr. 1958. v. 144, p. 76–78, tables.) 6 refs.

Primary production in the Bjørnøya area as measured by the R/V *Ernest Holt* in May 1954, amounted to 1.3 gm carbon/sq. m./day in the cold arctic water and 0.3 gm carbon/sq. m./day in the warmer, deeper Atlantic water. Penetration of green light into the sea is also measured and tabulated.

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50349. CORLETT, JOHN. Plankton in the western Barents Sea and the year-class strength of the Arcto-Norwegian cod. (International Council for the Exploration of the Sea. Journal du Conseil, 1958. v. 33, no. 3, p. 354–56, table.) 10 refs.

Account of the standing stock of plankton in this area for the past nine years with parallel data for strength of cod year classes. A close association between the two is noted and the dependence of survival of cod larvae on zooplankton stressed. ***Copy seen:*** DLC.

CORNAGLIA, M., *see* Piovella, C., *and* M. Cornaglia. Le modificazioni circolatorie . . . *1957*. No. 54004.

CORNEANU, M., *see* Bruckner, I., *and others*. The influence . . . hypothermia on anaphylactic shock. *1957*. No. 49956.

50350. CORNER, E. J. H. A new European *Clavaria: Clavulinopsis septentrionalis* sp. nov. (Friesia, 1956. bd. 5, hefte 3–5, p. 218–20, 2 illus.) Ref.

Contains a Latin diagnosis of this new fungus, collected in 1954 in the Umeå district of northern Sweden; it is very close to the Malayan *C. hastula*.

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CORNMAN, W. W., *see* Mardoian, M. G., *and others*. Winterization of construction equipment . . . *1957*. No. 53128.

50351. CORRELL, DONOVAN STEWART, 1908– . The genus *Habenaria* in western North America. (Leaflets of western botany, July 7, 1943. v. 3, no. 11, p. 233–47.)

Contains a key to western species and varieties and an annotated list of eleven species and six varieties (new combinations), with synonyms, descriptions and data on habitats and distribution. At least nine are recorded from Alaska, Aleutian Islands and northern Canada.

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50352. CORRELL, DONOVAN STEWART, 1908– . An orchid new to the United States. (Leaflets of western botany, Sept. 5, 1958. v. 8, no. 11, p. 271.)

Contains critical notes on one of the rarest plants in North America, *Habenaria*

chorisiana, known from Alaska (Juneau *fide* Anderson) and Aleutian Islands.

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COSTES-SODGNÉ, GENEVIÈVE, *see* Ratsimamanga, A. R., *and others*. Le comportement du rat surrénaloprive . . . *1958*. No. 54232.

50353. COTTEN, MARION deVEAUX, 1927– , *and* T. G. BROWN, Jr. Effects of pressor amines and ouabain on the heart and blood pressure during hypothermia. (Journal of pharmacology and experimental therapeutics, Nov. 1957. v. 121, no. 3, p. 319–29, illus., tables.) 6 refs.

Six pressor amines (levarterenol, epinephrine, phenylephrine, methoxamine, ephedrine, methamphetamine) and one cardiac glycoside-ouabain were tested as to their effect on normothermic and dogs cooled to 25°–23° C. Blood pressure, heart rate, and right ventricular contractile force in both groups were variously affected by these drugs. None of the drugs in the doses employed, produced increased incidence of cardiac arrhythmias at low body temperature.

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50354. COTTINGHAM, WILLIAM McOUAT, 1905– . Mineral exploration in New Quebec. (Precambrian, Sept. 1957. v. 30, no. 9, p. 14, 53, port.)

Outlines prospecting of iron ore deposits since 1941 (Knob Lake region): some 40 orebodies with 417 million tons of ore averaging 59% iron, and great quantities of lower grade are known. The northern part of the New Quebec iron range, development problems, the northern Ungava Peninsula nickel-copper deposits, and other explorations at Richmond Gulf (lead and copper), Eastmain River (base metal sulfides), Duncan Lake (iron) are reviewed. ***Copy seen:*** DGS.

50355. COTTINGHAM, WILLIAM McOUAT, 1905– . Quebec's frontier moves north. (Western miner and oil review, Oct. 1958. v. 31, no. 10, p. 144–45, illus.)

Outlines activities of mining companies engaged in prospecting and development of deposits in the Ungava Peninsula. A $200 million project by the Ungava Iron Ores calls for construction of townsites, shipping port, and a 25-mi. railroad in the Hopes Advance Bay area; similar plans are under investigation by the Oceanic Iron Ore in the same area; trans-shipment port is to be established in Greenland. A 225-mi. belt of nickel and copper deposits between Cape Smith and Wakeham Bay has been surveyed by a group of companies in cooperation with the Quebec Dept. of Mines.

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COTTLE, MERVA K., *see* Hoar, W. S., *and* M. K. Cottle. Dietary fat and temperature tolerance . . . *1952*. No. 51734.

COTTLE, MERVA K., *see also* Hoar, W. S., *and* M. K. Cottle. Some . . . temperature . . . chemical constitution of goldfish tissues. *1952*. No. 51736.

50356. COUCH, JIM. Highway to history. (Alaska sportsman, Jan. 1957. v. 23, no. 1, p. 10–13, 28–29, illus., map.)

Describes route of the 161 mi. Taylor Highway from Forty Mile Junction on the Alaska Highway to Eagle on the Yukon River. Built 1946–1954, it opens hitherto inaccessible mining and farm lands in east-central Alaska.

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50357. COUCH, JIM. Those imported musk oxen. (Alaska sportsman, Mar. 1958. v. 24, no. 3, p. 18–19, 34–37, illus.)

Musk oxen (34) captured in Greenland were imported into Alaska in 1930 and released in a 7,500-acre pasture at College (64°51′ N. 147°50′ W.). The herd, transferred to Nunivak Island in 1936, had increased to 60 head by 1939. Many were killed by Eskimo hunters in the mid-1940's; in 1946 the herd numbered 147 (unverified), in 1957: 143. Factors influencing the success of the experiment are reviewed. Appraisals of musk-ox meat and wool are quoted; under proper management, the present herd on Nunivak could serve as nucleus for a meat and wool industry in Alaska.

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COULSON, ROLAND ARMSTRONG, 1915– , *see* Hernandez, T., *and* R. A. Coulson. Inhibition of renal tubular function by cold. *1957*. No. 51699.

COULTER, HENRY WELTY, 1920– , *see* Muller, E. H., *and* H. W. Coulter. Incipient glacier development . . . Katmai . . . *1957*. No. 53446.

COULTER, HENRY WELTY, 1920– , *see also* Muller, E. H., *and* H. W. Coulter. The Knife Creek glaciers . . . *1957*. No. 53447.

50358. COURT, ARNOLD, 1914– , *and others*. The classification of glaciers. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 2–7.) 11 refs. *Other authors:* V. Schytt, J. W. Glen, H. W. Ahlmann, G. Manley, R. Finsterwalder, F. Loewe, P. D. Baird, R. P. Sharp, G. de Q. Robin, A. Bauer, R. C. Hubley, M. M. Miller, J. E. Fisher, G. J. Heinsheimer, G. A. Avsŭk and T. E. Armstrong.

Contains text of letter circulated by A. Court and comments of other scientists: a new classification based on thermal properties of glaciers is proposed; the terms, *permelting*, *refreezing*, and *nonmelting*, are suggested to replace Legally's *warm*, *transitional* and *cold* (1932), and Ahlmann's *temperate*, *sub-polar*, and *high-polar* (1935). The various classifications, advisability of changes, etc., are discussed English translation of G. A. Avsŭk's classification of glaciers by temperature regime (No. 38630) is contributed by T. E. Armstrong. ***Copy seen:*** DGS.

50359. COURTAULD, AUGUSTINE. From the ends of the earth; an anthology of polar writings. London, Oxford University Press, 1958. 423 p. maps on end papers. 63 refs.

Contains substantial excerpts from narratives of 47 explorers beginning with Homer, ending with Haig-Thomas. They are selected as "fine writing" and for their portrayal of travel, nature, life and men's thoughts in arctic (mostly) and antarctic regions. ***Copy seen:*** DLC.

COUTURE, LAWRENCE H., *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958*. No. 51935.

50360. COVINO, BENJAMIN G. Antifibrillary effect of mephentermine sulfate (Wyamine) in general hypothermia. (Journal of pharmacology & experimental therapeutics, Mar. 1958. v. 122, no. 3, p. 418–22, illus., table.) 15 refs.

Incidence of ventricular fibrillation due to hypothermia in dogs was reduced from 91% in 33 controls to 37% in 19 treated animals. The mode of action of this agent is discussed.

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50361. COVINO, BENJAMIN G., *and* W. R. BEAVERS. Cardiovascular response to hypothermia; effect of cold acclimatization. (American journal of physiology, Oct. 1957. v. 191, no. 1, p. 153–56, tables.) 11 refs.

Dogs exposed continuously to subzero temperature were fully acclimatized after four weeks in the cold. They showed a significantly lower terminal rectal temperature than unexposed controls. Ventricular fibrillation amounted to 9% as compared to 96% in controls. After five days in a warm environment deacclimatization took place. ***Copy seen:*** DNLM.

50362. COVINO, BENJAMIN G., *and* W. R. BEAVERS. Cardiovascular response to hypothermia; effect of cold acclimatization. Ladd Air Force Base, Jan. 1958. 15 p. illus., table. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–27.) 12 refs.

Experimental study aimed at elucidating the effect of cold acclimation on the cardiac response to severe, acute hypothermia. Dogs, exposed one to four wks. to an ambient temperature of 0° to −40° C. showed, when made hypothermic, an incidence of 9% in ventricular fibrillation. Not-acclimatized controls showed an incidence of 96%. Extrinsic cardiac factors are claimed to be responsible for the difference. ***Copy seen:*** DNLM.

50363. COVINO, BENJAMIN G., *and* W. R. BEAVERS. Changes in cardiac contractility during immersion hypothermia. (American journal of physiology, Nov. 1958. v. 195, no. 2, p. 433–36, illus., table.) 11 refs.

A threefold increase in inotropic action of dog's heart was observed as rectal temperature fell to 25° C. Below this temperature, a gradual reduction in the amplitude of contraction took place. Isolated, perfused rabbit hearts showed similar increase in ventricular contraction when cooled. Results suggest a direct positive inotropic action of cold upon cardiac muscle.

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50364. COVINO, BENJAMIN G., *and* W. R. BEAVERS. Effect of cold on the isolated and intact rabbit heart. (Journal of applied physiology, Nov. 1958. v. 13, no. 3, p. 422–24, illus.) 9 refs.

Neither the isolated nor the intact rabbit heart developed arrhythmias as temperature fell. In both instances, progressive bradycardia took place, with mechanical and electrical asystole appearing below 20° C. Hypothermic dogs, by contrast, showed high incidence of cardiac arrhythmias, indicating a true species difference. ***Copy seen:*** DNLM.

50365. COVINO, BENJAMIN G., *and* W. R. BEAVERS. Effect of hypothermia on ventricular fibrillary threshold. (Society for Experimental Biology and Medicine. Proceedings, Aug.–Sept. 1957. v. 95, no. 4, p. 631–34, illus., tables.) 12 refs.

Account of quantitative measurements of basic ventricular threshold and ventricular fibrillary threshold in dogs prior to and during immersion hypothermia. No change in basic threshold was seen when body temperature fell to 22° C., but ventricular fibrillary threshold showed at the same time a 5-fold decrease. Prior exposure to cold or maintenance of a steady pH did not alter this condition. ***Copy seen:*** DLC.

50366. COVINO, BENJAMIN G., *and* W. R. BEAVERS. Hind limb blood flow during immersion hypothermia. (Journal of applied physiology, Jan. 1957. v. 10, no. 1, p. 146–50, illus., table.) 20 refs.

Account of measurements of femoral arterial blood flow in dogs, prior to, and during immersion hypothermia. Rise in vasodilatation and blood flow was observed at 35° and at 28°–25° C. rectal temperature. In the first instance sympathetic cholinergic vasodilator fibers proved responsible for the vascular response; the second, unrelated to nervous or local metabolic factors, seemed to be a cold-induced reaction.

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50367. COVINO, BENJAMIN G., *and* W. R. BEAVERS. Hind limb blood flow during immersion hypothermia. Jan. 1957. 13 p. illus., table. (U.S. Air Force. Arctic Aeromedical Laboratory, Ladd Air Force Base Alaska. Project no. 8–7954. Report no. 2.) 20 refs.

Two phases of vasodilatation were observed in the cooled hind limbs of dogs: one at a rectal temperature of 35° C., the other at 28–25° C. The first was due to stimulation of sympathetic dilator fibers of the arterio-venous anastomotic vessels in the skeletal muscle and could be inhibited by atropinization and/or sympathectomy-adrenalectomy. The second dilatation was unrelated to nervous or local metabolic factors and is assumed to be a direct result of cold on the arteriolar-capillary circuit. ***Copy seen:*** DNLM.

COVINO, BENJAMIN G., *see also:* Adams, T., *and others.* Racial variations . . . cold stress. *1957.* No. 49113.

Adams, T., *and* B. G. Covino. Racial variations . . . standardized cold stress. *1958.* No. 49114.

Beavers, W. R., *and* B. G. Covino. Antifibrillary effects . . . glycine . . . hypothermia. *1957.* No. 49595.

Beavers, W. R., *and* B. G. Covino. Evaluation of glycine in frostbite prophylaxis. *1957.* No. 49596.

Beavers, W. R., *and* B. G. Covino. Glycine . . . antifibrillary agent in hypothermia. *1958.* No. 49597.

Beavers, W. R., *and* B. G. Covino. Relationship of potassium and calcium to hypothermic . . . fibrillation. *1958.* No. 49598.

D'Amato, H. E., *and* B. G. Covino. Effectiveness of antifibrillatory agents in hypothermia. *1958.* No. 50424.

Hannon, J. P., *and* B. G. Covino. Effect of hypothermia . . . cellular respiration of ventricular tissue. *1958.* No. 51548.

50368. COWIE, J. W., *and* P. J. ADAMS. The geology of the Cambro-Ordovician rocks of central East Greenland, part 1, stratigraphy and structure. København, C. A. Reitzel, 1957. 193 p., plates, 3 fold. maps, cross-sections. (Meddelelser om Grønland, bd. 159, nr. 1.) 31 refs.

Gives results of investigations during the Danish Expedition to East Greenland, led by L. Koch. Sedimentary sections were examined systematically, searched for fossils and measured, and lithological types sampled along the south coast of Ella Ø, in the Albert Heims Bjerge region of northern Hudson Land, and in Ole Rømers Land. Detailed descriptions of the sections are included in the appendix. Stratigraphic units and geologic structure of the region (72°15′–74°15′ N.) are outlined.

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COWLEY, R. ADAMS, *see* Schimert, G., *and* R. A. Cowley. Defibrillation, cardiac arrest and resuscitation . . . hypothermia . . . *1957.* No. 54605.

COWN, W. B., *see* Kethley, T. W., *and others.* The effect of low temperatures . . . survival of airborne bacteria. *1957.* No. 52250.

50369. CRAFTS, WALTER, *and* **C. M. OFFENHAUER.** Development and application of chromium-copper-nickel steel

for low-temperature service. (U.S. National Bureau of Standards. Circular, May 7, 1952, no. 520, p. 48–66, illus., tables, graph.) 8 refs.

Results of tests on various compositions are presented; the chemical composition and mechanical properties of types suitable for service at −80° C. (4) and at −100° C. (8) are tabulated. Carbon and silicon tend to raise the transition temperature, while manganese, chromium, nickel, and copper lower it within the limits of a pearlitic microstructure. A high aluminum content is one of the most effective means of lowering the transition temperature.

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CRAGG, C. BRIAN, *see* Boyle, R. W., *and* C. B. Cragg. Soil analyses . . . geochemical prospecting . . . *1957*. No. 49876.

CRAIG, B. G., *see* Lee, H. A., *and others*. Keewatin ice divide. *1957*. No. 52731.

CRAIG, B. G., *see also* Wright, G. M. Geological notes . . . Mackenzie . . . *1957*. No. 56121.

50370. CRAIG, DOROTHY L. Kodiak residents join forces in spring chest X-ray survey. (Alaska's health, Aug. 1957 v. 14, p. 5.)

Account of survey spearheaded by the Kodiak Health and Welfare Council and executed Mar. 11–16 by the ADH tuberculosis X-ray team. Number of X-rays taken, aiding organizations and individuals, indoctrination work, etc., are noted. ***Copy seen:*** DLC.

CRAIG, ELLA HOBBS, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

CRAIG, WINCHELL McKANDREE, 1892– , *see* Gifford, R. W., *and others*. Sympathectomy for Raynaud's phenomenon; follow-up . . . *1958*. No. 51182.

50371. CRANE, W. A. J., *and others*. Pathologic changes in adrenalectomized and non-adrenalectomized rats exposed to cold. (Endocrinology, Feb. 1958. v. 62, no. 2, p. 216–26, illus., tables.) 7 refs. *Other authors:* B. L. Baker *and* D. J. Ingle.

Rats exposed to cold ate much more but gained less than controls kept at room temperature. When exposed to cold, animals showed equally marked gross and microscopic damage to heart and kidneys, irrespective whether they were adrenalectomized or not. In all rats exposed to cold (3°–5° C. for 60 days), hypertrophy of heart and kidneys was observed. ***Copy seen:*** DNLM.

50372. CRANSWICK, J. STUART, *d.* **1954,** *and* **M. A. FRITZ.** Coral fauna of the upper Abitibi River limestone. (Geological Association of Canada. Proceedings, Dec. 1958. v. 10, p. 31–81, 6 plates.) 79 refs.

Revised and edited from Cranswick's M.A. thesis at Univ. of Toronto; complete thesis includes a discussion of the stratigraphy and other pertinent details; available at Dept. of Geological Sciences, Univ. of Toronto. Most of the material described was collected by Fritz in 1950 from the vicinity of Sextant (50°10′ N. 81°38′ W.) and Coral Rapids (50°12′ N. 81°40′ W.) in Northern Ontario. Cranswick visited the area later and added further specimens. "Twenty-eight species are described, of which three are new and two represent hitherto unrecognized varieties. Twelve species belong to the Tetra coralla and sixteen to the Tabulata. The fauna, which is considered to be of Middle Devonian age, is correlated with the 'Columbus' of Ontario . . . and central Ohio, and with the 'Jeffersonville' of southeastern Indiana."—Author's abstract. ***Copy seen:*** DGS.

50373. CRARY, ALBERT PADDOCK, 1911–. Arctic ice island and ice shelf studies, part 1. (Arctic, 1958. v. 11, no. 1, p. 3–42, illus., maps, diagrs., graphs, tables, profiles incl. fold.) 12 refs.

Summarizes some physical characteristics of ice island T–3 and its presumed source, the ice shelf off northern Ellesmere. Investigations since 1952 are described, results tabulated and graphed. The maximum ice thickness of the ice shelf was 60 m. and that of T–3, 68 m. (averaging 0.905 gm./cc. in density from the surface to a depth of 16 m.). Dust from dirt layers (collecting in small holes) on T–1 and T–3 appears to have originated from a land mass underlain partly by volcanic rock and partly by metamorphic and plutonic types and to have been wind-deposited. Deep cores on T–3 revealed a sequence of dirt layers to 28 m. with clear ice below, the composition and grain size the same in all the layers; the heaviest were near the surface (amounting to 114–122 gm./sq. m.) and at depths of 25 and 28 m. (80 gm./sq. m.). Four types of ice were observed on Ellesmere

ice shelf and on T–3 in 1953 and 1954: iced firn, glacier, lake and sea ice; in 1955 only iced firn and lake ice were identified on the island. Temperatures recorded below the depth of annual change at the ice rise near Ward Hunt Island were −17.7° C. at 12.2 m. and −17.3° C. at 18.0 m. Rocks, and plant and animal specimens found on T–3 are examined in relation to the possible origin of the island. Strand cracks at the junction between floating and grounded ice on the Ward Hunt ice shelf are also considered.—From SIPRE. ***Copy seen:*** DLC.

50374. CRARY, ALBERT PADDOCK, 1911– , *and* N. GOLDSTEIN. Geophysical studies in the Arctic Ocean. (Deep sea research, 1957. v. 4, no. 3, p. 185–201, 25 figs., table.) 7 refs.

Contains further results of studies made on ice island T–3 (drifting station B), occupied Mar. 1952–May 1954, Apr.–Sept. 1955 (No. 34260). During these periods, T–3 drifted generally southeastward in an irregular path from 88° N. 156° W. to 82°19′ N. 98° W. Personnel from U.S. Air Force Cambridge Research Center carried on geophysical studies throughout the occupation, except Oct. 1953–Mar. 1954. A prominent submarine ridge was discovered which rises in one area to 1,450 m. below the sea surface; it lies southwest of and parallel to the Lomonosov Range; appears to be nearly as high, but not as extensive; it is tentatively named "Marvin Ridge" after a member of Peary's 1909 North Pole trip. Seismic reflection data were used to determine water depths, character and thickness of bottom sediments. Gravity studies revealed that the vertical motion of T–3 was considerably greater than that experienced on land areas. Comparison was made with gravity values at Thule; results from both places need further confirmation. ***Copy seen:*** DGS.

CRARY, ALBERT PADDOCK, 1911– , *see also* Browne, I. M., *and* A. P. Crary. The movement of ice . . . *1958.* No. 49954.

CRARY, ALBERT PADDOCK, 1911– , *see also* Savel'ev, B. A. Opredelenie vozrasta ledi̇̂nykh ostrovov . . . *1958.* No. 54572.

CRARY, ALBERT PADDOCK, 1911– , *see also* Savel'ev, B. A. Seĭsmicheskie nablûdeniĭâ . . . *1958.* No. 54573.

50375. CRAWFORD, CARL BENSON, *and* R. F. LEGGET. Ground temperature investigations in Canada. (Engineering journal, Mar. 1957. v. 40, no. 3, p. 263–69, 290, illus., map, graphs.) 16 refs.

Describes soil temperature recording program of the Division of Building Research of the National Research Council, at installations throughout Canada, including Fort Smith, Yellowknife, Aishihik, Aklavik, Resolute Bay, and Knob Lake. Instrumentation and recording procedure are indicated for each installation and some preliminary results are summarized, in particular those obtained at Knob Lake and Ottawa. Monthly averages of temperatures and their variation with depth are graphed and discussed; other variables affecting the temperatures (thermal properties of the soil, water migration, air movements, radiation, etc.) are considered in a review of earlier, empirical approaches to ground temperature studies.

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CRAWFORD, E. STANLEY, *see* Sanders, F., *and others.* Effects of hypothermia on experimental . . . pneumococcal infection . . . *1958.* No. 54540.

50376. CREEK, D. W., *and others.* Hypervitaminosis A, a toxic reaction. (American journal of gastroenterology, Feb. 1958. v. 29, no. 2, p. 169–72.) 5 refs. *Others authors:* K. J. McNiece *and* L. M. Nelson.

Description of three cases in adults, 16, 47, and 67 years old. Bleeding and hemorrhagic tendencies were the most common symptoms; alopecia, anorexia and malaise, less so. Withdrawal of vitamin A intake made these toxic effects disappear. ***Copy seen:*** DNLM.

50377. CREMER, B., *and others.* Oxygen uptake of tissue and disappearance of shivering activity. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 31.) *Other authors:* D. Johnston, T. Davis, F. Bell, and R. Jasper.

Summary of experiments with rats exposed to 5–6° C. Shivering showed a decline as exposure increased in length; it varied inversely with O_2-uptake of muscle tissue during 10–21 days exposure and directly during the 21–30-day period. Liver tissue showed no change in O_2-consumption during cold exposure.

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50378. CRESSON, EZRA TOWNSEND, 1838–1926. Notes on the species

belonging to the subfamily Ichneumonides, found in America north of Mexico. (American Entomological Society. Transactions, 1877. v. 6, p. 129–212.)

About three hundred species are treated, 42 new; four are from the North: *Ichneumon hiemalus* (Aleutian Islands), *I. lariae* and *I. ferrugator* (arctic America) and *Amblyteles hudsonicus* (Hudson Bay Territory). ***Copy seen:*** DA.

50379. CRESSON, EZRA TOWNSEND, 1876–1948. The Nereidae and Micropezidae of America north of Mexico, Diptera. (American Entomological Society. Transactions, Dec. 1938. v. 64, no. 4, p. 293–366, illus. plates 11–13).

Of some 25 species treated, two are from Alaska: *Paracalobata pallipes* and *Cnodacophora nasoni*. ***Copy seen:*** DA.

50380. CRESSON, EZRA TOWNSEND, 1876–1948. Studies in the dipterous family Ephydridae, paper III. (American Entomological Society. Transactions, June 24, 1930. v. 56, no. 2, p. 93–131.)

Includes synonyms and critical notes on *Lamproscatella quadrisetosa* and *Scatophila cribrata*, both occurring in Greenland. The earlier parts of this paper do not contain arctic material.

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50381. CRESSON, EZRA TOWNSEND, 1876–1948. Synopses of North American Ephydridae, Diptera, parts IA–II. (American Entomological Society. Transactions, Sept. 1944. v. 70, no. 3, p. 159–80.)

Contains some corrections and additions to sub-fam. Psilopinae (No. 39396); (II) treatment of three tribes of the subfamily Notiphilinae: of 50 species, six are described as new; *Ilythea spilota* is native to Alaska. ***Copy seen:*** DA.

50382. CRESSON, EZRA TOWNSEND, 1876–1948. Synopses of North American Ephydridae, Diptera, III; the tribe Notiphilini of the subfamily Notiphilinae. (American Entomological Society. Transactions, Dec. 1946. v. 72, no. 4, p. 227–40.)

Keys and systematic treatment of 33 of the small, dark flies, among them *Notiphila* (*Agrolimna*) *olivacea*, occurring in Alaska. ***Copy seen:*** DA.

CRINGAN, ALEXANDER T., *see* De Vos, A., *and* A. T. Cringan. Fur management . . . *1957*. No. 50536.

50383. CRISCUOLO, DOMINIC, *and others*. Oxygen transport, utilization and storage in rats acclimated to altitude at different temperatures. (Journal of applied physiology, Nov. 1958. v. 13, no. 3, p. 353–56, table.) 17 refs. *Other authors*: H. B. Hale, *and* R. B. Mefferd, Jr.

Report on rats exposed for over three months to simulated altitude of 18,000 ft. at 5°, 24° and 36° C. Oxygen transport was normal in altitude-cold, but depressed in altitude-heat. Adrenal weight in altitude-cold was greater than in cold alone. O_2-storage was unaffected by thermal factors, while succinic dehydrogenase (of liver and adrenals) was mostly affected by them.

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50384. CRISHOLM, LAUCHIE. Tom Wheeler's airline. (Aircraft, July 1958. v. 20, no. 7, p. 40–42,+, illus.)

Reviews the company's (Wheeler Airlines) equipment and activities: 42 aircraft operate on regular routes and chartered flights including semi-weekly service to Hudson Bay, Frobisher; flights to northern Quebec, Goose Bay, Labrador, Greenland, etc.; passenger- and cargo-transport, ice reconnaissance, forest spray work, and resupply missions to DEW Line sites. ***Copy seen:*** DLC.

CROAL, JAMES P., *see* Canada. Defence Research Board. Op. Hazen 1957. *1958*. No. 50061.

50385. CROASDALE, HANNAH THOMPSON, 1905– . Freshwater algae of Alaska 1; some desmids from the Interior, part 3; *Cosmariae* concluded. (American Microscopical Society. Transactions, Apr. 1957. v. 76, no. 2, p. 116–58, illus., tables, map.) 70 refs.

In sequence to No. 39400, 44492, with a description of collecting stations, all four on, or slightly north of the Arctic Circle. In the area surveyed, boreal forest and tundra meet, permafrost is discontinuous, shallow ponds and bog holes are numerous and rich in desmids. Each taxon is illustrated with a camera lucida drawing. Notes include: location of find, substrate, abundance, earlier records, etc. An ecological list of species is attached with geographic latitude, altitude, pH and type of locality tabulated.

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50386. CROCKER, C. R. Winter construction. (Engineering journal, Feb.

1958. v. 41, no. 2, p. 43–49, illus., graphs.) 7 refs.

Steps to encourage winter activity in the Canadian construction industry are described. Construction techniques in Scandinavia and Russia are examined, and details of a system of state control in Sweden are given. Prefabricated concrete walls, floor and roof panels are widely used. A Russian cold concreting technique which permits placing of concrete at below-zero temperatures without protection, and a system of heating concrete on large hydraulic structures by electricity, are described.

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50387. CROCKER, C. R. Winter construction; problems and progress. (Engineering and contract record, Oct. 1957. v. 70, no. 10, p. 86–89.)

Economic problems resulting from seasonal unemployment in the construction industry in Canada are briefly outlined, and measures adopted in Scandinavia, Russia, and Canada to extend the construction season are described. In Norway and Sweden, the government attempts to stabilize employment by a system of permits which controls building activity. Cold concrete has been used in the U.S.S.R. since 1952, and new techniques of winter concreting have been developed. Prefabrication is also widely used. Canada leads in per capita volume of winter work, and several examples of winter construction are cited to show it is possible at an acceptable cost.

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50388. CROCKER, ROBERT L., *and* B. A. DICKSON. Soil development on the recessional moraines of the Herbert and Mendenhall Glaciers, southeastern Alaska. (Journal of ecology, Apr. 1957. v. 45, p. 169–85, illus., map.) 16 refs.

A study of the development of soil properties of these areas as determined by vegetation succession and time. Bulk density of the soil, its moisture, pH, total N, total organic C, carbon-nitrogen ratio, and dry matter content were considered. Though the two areas show similar traits, certain variations due to differences in soil forming factors, exist between them. ***Copy seen:*** DLC.

50389. CROFT, N. A. C. Arctic rations. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, Aug. 1948. v. 1, no. 3, p. 244–46, table.)

Summary of a seminar led by the author and dealing with: the nature of the Arctic, its means of transport, character of future military operations; and rations: types required, caloric value, nutritive components, evaluation of proposed rations. ***Copy seen:*** DNLM.

50390. CRONQUIST, ARTHUR JOHN, 1919– . A new *Aster* from Yukon. (Madroño, July 1945. v. 8, no. 3, p. 97–99.)

Contains Latin and English descriptions of *A. yukonensis* n. sp., collected at the south end of Lake Kluane, July 23, 1944, J. P. Anderson 9384; comparison is made with related species *A. novae-angliae* and *A. modestus.* ***Copy seen:*** DA.

50391. CRONQUIST, ARTHUR JOHN, 1919– . Revision of the western North American species of *Aster* centering about *Aster foliaceus* Lindl. (American midland naturalist, Mar. 1943. v. 29, no. 2, p. 429–68, illus., 17 plates.) 13 refs.

Contains historical notes, discussion of the group, keys, and a systematic annotated list of eight species, three subspecies and 13 varieties recognized by the author. Synonyms, descriptions, critical notes and lists of specimens are provided; a few new combinations are established. *A. foliaceus* (Alaska, Aleutian Islands), with var. *typicus*, *A. douglasii* (Yes Bay, Wrangell) and *A. occidentalis* var. *typicus* n. nom. (Northwest Territories), are included. ***Copy seen:*** DLC.

50392. CROOME, ANGELA, *Compiler.* The International Geophysical Year, month by month. (Discovery, 1957–1958. v. 18, no. 1–v. 19, no. 12, illus.)

Contains a monthly three-page report of IGY plans, programs and activities during 1957–58, as No. 44630 for 1956. In worldwide coverage antarctic work is salient, but arctic activities reported include: Fletcher's ice island (v. 18, no. 8, p. 349); Soviet drifting stations North Pole 4, 6 and 7 (v. 18, no. 4, p. 162); Cosmic ray observations on Scandinavian Airlines System's flight over North Pole, and suggestion that a third North Pole, a "cosmic-ray pole" may exist (v. 18, no. 4, p. 162–63); Greenland expedition led by P. É. Victor, considering a fiberglass sphere for the main hut at its central icecap station between 69°–72° N. (v. 18, no. 10, p. 439); SIPRE's ice-core museum (v. 18, no. 11, p. 483); Russian investigations of ocean bottom sediments in the Arctic Basin, showing it to have

been cut off from the Atlantic three times during the past 50,000 yrs. (v. 19, no. 3, p. 119–20); Operation Hazen on Ellesmere Island (v. 19, no. 3, p. 121); British auroral studies (v. 19, no. 5, p. 209, no. 8, p. 343–44); Polish findings of the accelerated isostatic rise of Spitsbergen from the sea (v. 19, no. 6, p. 251); etc. This report is to be continued under the title *Geophysics and space research*, to cover international geophysical studies.

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CROSBY, CYRUS RICHARD, 1879– , *see* Bishop, S. C., *and* C. R. Crosby. Studies in American spiders . . . *Ceratinopsis* . . . *1930* No. 49741.

50393. CROSBY, JOHN, *and* **E. BECKETT.** Rock wren at Churchill, Manitoba. (Canadian field-naturalist, Apr.–June 1957. v. 71, no. 2, p. 82–83.)

Contains observations on a pair of *Salpinctes obsoletus*, June 29–Aug. 4, 1956. They were seen carrying food but no young were found. ***Copy seen:*** DA.

CROSBY, MURRAY G., *see* Horner, S. G. L., *and others.* Single sideband. *1957.* No. 51815.

CROSBY, WILLIAM, *see* Villalobos, T. J., *and others.* A cause . . . thrombocytopenia and leucopenia . . . hypothermia. *1958.* No. 55815.

50394. CROSS, FREDERICK SAMUEL, 1920– , *and others.* Localized cardiac hypothermia as an adjunct to elective cardiac arrest. (Surgical forum, 1958. v. 8, p. 355–59, table.) 5 refs. *Other authors:* R. D. Jones *and* R. M. Berne.

A study of elective cardiac arrest produced by potassium citrate perfusion in normothermic hearts and in those having cold blood (±20° C.) infused into the coronary circulation of dogs. Only the second group had a low incidence of ventricular fibrillation, good ECG, etc., after cardiac arrest.

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CROSS, FREDERICK SAMUEL, 1920– , *see also* Berne, R. M., *and others.* Myocardial hypothermia . . . elective cardiac arrest. *1958.* No. 49693.

CROSS, FREDERICK SAMUEL, 1920– , *see also* Berne, R. M., *and others.* Oxygen consumption . . . hypothermic . . . heart. *1958.* No. 49694.

50395. CROSS, GEORGE C. Yukon 1956 review. (Canadian mining journal, Feb. 1957. v. 78, no. 2, p. 93–94, text map.)

Mineral developments and production in the area are reviewed, with major prospecting and development sites shown on map. Production generally increased over the previous year. The next major increase in mineral production in the area is apparently dependent on road, rail, power, and smelting development. On Galena Hill, all known major surface showings and contacts have been mapped in the area between Elsa and Calumet camps, leaving only the Silver King area to be mapped. On Keno Hill, plane table mapping during the summer extended the mapped area to include the Lucky Queen and Wernecke areas.

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50396. CROSS, GEORGE C. Yukon 1957 review. (Canadian mining journal, Feb. 1958. v. 79, no. 2, p. 104–105, map.)

Oil exploration in 1956–57 is stressed: ten million acres covered by permit applications by Sept. 1957; a test well drilled; group effort, use of aircraft, and experience of geologists are noted. Gold, lead and zinc prices declined, but production continued satisfactory. Active exploration for asbestos is underway. Map locates 18 active or inactive mines, and areas under exploration.

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CROSS, K. W., *see* Brodie, H. R., *and others.* Heat production. . . infants . . . *1957.* No. 49934.

50397. CRUM, HOWARD A. Canadian bryological notes, 1. (Canada. National Museum. Bulletin no. 147, Annual report for the fiscal year 1955–56, *pub.* 1957. p. 116–23, map.) 17 refs.

Attempts to clarify the taxonomy and distribution of Canadian bryophytes by listing and describing those on which there is confusion. A few are from northern areas: *Stegonia latifolia* var. *pilifera* (Brid.) Broth; *Grimmia torquata* Hornsch.; and *Aulacomnium acuminatum* (Lindb. & Arn.) Par. The list is to be continued. ***Copy seen:*** DGS.

50398. CRUTCHER, HAROLD L. Upper wind distribution statistical parameter estimates. Washington, D.C., U.S. Govt. Print. Off., Nov. 1958. 59 p. tables. (U.S. Weather Bureau. Technical paper no. 34.) 18 refs.

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Contains estimates of some statistical parameters of wind distributions over the Northern Hemisphere, and tables of derived values prepared from the original data, available at the National Weather Records Center, Asheville, N.C. Symbols and definitions of the statistical parameters and formulas used in computing the estimates; also individual stations by geographical area, with time of observation and period of record, are tabulated. In general, data cover the four seasons, the five-year period 1948–1953, and five pressure levels: 850, 700, 500, 300, 200 mb, but Canadian and arctic data: 700, 500, 300, 200 mb. Arctic stations include nine in Alaska, Canada 16, Ocean Station "M", Greenland 4, one in Norway, and seven in U.S.S.R. ***Copy seen:*** DGS.

50399. CSALAY, LASZLO, *and others.* Hipotermia és farmakológiás hibernáció hatása a hipoxiás liquornyomásnövekedésre. (Kísérletes orvostudomány, Sept. 1957. v. 9, no. 4, p. 370–74, illus. tables.) 12 refs. Text in Hungarian. Summary in German. *Other authors:* G. Ludány *and* A. Orthmayr. ***Title tr.:*** Effect of hypothermia and pharmacological hibernation upon hypoxic increase in cerebral fluid pressure.

Account of experiments with cats, breathing a hypoxic gas mixture. It was found that during hypothermia the pressure increase of the cerebral fluid caused by hypoxia was reduced by 41%. Pharmacological hibernation had a similar effect. ***Copy seen:*** DNLM.

CSERNYÁNSZKY, H., *see* Szilágyi, T., *and others.* Effect . . . electric shock . . . hypothermia. *1958.* No. 55304.

CSERNYÁNSZKY, H., *see also* Szilágyi, T., *and others.* Untersuchung elektrischer Stromstösse . . . *1958.* No. 55305.

CSETRY, C., *see* Thuránszky, K., *and* C. Csetry. Hypothermie . . . *1957.* No. 55425.

50400. CUGURRA, F., *and* **L. BALDINI.** Sulla capacità dei cosiddetti gangliopleggici di bloccare la spinta ipermetabolica da freddo, 6; azione della cloropromazina. (Società italiana di Biologia sperimentale. Bolletino, Dec. 1956. v. 32, no. 12, p. 1624–25.) 2 refs. Text in Italian. ***Title tr.:*** The capacity of ganglioplegics to block the hypermetabolic rise due to cold, 6; action of chlorpromazine.

Following a description of the pharmacological nature of this drug, the author gives a brief report on its action in the hypothermic rat. At specified doses it was found to counteract hypermetabolism caused by cold.

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50401. CULLISON, JACK W., *and* **T. R. A. DAVIS.** The isolation of enteric pathogens at Barrow, Alaska. (U.S. Armed Forces. Medical Journal, Apr. 1957. v. 8, no. 4, p. 534–38, table.) 6 refs.

Account of investigation among the Eskimos of Barrow made in Nov., Feb. and July 1954–55. *Salmonella typhimurium* was isolated in 36 cases, *Shigella sonnei* from one fecal sample. None of the subjects had diarrhea during the sampling, hence the organisms represent subclinical or carrier states. There was twice as high incidence of infection in the summer as in the winter.

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50402. CUMMING, BRUCE G., *and* **J. R. HAY.** Light and dormancy in wild oats, *Avena fatua* L. (Nature, Aug. 30, 1958. v. 182, no. 4635, p. 609–610, tables.) 5 refs.

Report on experiments showing that white, blue and infra-red light inhibits germination of partly dormant wild oats. Daylight also has an inhibitory effect when seeds are on the soil surface but not when buried. Autumn tillage thus produces earlier oat germination in the spring. ***Copy seen:*** DLC.

50403. CUMMINGS, CLARA E. A list of Labrador lichens. (Geographical Society of Philadelphia. Bulletin, 1902. v. 3, no. 4, p. 196–200.) *From:* Report of the Brown-Harvard Expedition to Nachvak, Labrador, 1900 (No. 3827).

Lists, with brief notes, 43 lichens collected by Prof. E. B. Delabarre on the Atlantic coast of Labrador, July–Sept. 1900. Five of the species are not recorded in the enumeration of Dr. F. Arnold.

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CUNNINGHAM, *Rev.* **THOMAS,** *S. J., see* Scott, R. F. Resource planning . . . *1957.* No. 54647.

CUOCULO, R., *see* Preziosi, P., *and others.* Sulla . . . modificazioni corticosurrenali . . . freddo. *1957.* No. 54137.

CURRIE, CAMPBELL, *see* Hanson, H. C., *and* C. Currie. The kill of wild geese . . . *1957.* No. 51576.

CURRÒ, S., *see* Santoro, A., *and others.* Variazioni biochimiche . . . *1957.* No. 54545.

50404. CURRY-LINDAHL, KAI, 1917– . Berguven i Sverige. (Sveriges natur. Årsbok, 1950. årg. 41, nr. 1A, p. 127–33, map.) Text in Swedish. ***Title tr.:*** The mountain owl in Sweden.

Discusses occurrence and need for protection of the mountain owl, now found mainly in northern Sweden and Lapland: its main enemy is man, but it is a useful predator, as 45% of its prey is said to be harmful to man's interest.

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50405. CURRY-LINDAHL, KAI, 1917– . Vertebratfaunan i Sareks och Padjelantas fjällområden. (Fauna och flora, 1958. årg. 53, häfte 1–2, p. 39–71; häfte 3–4, p. 97–149, illus., map, tables.) 64 refs. Text in Swedish. Summary in English. ***Title tr.:*** The vertebrate fauna in the Sarek and Padjelanta mountain regions.

Reports species observed during four expeditions (1943, 1946, 1953 and 1957) to the Sarek Mts. and the adjacent region of north Sweden (67°06′–10′ N., 17° E.–18°05′ E., elevation 305–2,090 m). The different valleys, mountain plains and lakes investigated are listed with brief topographical descriptions and notes on the faunal population. Biological data are given in a list of species observed; 22 mammals, 104 birds, one reptile, one amphibian and two fishes are known in the area. ***Copy seen:*** DA.

CURTIS, ROGER, *see* Schlechtendal, D. F. L. Ueber die Flor von Labrador. *1836.* No. 54607.

50406. CUSHMAN, JOSEPH AUGUSTINE, 1881–1949, *and* **M. R. TODD.** Foraminifera from the coast of Washington. Sharon, Mass., 1947. 23 p. 4 plates. (Cushman Laboratory for Foraminiferal Research, Sharon, Mass. Special publication no. 21.)

Contains a taxonomic list of about eighty foraminifers, with descriptions of two new species. At least ten are recorded as spreading to the coast of Alaska. ***Copy seen:*** DSI–M.

50407. CUSHMAN, JOSEPH AUGUSTINE, 1881–1949, *and* **M. R. TODD.** A foraminiferal fauna from Amchitka Island, Alaska. (Cushman Laboratory for Foraminiferal Research, Sharon, Mass. Contributions, Sept. 1947. v. 23, pt. 3, no. 297, p. 60–72, plates 14–16).

Contains a taxonomic list of about forty species and varieties of fossil foraminifers, of which three forms are described as new. They were collected by R. R Coats from the floor of a quarry at 125 ft. elevation, near East Cape, Amchitka Island in the Aleutians. The fauna, either Pleistocene or Pliocene, was probably deposited in shallow water.

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50408. CUSHMAN, JOSEPH AUGUSTINE, 1881–1949. The genus *Sigmoilina* and its species. (Cushman Laboratory for Foraminiferal Research, Sharon, Mass. Contributions, 1946. v. 22, pt. 2, no. 276, p. 29–45, plates 5–6.)

Contains a taxonomic list of about thirty species, fossil and recent, of which four and one variety are described as new. Two recent foraminifers, *S. herzensteini* and *S. makarovi,* obtained in the Okhotsk Sea, are included.

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50409. CZAP, IVAN MICHAELSON. Early American icons. (The Russian-orthodox journal, Feb. 1957. v. 30, no. 10, p. 11, 24).

Describes as the "first American" icon, that aboard Bering's vessel on his 1741 voyage to Alaska. Salvaged from the wreck on Bering Island, it was seen in Petropavlovsk a century later, but its present whereabouts are unknown.

DADAY, H., *see* Greenham, C. G., *and* H. Daday. Electrical determination of cold hardiness . . . *1957.* No. 51354.

50410. DADYKIN, VSEVOLOD PETROVICH, *and others.* Ob usvoenii sveta rasteniiami v Iakutske i Tiksi. (Akademiia nauk SSSR. Doklady, July 1, 1957. t. 115, no. 1, p. 190–92, illus., 2 tables.) 5 refs. Text in Russian. *Other authors:* S. A. Stanko, G. S. Gorbunova, and Z. S Igumnova. ***Title tr.:*** Light assimilation by plants at Yakutsk and Tiksi.

Reports an experimental study of optical properties of plants (radish) carried out in Yakutsk (62° N.) and in Tiksi (71.6° N.). The weather conditions in both places are tabulated. The conclusion is offered that the Yakutsk plants reflect and pass more solar rays than the Tiksi plants; the latter, however, absorb light much more effectively than the same species in Yakutsk, i.e., 90 percent, as graphically

shown. The significance of northern plants utilizing light energy better than more southerly ones is noted. This confirms a theory advanced by K. A. Timirîazev long ago on the "optical adaptation" of plants, compensating thus the lack of radiant heat in the Arctic. The output of dry matter in the plants was also studied; the output (tabulated) was one-and-a-half times larger in Tiksi than in Yakutsk. ***Copy seen:*** DLC.

50411. DADYKIN, VSEVOLOD PETROVICH. V kraîu taĭgi i tundry. (Sovetskiĭ soîuz, 1957, no. 1 (83), p. 10–11, illus.) Text in Russian. ***Title tr.:*** In the land of taiga and tundra.

Sketch of scientific and cultural achievements in Yakutia: schooling (including higher education), means of travel, mineral and ore resources, geologic research, agricultural problems (permafrost), livestock, fur animals, study of cosmic radiation, literature, historical and philological research. Author is chairman of the presidium of the Academy of Sciences' Yakut Branch.

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50412. DADYKIN, VSEVOLOD PETROVICH. V sovetskoĭ Îakutii. (Nauka i zhizn', May 1957. god 24, no. 5, p. 54–55, illus.) Text in Russian. ***Title tr.:*** In Soviet Yakutia.

Interview with V. P. Dadykin on the scientific exploration of Yakutia: discovery of diamonds, survey of coal resources, discovery of natural gas, cosmic ray studies, northern plant physiology investigations, conservation of local furbearers and acclimatization of new species, historical and philological studies.

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50413. DADYKIN, VSEVOLOD PETROVICH. Voprosy fito-fiziologicheskikh issledovaniĭ na kraĭnem Severe. (Problemy Severa, 1958, vyp. 1, p. 188–99, table.) 30 refs. Text in Russian. ***Title tr.:*** Problems of phyto-physiological research in the far North.

Presents information on the drive towards the North in Soviet agriculture and its phases. Problems of soil moisture and (low) temperature, soil chemistry and amelioration are reviewed. Recent advances in Soviet arctic farming are discussed, e.g., supply of N fertilizer through the leaves, introduction of corn as a fodder plant and its special requirements in the North. Problems of root growth, of continuous photosynthesis in mid-summer, of expanding research to the North, etc., are also summarized.

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DADYKIN, VSEVOLOD PETROVICH, *see also* Mesîatsev, S. Molodost' starogo goroda. *1957*. No. 53247.

DAFOE, DON M., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

50414. DAHL, CHRISTINE. Die Gattung *Trichocera* in Spitzbergen, Bäreninsel und Jan Mayen; Dip. (Opuscula entomologica, Oct. 1957. bd. 22, häfte 2–3, p. 227–37, 12 illus.) 25 refs. Text in German. ***Title tr.:*** The genus *Trichocera* in Spitsbergen, Bjørnøya and Jan Mayen; Dip.

Distribution is studied of six species of this genus of false crane flies reported from these islands, with conclusion that only three species actually occur there: *T. lutea* (on all three islands), *T. borealis* (Vestspitsbergen), and *T. maculipennis* (Bjørnøya and Jan Mayen).

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50415. DAHL, EILIF, 1916– . Amfiatlantiske planter. (Blyttia, 1958. bd. 16, hefte 3, p. 93–121, 6 text maps, 5 tables.) 48 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Amphi-Atlantic plants.

The hypothesis that the amphi-Atlantic species once came from the Bering Strait area, and subsequently died out in adjacent parts of America and Eurasia is considered (and rejected). Another hypothesis involves migration across the Atlantic either by means of long-distance dispersal or by a land bridge between Europe and America. If the arctic species in Scandinavia and the eastern species in Greenland crossed the Atlantic by dispersal, one would expect to find species adapted to long-distance dispersal highly represented within these elements. All these hypotheses are represented in the tabular survey. The discussion covers practically all northern regions of Europe, Asia and North America.

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50416. DAHL, KNUT, 1871– . The scales of the herring as a means of determining age, growth and migration. Bergen, J. Grieg, 1907. 36 p. illus., tables. (Norway. Fiskeridirektoratet. Skrifter, ser. havundersøkelser. Report on Norwegian fishery and marine investigations, v. 2, no. 6.) Refs. in text.

A study of scales of herring from Norwegian and other waters with the ultimate aim of determining the existence of different types or "tribes." Following a fundamental section on the structure of scales at different seasons and their growth and growth rings, herrings from various seas are analyzed for their length, age and scales. The Norwegian spring herring was found to attain the largest size due to continuous growth, whilst the growth of other types becomes arrested; the types inhabiting the ocean consist of older, large, individuals, those in the fjords or bays are younger and smaller. The scales of all these different types were found to grow differently, so that in some cases the type can be determined from a single scale. The significance of this observation is discussed. ***Copy seen:*** DI.

50417. DAHL, RICHARD G. The Leng types of Cicindelidae; Coleoptera. (Entomological news, June–July 1941. v. 52, no. 6–7, p. 169–72, 188–91.)

Contains designations of lectotypes of the species of Cicindelidae, or some others, described by C. W. Leng. Of 20 lectotypes discussed, two are from the North: *Cicindela formosa* var. *manitoba* (Hudson Bay region) and *C. longilabris* var. *novaterra* (Newfoundland).

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50418. DAHLGREN, CARL ERIC. Bondeskogens arrondering i Norrbotten. (Skogen, *Stockholm*, June 13, 1958. årg. 45, nr. 12, p. 369.) Text in Swedish. ***Title tr.:*** Regulation of farm forest lots in Norrbotten.

Comment on views of Gunnar Carlborg (q.v.): exchange of farm wood lots in Norrbotten is more essential than lot-exchange between the state and lumber companies and should be made part of this program. ***Copy seen:*** DA.

50419. DAHLSKOG, STEN. Dagbok från Kvikkjokk. (Sveriges natur. Årsbok, 1957. årg 48, nr. 4A, p. 91–106, illus.) Text in Swedish. ***Title tr.:*** Journal from Kvikkjokk.

The local limit of navigation on the Lilla Lule River was the factor responsible for the location of Kvikkjokk. But the delta of two mountain streams, which enter quiet water at the site, has been the determining factor in development of the area. The role of almost annual floods in extending the delta and in fertilizing and flooding its topsoil is discussed. The future of the region depends on how highways and waterpower are developed, and the hydroelectric power project is a controversial issue; it is considered by the local population as potentially harmful for the welfare of the region. ***Copy seen:*** DLC.

DAILEY, DAVID T., *see* Beer, R. E., *and* D. T. Dailey. Biological . . . cheyletid mites . . . *1956.* No. 49607.

DALE, GEORGE A., *see* Butler, E. I., *and* G. A. Dale. Alaska . . . *1957.* No. 50028.

50420. DALENIUS, PER. Studium av en elritspopulation i en lappländsk fjällsjö. (Fauna och flora 1957, häfte 3–4, p. 125–36, illus., tables, diagrs.) Text in Swedish. ***Title tr.:*** Study of a minnow population in a Lapland mountain lake.

Contains results of investigations over several years in a small tarn a few km. south of Abisko (68°20′ N. 18°51′ E.) in northern Sweden. The study deals mainly with infection of the fish by *Ligula intestinalis* L. A biological account of this cestode's development and its effect on the host is given. Of 232 fish examined, 38% (56% of the males, 26% of the females) were affected. Infection appears earliest in some three-year-olds; the incidence increases with age and practically all the oldest specimens contain parasites. Possible nutritional causes for the greater infection of males than females and for the absence of infection in the young are discussed.

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50421. DALL, WILLIAM HEALEY, 1845–1927. A new Alaskan *Puncturella.* (Nautilus, Jan. 1924. v. 37, no. 3, p. 133.)

Describes: Puncturella eyerdami n. sp., collected by Walter Eyerdam, q.v.

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50422. DALL, WILLIAM HEALEY, 1845–1927. The new Pliocene Pectens from Nome, Alaska. (Nautilus, Jan. 1921. v. 34, no. 3, p. 76–77.)

Describes: Pecten (*Plagioctenium*) *hallae* and *Pecten* (*Patinopecten*) *rhytidus* n. ssp. with some notes on accompanying fossil shells found in a shaft 20 ft. below the surface near the Solomon River.

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DALL, WILLIAM HEALEY, 1845–1927, *see also* Strong, A. M. Notes . . . *Acteocina . . . 1921–22.* No. 55203.

50423. DALLIN, DAVID J., 1889– , *and* B. I. NOKOLAEVSKIĬ. Forced labor in Soviet Russia. New Haven, Yale University Press, 1947. 331 p. facsims., tables, maps. Over 75 refs.

Monographic study of forced labor and the so-called Corrective Labor Camps (Ispravitel'no-trudovye lagerîa) in the U.S.S.R., based in part on unpublished materials and data supplied by escapees. Of 125 camps listed with note of activities in 1947, 35 are in the arctic or subarctic regions (maps p. 64–65). Development of gold mining in the Kolyma and Indigirka basins and in Chukotka, the foundation of Magadan and construction of the Magadan-Seymchan highway with forced labor, the organization of Dal'stroĭ and its activities, treatment of the laborers, their mortality (high) are recounted (p. 108–148). The gold output is tentatively estimated at 11 to 16 million oz. annually. The camp of prisoners and deportees in the Solovetskiye Islands in 1921–25 is described (p. 168–85), and scattered information offered on other northern camps. A survey of the international literature is appended.

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DALPHIN, GEORGE R., *see* Spec. Libraries Assoc. Geog. *and* Map Div. Bulletin. *1958*. No. 55089.

DAL'STROĬ, K 25-LETIIŬ, 1956, *see* Sergeev, M. A. Kniga o Dal'stroe. *1958*. No. 54700.

50424. D'AMATO, HENRY E., *and* B. G. COVINO. Effectiveness of antifibrillatory agents in hypothermia. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 32.)

Short account of the effects of Ambonestyl, quinidine or mephentermine on ventricular fibrillation of dogs cooled to 25° and 30° C. and subjected to circulatory occlusion and right ventriculotomy. The effectiveness of these drugs on ventricular fibrillation is evaluated.

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50425. DAMINOVA, A. M. Eshche raz o vozraste kompleksa kristallicheskikh slant͡sev Taĭmyrskogo poluostrova. (Sovetskaîa geologiîa, June 1958. god 1, no. 6, p. 182–87, text map.) 5 refs. Text in Russian. ***Title tr.:*** Once more on the age of the crystalline schist complex of the Taymyr Peninsula.

Answers Ravich, Vakar and Gramberg (No. 54241): age determination of crystalline schists is a key question for explanation of the history of the Taymyr folded region, its tectonics, magmatism and formation of useful minerals; no new evidence has been adduced to controvert author's earlier statements which, in fact, have been confirmed subsequently by data received on Taymyr biotites, dated for 290 million years' age.

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50426. DAMINOVA, A. M. Geologicheskoe stroenie t͡sentral'nogo Taĭmyra. (Izvestiîa vysshikh uchebnykh zavedeniĭ. Geologiîa i razvedka, 1958, no. 3, p. 3–19, fold. table, fold. map.) 18 refs. Text in Russian. ***Title tr.:*** Geological structure of central Taymyr.

Account of the area approx. 73°–76°15′ N. 85°–100° E. in the western part of the Peninsula, based on investigation and geological surveying done by the Taymyr Expedition of the Trust "Arktikrazvedka" in 1946–54 (with author participating in 1947–53). Stratigraphy and location of main geological formations, from the Proterozoic up to Quaternary rocks, are sketched (p. 2–12 and fold. map); tectonics, magmatic formations and history of the area are discussed. Eight types of magmatic formations are characterized by tabular data. Fold. geological map, 1:1 million, compiled by the author in 1955, is based on explorations and collections of some forty (named) geologists. ***Copy seen:*** DLC.

50427. DAMINOVA, A. M. Vozrast kompleksa kristallicheskikh slant͡sev Taĭmyrskogo poluostrova. (Sovetskaîa geologiîa. Sbornik, 1957. no. 58, p. 50–55, fold. map, fold. plate, table.) 5 refs. Text in Russian. ***Title tr.:*** The age of the Taymyr Peninsula crystalline schist complex.

The age of formation of Taymyr schists has been reported as Cambro-Silurian (by H. Backlund), as Proterozoic (V. A. Obruchev) and as Lower Protozoic (M. G. Ravich). On the basis of recent geologic mapping and petrographic, stratographic, and X-ray data, the author finds evidence to support Backlund's opinion.

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50428. DAMM, ARNE, *and* A. PRINTZ. Friluftsliv. 2. oppl. Oslo, N. W. Damm, 1947. 372 p. illus. Text in Norwegian. ***Title tr.:*** Outdoor life. 2d edition.

Handbook on practical aspects of outdoor life in Norway: equipment and food, their selection, use, and care; trail con-

siderations, camping and campsites, and physical and mental health management, etc. Shelter erection, care of fires, recognition of animal life and wild edible plants, and first aid are explained. Techniques of hunting, fishing, canoeing, bicycling, mountain climbing, skiing, handling of dogs, management and transport of packs, photography, and survival during snowstorms are discussed. Rugged conditions and self-sufficiency of the traveler are stressed; information pertinent to sub-arctic conditions is given throughout, profusely illustrated with drawings by R. Drevon.

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50429. DAMMANN, J. FRANCIS. Intravenale Panthesin-Hydergin-Therapie bei Erfrierungen. (Zentralblatt für Chirurgie, Dec. 1957. Jahrg. 82, Heft 49, p. 2024–31.) 5 refs. Text in German. ***Title tr.:*** Intravenous Panthesin-Hydergin therapy of frostbite.

Case history of frostbite, grade II and III, of both legs, in a female aged 17. Information on frostbite in general, its pathology and therapy is also presented. Treatment with a mixture of both drugs produced prompt results with complete recovery. In the early stages of this case, amputation seemed necessary.

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DAMMIN, GUSTAVE J., *see* Kulka, J. P. *and* G. J. Dammin. Pathogenesis of experimental frostbite. *1958.* No. 52558.

DAMMIN, GUSTAVE J., *see also* Kulka, J. P., *and others.* Physiopathology of cold injury; cutaneous circulation . . . feet . . . *1958.* No. 52559.

D'AMOUR, FRED E., *see* Erickson, B. R., *and others.* Effect of environmental temperature in traumatic shock. *1957.* No. 50771.

50430. DANIELS, FARRINGTON, 1918– . Physiological responses of men to heat and cold. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 18–32, illus.) 41 refs.

A review of the field with the following aspects of cold discussed: heat exchange; body temperature distribution and gradients; physiological reactions in man to cold and their sequence; hypothermia and its physiology; metabolism during cold exposure; chemical changes; acclimatization; the Lewis reaction, etc.

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50431. DANIELSEN, EDWIN F., *and others.* Intensity and frequency of severe storms in the Gulf of Alaska. (American Geophysical Union, Transactions, Feb. 1957. v. 38, no. 1, p. 44–49, text map, diagrs.) 7 refs. *Also pub. as:* Washington (State) University, Dept. of Meteorology and Climatology, Contribution no. 23, and its Dept. of Oceanography, Contribution no. 203; Oregon State College, Contribution no. 3 in oceanography and limnology. *Other authors:* W. V. Burt *and* M. Rattray, Jr.

An historical survey, based upon the U.S. Weather Bureau's Historical weather maps for the Northern Hemisphere; made to determine from weather data the frequency and variability of occurrence of storms which would generate very high waves, and to show the importance of factors other than measured wind speed on the development of very high waves. Two criteria were established for classifying severity of storms. Most severe was that of Jan. 9–10, 1952 in which the S.S. *Pennsylvania* sank.

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50432. DANILENKO, V. Pomoshch' prishla s vozdukha. (Grazhdanskai͡a avia‿t͡siia, Mar. 1957. god 14, no. 3, p. 11.) Text in Russian. ***Title tr.:*** Rescue came from the air.

Story of a geologist, injured by a landslide in a mountainous area of Kamchatka and rescued by helicopter.

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DANILOV, BORIS IVANOVICH, *see* Ruzov, L. V. Na sushe i na more . . . *1957.* No. 54464.

50433. DANILOV, DIMITRIĬ NIKITICH, 1900– . Mesta noreniia pes‿t͡sa, *Alopex lagopus,* v vostochnoĭ chasti Bol'shezemel'skoĭ tundry. (Problemy Severa, 1958, vyp. 2, p. 212–218, illus., table.) 11 refs. Text in Russian. ***Title tr.:*** Places of burrowing of the polar fox, *Alopex lagopus,* in the eastern Bol'shezemel'skaya Tundra.

Outline based on study of over 40 burrows some 40–60 km. from the Kara Sea, approx. 64°40′ E. Location and relief, exposure of incline (mostly southern), soil, wind and temperature conditions; distance between burrows, etc., are considered. ***Copy seen:*** DLC.

50434. DANILOV, DIMITRIĬ NIKITICH, 1900– . Novye knigi po okhotnich'emu khozi͡aĭstvu. (Ra͡tsionalizat͡siĭa okhotnich'ego promysla, 1958, vyp. 7, p. 145–47.) Text in Russian. ***Title tr.:*** New books on the hunting industry.

List, partly annotated, of 1957–58 Soviet publications on hunting, nine of them dealing with the far North.

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50435. DANILOV, DIMITRIĬ NIKITICH, 1900– . Proizvoditel'nost' ernikov i ivni͡akov v vostochnoĭ chasti Bol'shezemel'skoĭ tundry. (Botanicheskiĭ zhurnal, Mar. 1958. v. 43, no. 3, p. 388–93, illus.) 10 refs. Text in Russian. ***Title tr.:*** Productivity of *Betulata nana* and *Saliceta fruticosa* associations in the eastern part of the Bol'shezemel'skaya Tundra.

Deals with vegetation of the tundra area 40–60 km. from the Kara Sea coast (Kara River). Plant associations of willow and birch, the grass cover, and moss cover are described. Longitudinal growth, mass of timber and twigs per hectare and the amount and weight of bushy growth per hectare are discussed and tabulated. ***Copy seen:*** DLC.

50436. DANILOV, N. A. Pervyĭ mesi͡ats zimy. (Priroda, Dec. 1957. god. 46, no. 12, p. 125–26, text map.) Text in Russian. ***Title tr:.*** The first month of winter.

Includes notes on characteristic features of arctic winter weather (absence of solar radiation, less fog, etc.). The length of the day on the latitude of Arkhangel'sk at winter solstice is about four hrs.; the sun is seen near the horizon and the monthly amount of solar heat is 0.2 kg-cal./cm.^{2}. The earliest onset of winter (in October, and lasting five months) was observed in the basins of Severnaya Dvina and Pechora Rivers; very cold weather prevailed in northern Siberia. ***Copy seen:*** DLC.

50437. DANILOV, SEMEN PETROVICH, 1918– . Maĭ. (Druzhba narodov, Sept. 1958, no. 9, p. 210.) Text in Russian. ***Title tr.:*** May.

Poem translated from the original Yakut by R. Rozhdestvenskiĭ.

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DANILOV, V. I͡A., *see* Miller, A. D., *and* V. I͡A. Danilov. Solevye oreoly rasseĭani͡a . . . *1957.* No. 53292.

50438. DANILOVSKAI͡A, L. I., *and others.* Opyt stroitel'stva sbornykh domov na fundamentakh melkogo zalozheni͡a. (Khabarovskiĭ institut inzhenerov zheleznodorozhnogo transporta. Trudy, 1956, vyp. 9, p. 87–93, illus., tables, diagrs.) Text in Russian. *Other authors*: V. D. Matveev *and* G. F. Shishkanov. ***Title tr.***: Experience in building houses of prefabricated panels on shallow foundations.

Experience in Khaborovsk Province with foundations in ground subject to frost heaving (average freezing to 2.5 m.; max. to 3.2 m.) is described in detail, and the foundation structure is diagrammed. Data on the granulometric composition of the ground and on the deformation of 22 houses by frost heaving are tabulated. Foundations of concrete blocks 0.7 m. deep for single-story houses of prefabricated panels can be laid on soils of homogenous granulometric structure in areas of deep ground water. Frost heaving observed in such cases causes uniform displacement of foundations at a rate that does not cause deformation.—From SIPRE.

Copy seen: DLC.

DANISH, L. L., *see* Akademi͡a nauk SSSR. I͡Akutskiĭ filial. Za sovetskui͡u vlast' . . . *1957.* No. 49170.

50439. *DANISH FOREIGN OFFICE JOURNAL.* Mother of the seas. (Danish Foreign Office journal, June 1957. no. 24, p. 16, illus.)

Note on new Greenland stamp designed by the Greenlandic artist, Jens Rosing: the design derived from this Eskimo legend depicts a young woman and various Greenland mammals and birds. ***Copy seen:*** DLC.

DANNER, JUDITH I. B., *see* Gordienko, P. A. Issledovani͡a . . . l'dov . . . konferent͡si͡a . . . *1958.* No. 51284.

50440. DANNEVIG, ALF, 1886– . Vekslingene i de store fiskerier. (Naturen, 1949. årg. 73, nr. 4, p. 101–109, table.) Text in Norwegian. ***Title tr.:*** Variations in the large fisheries.

Studies of conditions affecting hatching and survival of young are reviewed in an attempt to determine and publicize environmental conditions to be considered in forecasting the amount of fish in a particular harvest. Light conditions during incubation affect hatch; gas content of the water, changes in pressure,

and availability of food are critical factors in survival of the young. Water currents, temperatures, plankton, detritus, etc. affect development of the fish stock. Results of investigations on Newfoundland and Lofoten banks are tabulated. ***Copy seen:*** DGS.

50441. DANSEREAU, PIERRE MACKAY, 1911– . Bibliographie des publications de M. Pierre Dansereau dressée par l'auteur. Bibliography of the publications of Mr. Pierre Dansereau drawn up by the author. (Revue canadienne de géographie, Apr.–Sept. 1957. v. 11, no. 2–3, p. 115–23.) Text in French and English.

Lists 170 publications of 1934–1957, including a number on the (mainly Canadian) Arctic and Subarctic. Author was chief botanist of the Arctic Institute's Baffin Island Expedition 1950. A biographical sketch of Dr. Dansereau, now President of the Société de Géographie de Montréal, is given by Camille Laverdière in the same issue (p. 127–29) of this journal. ***Copy seen:*** DLC.

50442. DANSEREAU, PIERRE MACKAY, 1911– . Biogeography; an ecological perspective. New York, Ronald Press Co., 1957. 394 p. illus., tables, maps. Over 400 refs.

Comprehensive and concise textbook of plant and animal ecology and geography with overlaps into genetics, anthropology, social sciences, etc. Introduction on integration and environment, including climatological aspects, is followed by five sections treating, in turn: history of biota; bioclimatology, including climatic zones (cold-moist, glacial), polar trend, effects of altitude and of glaciation; synecology, i.e., ecology of communities or associations; autecology, dealing with the influence of environment on the species or individual, and including light and heat; man's impact on vegetation and fauna. Appendices list typical plant communities of the middle St. Lawrence valley and ecological terms.

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DANSGAARD, W., *see* Nutt, D. C., *and others.* Arctic Institute Greenland Expedition 1958; field report. *1958.* No. 53678.

50443. DAO, CHIN, *and others.* Electrocardiographic changes during hypothermia. (Chinese medical journal, Apr. 1958. **v. 76, no. 4,** p. 395–400, tables.) 12 refs. *Other authors:* **K. C. Li, C. H. Ku,** *and* **W. Y. Hu.**

Analysis of electrocardiograms from 36 patients made hypothermic but without circulatory occlusion. Main ECG changes included decrease of heart rate, prolongation of P–R and Q–T intervals and increased width of P and QRS. The secondary wave of Osborn appeared in six cases. Arrhythmia and auricular fibrillation were noted but not ventricular fibrillation. ***Copy seen:*** DNLM.

50444. D'ARCY, P. F. A method for screening compounds for adrenocortical activity using the resistance of mice to the effect of cold. (Journal of endocrinology, Apr. 1957. v. 15, no. 1, p. 9–16, illus., tables.) 13 refs.

Description of assay using 11-oxygenated corticosteroids to restore resistance to cold in adrenalectomized mice. The advantages and disadvantages of the new technique as compared with two older methods are discussed.

Copy seen: DNLM.

DARLINGTON, P. S., *see* Aldrich, J. M., *and* P. S. Darlington. The dipterous . . . Helomyzidae. *1908.* No. 49231.

50445. DARSIE, RICHARD F. Notes on American mosquito pupae II; the *Aedes* (*Ochlerotatus*) *punctor* subgroup, with key to known nearctic *Aedes* pupae; Diptera, Culicidae. (Entomological Society of America. Annals, Nov. 1957. v. 50, no. 6, p. 611–20, 8 illus., table.) 13 refs. Misc. paper no. 274, Delaware Agricultural Experimental Station. Publication 286 and Sci. art. 204 of the Dept. Entomology, Mar. 20, 1957.

Contains keys to pupae of the *punctor* complex and to known nearctic *Aedes* pupae, a table of range in septa of *A. punctor* complex pupae, and descriptions of *Aedes* (*Ochlerotatus*) *punctor*, *A.* (*O.*) *hexodontus* and *A.* (*O.*) *punctodes* pupae, all native to Alaska. ***Copy seen:*** DSI.

DASHKOVA, A. D., *see* Bilibina, T. V., *and* A. D. Dashkova. K kharakteristike nekotorykh dokembriĭskikh granitov . . . *1957.* No. 49723.

DASSOW, JOHN ALBERT, 1917– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

50446. DAUDOVA, G. M. O reaktivnosti termoreguliruûshchikh fsentrov u zhivotnykh, nakhodîashchikhsîa v sostoûnii amitalovoĭ gipotermii. (Bûlleten'

ėksperimental'noĭ biologii i meditsiny, Feb. 1958. god 23, no. 2, p. 62–66, tables.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** Reactivity of the thermoregulating centers in animals under amythal hypothermia.

Hypothermia in amythal-injected dogs lasted longer, was less pronounced and different from that of untreated controls. Introduction of a pyrogen (killed *B. mesentericus*) reduced hypothermia, and brought temperature back to normal and above. ***Copy seen:*** DLC.

DAURKIN, NIKOLA , *see* Efimov, A. V. Iz istorii kartografii . . . *1957*. No. 50695.

50447. DAV, V. N. O vykhode siluriĭskikh porod v tsentral'noĭ chasti Tungusskoĭ sineklizy, basseĭn r. Eĭki. (Leningrad. Vsesoiuznyĭ geologicheskiĭ institut. Materialy, nov. seriia, 1955. vyp 7, Materialy po geologii Sibirskoĭ platformy, p. 234–36, illus., map.) Text in Russian. ***Title tr.:*** On the outcrop of Silurian rocks in the basin of Yeyka River, central part of the Tungusska syncline.

Describes location and faunal characteristics of Silurian rocks found by author in 1951 on both banks of the Yeyka tributary to the Nizhnyaya Tunguska. According to fossil fauna, three strata are identified: (1) Brachiopoda and Pelecypoda; (2) single corals and sea lilies; and (3) Tabulata and colonial corals. Some species of these fauna are identified. Other Silurian marine deposits are known in the Iritka and Severnaya Chunya valleys also in the central part of Tungusska syncline. Since Silurian deposits are poor in faunal characteristics, the importance of this find for Silurian stratigraphy is noted.

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50448. DAVIDOVICH, SEMEN MARKOVICH, *and* **K. I. TAL'VIK.** Traktory i avtomobili, izd. 10oe. Moskva, Gos. izd-vo sel'khoz. literatury, 1957. 671 p. illus., tables, graphs, diagrs. 29 refs. Text in Russian. ***Title tr.:*** Tractors and automobiles. 10th ed.

Theory of internal combustion engines, construction details and performance are described in reference to recent models of gasoline and diesel engines for tractors and trucks. Chapter 14 (p. 371–88) includes description of cold starting and arrangement of gears especially for heavy duty engines. A light two-cylinder gasoline engine is generally used with hot exhaust gas pipe passed through the air suction manifold for preheating the main engine under winter conditions. Special gear arrangement is provided for decompression of the main engine during warming up period and at initial phase of starting. ***Copy seen:*** DLC.

DAVIDSON, C. F., *see* U.S.S.R. Ministerstvo geologii i okhrany nedr SSSR. Almazy Sibiri. *1957*. No. 55592.

DAVIDSON, DONALD THOMAS, 1919– , *see* Carlson, P. R., *and others.* Geology and mechanical stabilization of Cenozoic sediments . . . *1958*. No. 50134.

DAVIDSON, DONALD THOMAS, 1919– , *see* Lindholm, G. F., *and others.* Geologic and engineering properties of silts . . . *1957*. No. 52840.

DAVIDSON, DONALD THOMAS, 1919– , *see also* O'Sullivan, J. B., *and others.* Geology . . . soil materials . . . *1958*. No. 53805.

DAVIDSON, JOHN H., *see* Bloch, I., *and* J. H. Davidson. Some . . . hydroelectric power. *1957*. No. 49776.

DAVIDSON, MONICA, *see* Schönbaum, E., *and others.* Comparison of certain methods for assessing adrenocortical activity in rats . . . *1958*. No. 54617.

50449. DAVIDSSON, ÅKE. Handritade kartor över Finland i Uppsala universitetsbibliotek. Uppsala, Almquist & Wiksell, 1957. (Uppsala. Universitet. Bibliotek. Acta bibliothecae r. universitatis Upsaliensis, v. 11.) 60 p. 3 maps. Refs in text. Text in Swedish and Finnish. Summary in German (p. 25–26). ***Title tr.:*** Mss. maps of Finland at the Uppsala University Library.

Lists 245 maps (17th–19th century) by region or subject with original title, scale, size, etc.; index of cartographers, etc., is added and an introduction to the collection's history is given. A few of the maps include northern Finland.

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50450. DAVIES, DOUGLAS M., *and* **B. V. PETERSON.** Observations on the mating, feeding, ovarian development and oviposition of adult black flies, Simulidae, Diptera. (Canadian journal of zoology, Dec. 1956. v. 34, no. 6, p. 615–55, illus., tables.) 125 refs.

A study of 24 species, six from northern regions including some very common

forms, the others from southern Ontario. Notes on the taxonomy and ecology of the *Simulium venustum-S. verecundum* complex precede the account of the functions cited in title. The section on mating includes the main behavior. Feeding deals with structure of mouth parts, ways of blood sucking in the various species and feeding on nectar. Ovarian development includes number of gonotrophic cycles, variations in number and size of eggs, etc.; ways of oviposition are described for each species.

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DAVIES, DOUGLAS M., *see also* Syme, P. D., *and* D. M. Davies. Three new . . . *Prosimulium . . . 1958.* No. 55294.

50451. DAVIES, ELIZABETH W. Cytology, evolution and origin of the aneuploid series in the genus *Carex.* (Hereditas, 1956. bd. 42, häft, 3–4, p. 349–65, 36 illus., 2 tables.) 75 refs.

Contains a detailed cytological survey of the sedge genus *Carex:* 23 species with haploid chromosome numbers are tabulated, among them *C. lachenalii* from Abisko, Torne Lappmark (n=29). Conclusions reached are as follows: "Aneuploidy is the major process in the evolution of *Carex,* and the diffuse nature of the centromere accounts for the long aneuploid series present in this genus. The chromosomes of the Cyperaceae, like the Juncaceae, break and the fragments remain viable and function as separate entities. Thus, the series is ascending, and like polyploidy, aneuploidy in the form of agmatoploidy, produces variation in plants and speciation."

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50452. DAVIES, J. L. The geography of the gray seal. (Journal of mammalogy, Aug. 1957. v. 38, no. 3, p. 297–310, tables, maps.) 45 refs.

A survey of the distribution of *Halichoerus grypus* (Fabricius) and biological factors affecting it. Three population groups, totalling some 50 thousand head, were found to exist: one in the Gulf of St. Lawrence; a second in the British Isles, Faeroes, Iceland, Norway and the White Sea region; a third in the Baltic. The three groups are isolated from each other not only geographically but also physiologically and in behavior, development and morphology. The movement of the seals within each group is mainly connected with feeding and breeding.

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50453. DAVIES, J. L., *and* **E. R. GUILER.** A newborn piked whale in Tasmania. (Journal of mammalogy, Nov. 1958. v. 39, no. 4, p. 593–94.) 8 refs.

Description of a fetal or newborn specimen of *Balaenoptera acutorostrata* Lacépède, 216 cm. long, with data on morphometry, anatomy, color. This is the first authentic record of this species for Tasmania. Its condition suggests that the young of this form are born in June or July. ***Copy seen:*** DI.

50454. DAVIES, J. L. The Pinnipedia; an essay in zoogeography. (Geographical review, Oct. 1958. v. 48, no. 4, p. 474–93, maps.) 28 refs.

Presents evidence from a variety of sources, indicating the cold water, specifically arctic, origin of these mammals. Supplementing this with geological evidence, a middle or late Eocene Arctic Sea is assumed most likely to have been the area of their early development and appearance. Sea lions, walrus, and several seals are considered in turn. Their subsequent spread through all the cold seas and further development are reconstructed and their present regional geography outlined. ***Copy seen:*** DLC.

50455. DAVIES, J. L. Pleistocene geography and the distribution of northern pinnipeds. (Ecology, Jan. 1958. v. 39, no. 1, p. 97–113, illus., table, maps.) 24 refs.

An attempt to explain present-day distribution of these pinnipeds (seals, sea lion, walrus) by happenings during the Pleistocene, specifically, by the periodic expansion and contraction of the polar sea and glacier ice. Expansion of the ice caused splitting and isolation of seal populations and formation of new forms, etc. Contraction acted in an opposite sense. The last two glacial ages, but especially the last one are considered responsible for the present distribution of seals.

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50456. DAVIS, G. C. A monograph of the tribe Bassini. (American Entomological Society. Transactions, 1895. v. 22, p. 17–30.)

Contains a systematic annotated list of 29 species of these hymenopters, including *Zootrephes frigidus* from the Hudson Bay region. ***Copy seen:*** DA.

50457. DAVIS, M. M. Frost damage to roads; certain design characteristics

help control the harmful effects of frost action. (Engineering and contract record, Oct. 1957. v. 70, no. 10, p. 108–111, illus.)

Techniques for controlling the harmful effects of frost action on roads are reviewed. The process of freezing in various soils and procedures for determining their frost-susceptibility are outlined. Control measures include proper drainage, the removal of frost-susceptible soil layers, the installation of granular wedges adjacent to fixed drainage structures, the use of frost-resistant materials for base courses, and frost-proofing of susceptible soils. Diagrams are presented showing uniform and differential heaving and thawing as well as the types of ice formation in various soils.—From SIPRE.

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50458. DAVIS, M. M. Highway design and frost-susceptible soils. (Roads and engineering construction, Sept. 1957. v. 95, no. 9, p. 98+.) 5 refs.

Contains a general outline of procedures to control damaging effects of frost action on roads. Soil exploration to determine the degree of frost susceptibility before construction is stressed, and some simple preventative measures noted: proper drainage, removal of the frost-susceptible soil, placement of granular wedges adjacent to fixed structures, etc. Where frost-susceptible soil cannot be eliminated from the road construction, it should be kept four ft. below the final grade.

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50459. DAVIS, R. G. Amputation in frostbite. (Canadian Medical Association. Journal, Nov. 1957. v. 77, no. 10, p. 948–52, illus., table.) 6 refs.

A discussion "of basic principles involved in management" with information on degrees of frostbite and their gross and microscopic pathology; prophylaxis; first aid, therapy, amputation. Forty-three cases are reviewed and summarized. ***Copy seen:*** DNLM.

DAVIS, T., *see* Cremer, B., *and others.* Oxygen uptake of tissue . . . shivering . . . *1958.* No. 50377.

50460. DAVIS, T. NEIL, *and* **C. T. ELVEY.** Construction of an all-sky camera. (College, Alaska, Oct. 1955.) 43 p. incl 28 p. illus., diagrs. (Alaska. University. Geophysical Institute. Research report no. 2.)

Contains a detailed report on the construction of equipment employed at College and Point Barrow for recording stable or slowly moving auroral forms. The equipment consists essentially of a 16-mm. movie camera equipped for time-lapse photography which views the entire sky in a convex mirror. Several schematics showing construction details are included. ***Copy seen:*** CaMAI.

50461. DAVIS, T. NEIL. Preliminary report on the Alaskan earthquake of April 7, 1958. (American Geophysical Union. Transactions, Oct. 1958. v. 39, no. 5, p. 941–42, map.)

Reports field investigation of Apr. 10, in the region of the epicenter, fixed at 65°45′ N. 155°30′ W., near Huslia on the Koyukuk River. Severe breakage of lake and river ice (approx. 3 ft. thick at the time) and many ground cracks and mud flows were observed in a 3 x 35 mi. zone. The shock was of Richter magnitude 7.0–7.5; the area over which the main shock was felt with an intensity of V or greater on the Modified Mercalli scale is in excess of 100,000 sq. mi.

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DAVIS, T. NEIL, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

50462. DAVIS, THOMAS R. A., *and* **F. T. ELKINS.** Cold weather test of the evacuation bag. (Military medicine, Feb. 1957. v. 120, no. 2, p. 125–29, illus.) 6 refs.

Report on tests of the currently used evacuation bag, with methods of thermal balance. The tests showed that the bag is unsuitable for transporting casualties on the H13 helicopter in arctic and subarctic conditions. Wind chill is apparently the main factor in the cooling effect. ***Copy seen:*** DNLM.

50463. DAVIS, THOMAS R. A., *and others.* Shivering and non-shivering thermogenesis in man. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 33.) *Other authors:* D. R. Johnston *and* F. C. Bell.

Shivering in subjects exposed to 13° C. was constant as to time of start and to the quantity produced at any one time. The intermittent nature of shivering was not reflected in changes of O_2-consumption and skin or rectal temperature.

Copy seen: DLC.

DAVIS, THOMAS R. A., *see* Cullison, J. W., *and* T. R. A. Davis. The isolation of enteric pathogens at Barrow . . . *1957*. No. 50401.

50464. DAVIS, WILLIAM E. Climbs in the northern St. Elias Range. (Canadian alpine journal, 1958. v. 41, p. 24–29.)

Party of six climbed five unnamed peaks in St. Elias Range, Aug. 1957, and made a second attempt on Mt. Craig (approx. 62° N. 140°30′ W.). Equipment and supplies were air-dropped, including rubber life rafts for the return trip down the Klutlan and White Rivers to the Alaska Highway.

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50465. DAVISON, A. N., *and others.* The antagonism of reserpine hypothermia by iproniazid. (Experientia, Aug. 1957. v. 13, no. 8, p. 329–30, illus.) 7 refs. *Other authors*: A. W. Lessin *and* M. W. Parkes.

Report on experiments with mice. The hypothermic action of reserpine was reduced by prior administration of iproniazid, being completely abolished when the interval between the two drugs was 24 hrs. This action runs parallel with the inhibition of monoamine oxidase.

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50466. DAVYDOV, MITROFAN MIKHAĬLOVICH. Reki potekut vspîat'. (Nauka i zhizn', Jan. 1957. god 24, no. 1, p. 57–58, illus., maps.) Text in Russian. ***Title tr.:*** Rivers are to flow backwards.

Outlines plans for redirecting southward part of the Pechora, Severnaya Dvina, Onega and Mezen' waters to irrigate arid regions in European U.S.S.R. and to serve as source of hydro-electric power. Three variants in redirecting the waters are discussed, viz. to the Caspian, to the Black and Azov, or to all three seas.

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DAVYDOV, MITROFAN MIKHAĬLOVICH, *see also* Orlov, B. P. Problema Kaspiîa. *1957*. No. 53773.

DAVYDOV, V., *see* Babichev, V., *and* V. Davydov. Konferentsiîa . . . Komi ASSR. *1958*. No. 49463.

DAWBIN, W. H., *see* Brown, S. G. Migrations of humpback whales. *1957*. No. 49952.

50467. DAWSON, DONALD, *and* **E. HARDENBERGH.** Effect of rapid rewarming on tissue survival of frozen rabbit's feet. (Journal of applied physiology, Mar. 1958. v. 12, no. 2, p. 155–63, illus.) 18 refs.

Report on experiments which indicate that increasing the "time frozen" is less harmful than increasing the thawing time, and that rewarming in water of 43° C. increases tissue surival while that of 37° C. has no effect. At least three factors seem to contribute to cold injury: temperature during the frozen state, length of time frozen and temperature during thawing. ***Copy seen:*** DNLM.

DAWSON, E. YALE, *see* Mohr, J. L., *and others.* An arctic . . . kelp bed. *1957*. No. 53356.

50468. DAWSON, WILLIAM RYAN, 1927– , *and* F. C. EVANS. Relation of growth and development to temperature regulation in nestling field and chipping sparrows. (Physiological zoology, Oct. 1957. v. 30, no. 4, p. 315–27, illus., tables.) 23 refs.

A study of the very rapid growth in these two sparrows which amounted to 40% per day and was completed with parallel development in seven–eight days. In the first two days of life, both species were never warmer than 3° above the environment (within an ambient temperature range of 15° to 38° C.). Both withstood body temperatures of 15° C. for one hour without harm. Temperature control improved gradually and became complete at the age of seven days.

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50469. DAWSON, WILLIAM RYAN, 1927– . Relation of oxygen consumption and evaporative water loss to temperature in the cardinal. (Physiological zoology, Jan. 1958. v. 31, no. 1, p. 37–48, illus., table.) 31 refs.

A study made during the cold and warm season in a temperature range of −17° to 41.5° C. Thermal neutrality between late December and early April varied from 18° to 33° C. Below thermal neutrality O_2-consumption increased approximately 0.1 cc./gm./hr. for each degree of decrease in environmental temperature. Evaporative water loss was determined for late spring and early summer only.

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DAY, E. K., *see* Fournelle, H. J., *and others.* Experimental ground water pollution at Anchorage . . . *1957*. No. 50961.

50470. DAY, J. H., *and* A. LEAHEY. Reconnaissance soil survey of the Slave River Lowland in the Northwest Territories of Canada. Ottawa, Dept. of Agriculture, Experimental Farms Service, 1957. 44 p., illus., fold. map, tables.

Surveys Slave River alluvial lowlands (60°–61°31′ N. 111°30′–113°50′ W.), describing for each of ten soil series: profile characteristics of the upper three feet of soil, natural drainage, principal vegetative species, soil group, estimated total acreage, and arability for crops suitable to the area. Fifteen soil associations are mapped (4 mi.: 1 in.). Approx. 73% of the area is estimated as suitable for agricultural development.

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DAY, MARGARET, *see* Beaulnes, A., *and* M. Day. Effect of temperature on arrythmia in isolated . . . atria. *1957.* No. 49593.

50471. DEAN, WILLIAM GEORGE, 1921– . Human geography of the lower Albany River basin. (Geographical bulletin, 1957. no. 10, p. 55–75, illus., fold. map.) Summary in French.

Describes effects of the physical environment on the economic development, establishment of settlements and cultural patterns of this area (approx. 52° N. 83° W.) in Northern Ontario. The economy is mainly extractive, depending on furs, wood-pulp and timber. Development possibilities are limited. The Indians, who belong to the Albany band of the Crees, continue mostly to make their living from fur trading and retain much of their old culture. They are, however, in a stage of transition, and some of the younger ones are turning to other occupations and moving into the towns.

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DEANE, R. E., *see* Canada. Defence Research Board. Op. Hazen 1957. *1958.* No. 50061.

50472. DEANESLY, RUTH, *and* A. S. PARKES. Delayed development of grafts from frozen ovarian tissue. (Journal of endocrinology, Jan. 1957. v. 14, no. 4, p. xxxv–xxxvi.) 4 refs.

Rats receiving autografts of ovarian tissue frozen in glycerol-saline, glycerol-horse-serum or glycerol-egg-yolk and stored for one week or one month at −79° C. showed vaginal cornification in one to eight months after implantation, more than half of the grafts becoming active in over 12 weeks following implantation. The delay suggests severe damage by freezing, the oocytes being mostly affected, as subsequent microscopic examination showed.

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50473. DEANESLY, RUTH. Egg survival in immature rat ovaries grafted after freezing and thawing. (Royal Society of London. Proceedings, ser. B. 1957. v. 147, no. 928, p. 412–21, illus., tables.) 17 refs.

Immature ovaries from rats 1–2 weeks old, frozen and kept at −78° C. and then rapidly thawed, showed a heavy loss of eggs after being subcutaneously grafted. Variations in freezing techniques did not lead to substantial egg survival. Similarly treated ovaries showed wide variation as grafts.

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DEARBORN, CURTIS HOWARD, 1912– , *see* Babb, M. F., *and* C. H. Dearborn. Performance . . . potato varieties . . . Matanuska . . . *1957.* No. 49462.

DEARBORN, CURTIS HOWARD, 1912– , *see* Laughlin, W. M., *and others.* Fertilizers . . . *1958.* No. 52678.

50474. DEARDEN, J. C. A stranding of killer whales in Newfoundland. (Canadian field-naturalist, Oct.–Dec. 1958. v. 72, no. 4, p. 166–67, table.)

A school of *Orcinus orca* was stranded at New Melbourne, Trinity Bay (48°02′ N. 53°14′ W.). Five of the whales were 20–22 ft. in length, the other two 12–15 ft.; sex and measurements are given in the table.

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50475. DEBABOVA, M. Truzheniki taĭgi. (Okhota i okhotnich'e khoziĭstvo Mar. 1957, no. 3, p. 3, illus. on insert.) Text in Russian. ***Title tr.:*** Toilers of the taiga.

Photographs of scenes from the life of hunters in various taiga and tundra regions, including the Anadyr' and Podkamennaya Tunguska basins, with brief notes.

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DE BAKEY, MICHAEL ELLIS, 1908– , *see* Moyer, J. H., *and others.* Hypothermia, 1; effect on renal . . . dog and man . . . *1957.* No. 53429.

DE BAKEY, MICHAEL ELLIS, 1908– , *see also* Sanders, F., *and others.* Effects

of hypothermia on experimental . . . pneumococcal infection . . . *1958.* No. 54540.

50476. DEBETS, GEORGIĬ FRANTSEVICH. Antropologicheskie issledovaniia alarskikh buriat. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1947. vyp. 4, p. 58–60.) 3 refs. Text in Russian. ***Title tr.:*** Anthropological investigations of the Alar Buryats.

Compares the physical anthropology of the Buryats living west of the Angara River to that of the reindeer-herding Chukchis and Eskimos, and analyzes their affinities and dissimilarities. Author sees no reason for attributing to Buryat influence, the stronger Mongoloid type of the Chukchis which distinguishes them from the Eskimos; but suggests either the Chukchis' mixture with some other (Mongoloid?) people, or a development of pedomorphic traits by the Eskimos.

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50477. DEBETS, GEORGIĬ FRANTSEVICH. Antropologicheskie tipy naseleniia SSSR i nekotorye problemy ėtnogeneza. (*In:* Ėtnograficheskoe soveshchanie, 1956. p. 62–67.) Text in Russian. ***Title tr.:*** Anthropological types of the population of U.S.S.R. and some problems of ethnogeny.

Divides the population of the Soviet Union into two main anthropological classes, the Europoid and the Mongoloid (central Asiatic, Baykal and Arctic), and a third transitional, the Eurasians, which include the Ugric or Ural-Lappish group. The racial affinities of existing sub-groups are discussed, including: the Paleoasiatics (closer to the Eskimos, Pacific Mongoloids and American Indians than to the Siberian continental Mongoloids), the Evenki-Tungus (closer to the Yukaghirs than to the Turkic Mongolians) and the Yakuts (closer to the Turkic Mongolians than to the Evenki).

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50478. DEBETS, GEORGIĬ FRANTSEVICH. O printsipakh klassifikatsii chelovecheskikh ras; po povodu stat'i V. V. Bunaka *Chelovecheskie rasy i puti ikh obrazovaniia.* (Sovetskaia ėtnografiia, 1956. no. 4, p. 129–42.) Refs. Text in Russian. ***Title tr.:*** Principles of race classification; in reference to V. V. Bunak's paper *Human races and their formation.*

Disagrees with Bunak's (q.v.) divisions of mankind into major and minor races, as well as on the period (neolithic) of their formation: e.g., America was settled in the neolithic and mesolithic (or possibly earlier) age by a race already separate and defined; the Lapps cannot be classified as Europeans but belong, together with the Ob' Ugrians (Oystyaks and Voguls), to a proto-Asiatic race.

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50479. DEBETS, GEORGIĬ FRANTSEVICH. Opyt graficheskogo izobrazheniia genealogicheskoĭ klassifikatsii chelovecheskikh ras. (Sovetskaia ėtnografiia, 1958. no. 4, p. 74–94, fold. graph.) Refs. Text in Russian. ***Title tr.:*** An attempt at graphic representation of the genealogical classification of human races.

Includes (p. 86–88) an anthropological characterization of the Ural-Laponoid (Lapps, Ostyaks, Voguls, etc.) and the Mongoloid races (Eskimos, Aleuts, Golds, Tungus, etc.). The schematic genealogical tree divides mankind into three major races (Negro-Australoids, Europoids, and Mongoloids); the arctic sub-race (Eskimo, Aleut, and Kamchadal types) is shown as a derivative of Asiatic and American branches of the Mongoloid race; but the Kamchadal type is related also to the Baykal sub-race, in its turn an outcrop of the Asiatic branch. The Laponoid and Yeniseian types are figured as descendants of the Ural-Laponoid sub-race which is rooted in the Northern branch of the Europoid and the Asiatic branch of the Mongoloid races (cf. No. 47643, 49998). An editorial summary (p. 93–94) of the Bunak-Debets polemics on race formations is appended.

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DEBETS, GEORGIĬ FRANTSEVICH, *see also* Chard, C. S. Physical types . . . Amur-Sakhalin . . . *1955.* No. 50177.

DEBETS, GEORGIĬ FRANTSEVICH, *see also* Gantskaia, O. A., *and* N. IA. Merpert. Issledovaniia sovetskikh arkheologov . . . *1958.* No. 51079.

DEBETS, GEORGIĬ FRANTSEVICH, *see also* Gantskaia, O. A. Sessii . . . issledovaniĭ 1957 g. *1958.* No. 51080.

DEBETS, GEORGIĬ FRANTSEVICH, *see also* Levin, M. G. Polevye issledovaniia . . . 1946 g. *1947.* No. 52790.

DEBETS, GEORGIĬ FRANTSEVICH, *see also* Levin, M. G. Polevye issledovaniia . . . 1947 g. *1948.* No. 52791.

DEBEȚS, GEORGIĬ FRANȚSEVICH, *see also* Levin, M. G. Polevye issledovaniĭa . . . 1948 g. *1949.* No. 52792.

DEBEȚS, GEORGIĬ FRANȚSEVICH, *see also* Zolotarevskaĭa, I. A. Rabota Instituta Étnografii . . . 1957 g. *1958.* No. 56242.

DECAUD, J., *see* Bargeton, D., *and others.* Échanges de chaleur de la main. *1958.* No. 49542.

50480. DEDOK, T. A., *and* **G. E. CHERNIĂK.** Kamennougol'nye otlozheniĭa verkhov'ev reki Verkhneĭ Taĭmyry. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. InformaȚsionnyĭ bŭlleten', 1958. vyp. 11, p. 20–22.) Text in Russian. ***Title tr.:*** Carboniferous deposits on the upper course of the Verkhnyaya Taymyra River.

Reports results on 1958 field work along the Verkhnyaya Taymyra upstream from the Fala-Bigay River (approx. 73° 30′ N. 94° E.). From investigated cross-sections, lower and middle parts of Carboniferous strata are distinguished and subsequently divided into series. For each series, thickness, lithologic and faunal, mostly brachiopod, characteristics are given. The newly collected material is said to help identify more precisely the border between Carboniferous and Permian deposits. ***Copy seen:*** DGS.

DEE, T., *see* Welch, B. E., *and others.* Energy requirements . . . subarctic bivouac. *1957.* No. 55983.

50481. DEGE, WILHELM, 1910– . Im Vorfeld des Nordpols; Fahrten und Abenteuer auf Spitzbergen. 3. Aufl. Freiburg, Herder, 1953. 214 p. 32 plates, 3 text maps. Text in German. ***Title tr.:*** In the forefield of the North Pole; travels and adventures on Spitsbergen.

Chronological account of journeys to Vestspitsbergen in 1935, 1936, and 1938, primarily for geomorphic investigations. Small parties landed by the Norwegian supply ship *Lyngen*, with equipment and supplies, at isolated locations along the northwest coast, carried on summer field work, living in tents or trappers' cabins, and traveling locally by boat or afoot. Climatic conditions, supplies, plant and animal life observed on sea and land, people encountered etc., are reported in detail. Geomorphic descriptions are given on many localities, clear and black bulb thermometer readings are compared and plant microclimate discussed. Visits with veteran trappers, Longyearbyen, the Norwegian coal mines, the Eisfjord radio station, and Norwegian shipping services are described.

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50482. DEGERBØL, MAGNUS, 1895– . The extinct reindeer of East-Greenland, *Rangifer tarandus eogroenlandicus*, subsp. nov., compared with reindeer from other arctic regions. København, Ejnar Munksgaard, 1957. 79 p. illus., incl. 11 plates, map, diagrs., 12 tables. (Acta Arctica, fasc. 10.) 68 refs.

This reindeer died out about 1900, because of severe conditions, increasing attacks by wolves and finally some catastrophic winters. Skulls, skeletons, etc., indicate that it was small in size, about the same as *R.t. pearyi* and much smaller than the West Greenland reindeer *R.t. groenlandicus*. Like reindeer of other high arctic regions (*R.t. pearyi* and *R.t. platyrhynchus*), it tends to fairly short facial part and particularly protruding orbits. Special characteristics of the antlers are described. Only two skins are available: the coat is not so soft and fine, the skin not so soft and thin, and the winter coat not so pure white as in *R.t. pearyi*. It was present in northeast Greenland, but south of the Scoresbysund district, reindeer are found only in the Angmagssalik area. The Greenland mammalian fauna may be of American origin, having immigrated in post-glacial times. Before the subspecies *R.t. pearyi* was finally formed, American reindeer may have reached northwest Greenland, some going south, others to the north and east coasts. Since the effect of geographical isolation and natural selection is especially great in high arctic regions, there has been sufficient time for subspecific differentiation. ***Copy seen:*** DSI.

50483. DEGERBØL, MAGNUS, 1895– . Det uddøde østgrønlandske rensdyr. (Grønland, Jan. 1957, nr. 1, p. 11–21, illus.) Ref. Text in Danish. ***Title tr.:*** The extinct East Greenland reindeer.

Describes: Rangifer tarandus eogroenlandicus Degerbøl. Its southern limit the Angmagssalik area, the animal was last seen in 1899 by the Swedish expedition under Nathorst. Its disappearance is linked with the appearance of polar wolves in East Greenland and with the

unstable climate, particularly unfavorable during 1860–1900.

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50484. de LAGUNA, FREDERICA, 1906– . Geological confirmation of native traditions, Yakutat, Alaska. (American antiquity, Apr. 1958. v. 23, no. 4, part 1, p. 434.)

Comment on No. 54017: evidence of glacial movements discussed agrees with native tradition of Atna and Eyak-speaking Indians as told to this writer in 1952 and 1954, that Icy Bay and Yakutat Bay were once (before 1400) filled with ice; a village, established on Icy Bay following the ice recession of 1400, was overwhelmed by later advance of the Malaspina Glacier. ***Copy seen:*** DLC.

DELLA, PORTA, P., *see* Fumagalli, B., *and others.* Comportamento del cuore isolato . . . *1957.* No. 51027.

50485. DELPHAUT, J., *and* **M. LANZA.** "Gangliopléqiques" et résistance à l'agression par le froid chez la souris et le rat. (Journal de physiologie, 1957. t. 49, no. 1, p. 133–35, tables.) 3 refs. Text in French. ***Title tr.:*** "Gangliopleqics" and cold-resistance in the mouse and rat.

Three out of four ganglioplegics reduced survival of mice exposed to −16° C. Chlorpromazine did not completely arrest the discharge of adrenalin in the cold-exposed rat, but its hypothermizing action coupled with that of the cold environment lead to rapid and critical fall in body temperature.

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50486. DELUCCHI, VITTORIO, *and* **M. W. R. de V. GRAHAM.** La revision du genre *Trichomalus* Thomson (1878); Chalcidoidea: Pteromalidae. (Beiträge zur Entomologie, Dec. 1956. Bd. 6, No. 5–6, p. 543–76, 4 illus.) 13 refs. Text in French. ***Title tr.:*** Revision of the genus *Trichomalus* Thomson (1878); Chalcidoidea: Pteromalidae.

Contains a critical treatment of this genus of chalcid flies, with a key to the species and redescriptions of the genus and 24 species, of which four are new. Many species are reduced to synonyms; only two of Thomson's original names, *punctiger* and *punctinucha,* are retained as valid; the first of this species is native to Lapland. ***Copy seen:*** DLC.

50487. DE MARIA, ALDO, *and* **A. SOLINAS.** L'emodinamica nella bradicardia sperimentale farmacologica in ibernazione artificiale. (Minerva chirurgica, Dec. 31, 1957. anno 12, no. 24, p. 1648–49, tables.) Text in Italian. ***Title tr.:*** Hemodynamics of experimental pharmacological bradycardia during artificial hibernation.

Account of experiments with dogs made hypothermic to 24° C. Heart frequency, systolic and diastolic pressure, and conditions upon rewarming are analyzed and discussed. ***Copy seen:*** DNLM.

50488. DE MARIA, ALDO, *and* **V. BOCCARDELLI.** Osservazioni sperimentali sulla fibrillazione ventricolare con particolare riguardo all' ipotermia. (Cuore e circolazione, 1957. v. 41, no. 2, p. 80–102, illus. tables.) 78 refs. Text in Italian. Summary in English. ***Title tr.:*** Experimental observations on ventricular fibrillation with special consideration of hypothermia.

Account of eight groups of surgical experiments with 117 dogs. General and differential hypothermia was applied in part of the cases, as well as "hibernation." Ventricular fibrillation was frequent during body cooling, especially in "hibernation." It reverted readily to normal rhythm and it was possible to stop it repeatedly or for long periods during the same intervention. Ventricular fibrillation did not in itself produce irreversible damage, provided sufficient oxygenation of the cardiac muscles was maintained. ***Copy seen:*** DNLM.

50489. DEMENITSKAIA, R. M., *and* **N. N. MIKHAĬLOV.** Osnovnye rezul'taty geofizicheskikh issledovaniĭ na severe Srednei Sibiri. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958. p. 95–107.) Text in Russian. ***Title tr.:*** Main results of the geophysical investigations in north Central Siberia.

Reports geophysical prospecting for mineral resources and oil started in the Soviet Arctic in 1935 and carried on regularly since 1950. Aerial magnetic survey was carried out for a 1,320,000 km.^{2} area, a gravimeter survey for 300,000 km.^{2}, and seismic survey for 2,910 linear km. The Ust'-Yenisey region, Anabar-Khatanga interfluve and Ust'-Olenek district surveys are described in turn, with considerable detail. General geophysical reconnaissance was made in various localities of the Ural-Lena zone, especially in the Taymyr depression, Pay-Khoy, Polar Ural, the Yamal and Taz Peninsulas. Data ob-

tained are outlined, citing the structures identified. ***Copy seen:*** DGS.

50490. DEMENITSKAIA, R. M. Struktura zemnoĭ kory v Arktike. (Leningrad. Naucho-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958, vyp. 7, p. 42–49, diagrs., maps.) 5 refs. Text in Russian. ***Title tr.:*** Structure of the earth's crust in the Arctic.

Presents a schematic map of the thickness of the earth's crust in the Arctic and outlines its geotectonic structures, evaluates recent pertinent literature and comments on studies by I. Oliver, M. Ewing, F. Press, P. Byerly and others. Geophysical and bathymetric data are used to reconstruct major landforms of the Arctic Basin. A hypothetical cross-section of the earth's crust from Novaya Zemlya toward Alaska is presented. Its friable, granitic, basaltic and subcrustal molded layers are reviewed, and their regional distribution discussed.

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50491. DEMENITSKAIA, R. M. Zavisimost' moshchnosti zemnoĭ kory ot vozrasta skladchatosti. (Sovetskai͡a geologii͡a, June 1958. god 1, no 6, p. 3–23, illus., tables, text maps.) 81 refs. Text in Russian. Summary in English. ***Title tr.:*** Dependence of the thickness of the earth's crust upon the age of folding.

Examines the principles presently used in dividing the earth's crust into continental and oceanic areas, and presents schematic maps of earth crustal thickness based on geotectonic mapping and on gravity, seismic and other data. The sharp differences indicated in crustal thickness in continental areas are believed to correspond to the age of folding, with young folding where maximal thickness exists, and ancient folding, the shields, in regions of minimum thickness. Lesser thicknesses characterize the areas of seas and oceans. Hence: "data on alteration of the crust thickness of the globe, and the uniformity in distribution of cardinal uplifts on the bottom of the world ocean lead to the conclusion of the unity and inversion of the process of development of the whole earth crust in space and time." The arctic regions are included in the discussion, and diagram of dispersion waves through the Arctic is presented. ***Copy seen:*** DLC.

DEMENITSKAIA, R. M., *see also* Vakar, V. A.,*and others.* K voprosu o regional'nykh razlomakh . . . *1958.* No. 55708.

50492. DEMENT'EV, GEORGIĬ PETROVICH. K voprosu ob istorii fauny ptit͡s Sovetskogo Soi͡uza. (Moskva. Universitet. Uchenye zapiski, 1958, vyp. 197, Ornitologii͡a, p. 5–16.) 48 refs. Text in Russian. ***Title tr.:*** Problem of the history of avifauna in the Soviet Union.

General discussion of paleogeographic problems as reflected in the origin of the Soviet bird population. The present-day avifauna of the U.S.S.R. is represented by about 704 species, belonging to 25 orders, a little more than 8% of the world's birdlife. The arctic Eurasian birdlife is essentially similar to that of North America, but this similarity gradually disappears toward the southern regions. A division of the territory into zones and sub-zones, including an arctic zone with coastal, tundra and forest-tundra sub-zones, is proposed, and need is noted for further studies of the problem.

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DEMENT'EV, GEORGIĬ PETROVICH, *see also* Uspenskiĭ, S. M. Ptit͡sy . . . *1958.* No. 55683.

50493. DEMIN, I. D., Vli͡anie razreshai͡ushcheĭ sposobnosti radiolokat͡sionnoĭ stant͡sii na tochnost' ot͡senki splochennosti l'dov. (Problemy Arktiki, 1958. vyp. 3, p. 61–67, illus., diagrs.) 2 refs. Text in Russian. Translated into English by Valda Dreimanis, American Meteorological Society, for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force. Copy at CaMAI. ***Title tr.:*** Effect of the resolving power of a radar station on the accuracy of ice compaction evaluations.

Formulae for determining a radar's resolving power, of major influence on its ability to distinguish ice compactness, are derived and applied to a standard aircraft radar. The accuracy of the determinations depends largely on the distance and azimuth between aircraft and ice field; highest accuracy is obtained when the diameter of the ice floes and the space between them equal or exceed the linear value of the radar's resolving power.

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50494. DEMOKIDOV, K. K., *and others.* Geologicheskoe stroenie ostrovov Novoĭ Zemli i ostrova Vaĭgach. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut Arktiki. Geologii͡a Sovetskoĭ Arktiki, 1957, p. 23–57.) Text in Russian. *Other authors:* B. S. Romanovich, Ī͡U. S. Bush-

kanetś, G. D. Belĭakov. ***Title tr.:*** The geological structure of the Novaya Zemlya islands and of Vaygach Island.

Presents a full characterization of the relief, stratigraphy, volcanism, and tectonics of these islands, based on earlier explorations and on the investigations and geologic mapping since 1947. Scientists active in the recent work are mentioned. Special emphasis is on stratigraphy. Presence of coal and oil was not confirmed, but that of zinc, lead, gold, silver, copper, arsenic, antimony, nickel and vanadium is indicated, as well as non-metallic minerals: rock crystal, asbestos, rubble stone, and some building materials. Development possibilities are suggested for the rock crystal and fluorite.

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50495. DEMOKIDOV, K. K. O stratigraficheskom raschlenenii kembriĭskikh otlozheniĭ severa Sibirskoĭ platformy. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 67, Sbornik stateĭ po geologii Arktiki, vyp. 7, p. 3–12, fold. table.) 11 refs. Text in Russian. ***Title tr.:*** Stratigraphic separation of Cambrian depositis in the north Siberian platform.

Presents stratigraphic outline of deposits of the Lena-Olenek watershed, based on author's investigation in 1955 and on pollen analyses. The deposits are separated into Sinian and Cambrian systems and the Cambrian outlined in several formations and series, for which a diagram is presented.

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50496. DEMOKIDOV, K. K. Osnovnye cherty geologicheskogo stroeniĭa Leno-Olenekskogo raĭona. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 22–37, 2 tables.) Text in Russian. ***Title tr.:*** Basic features of the geological structure of the Lena-Olenek River region.

Results of investigation on the stratigraphy, volcanism and tectonics of the Lena-Olenek watershed. Stratigraphic description is presented for early Paleozoic, Paleozoic, Mesozoic and Cenozoic deposits. Special attention is given to the Cambrian and Jurassic deposits, which play the most important role in this region. Tabular outlines for the Cambrian (by author) and for the Jurassic (by N. S. Voronetś) are included. Volcanic activity occurred mainly in Proterozoic and Paleozoic time. Tectonic movements, their cycles and effects for the geology are discussed.

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50497. DEMOKIDOV, K. K., *and others.* Stratigrafiĭa i fat͡sii kembriĭa Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik stateĭ po geologii Arktiki, vyp. 5, p. 41–54, table.) 15 refs. Text in Russian. *Other authors:* N. E. Chernysheva, N. K. Pisarchik, *and* O. M. Nekrasova. ***Title tr.:*** Cambrian stratigraphy and facies of the Siberian platform.

Presents new and detailed stratigraphic division for Cambrian deposits and their facies distributed mainly in two regions of the Siberian platform: the southern occupying the upper courses of the Lena and Angara, and the northern the Olenek and Kotuy basins. The Lower Cambrian is divided into Aldan and Lena series, Middle Cambrian into Amga and Maya series. Single Upper Cambrian occurrences are also identified and described.

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DEMOKIDOV, K. K., *see also* Tkachenko, B. V., *and others.* Geologicheskoe stroenie . . . *1957.* No. 55460.

DEMPSEY, WILLIAM J., *see* Andreasen, G. E., *and others.* Aeromagnetic map . . . *1958.* No. 49302.

DEMPSEY, WILLIAM J., *see also* Zietz, I., *and others.* Regional geologic interpretation . . . *1958.* No. 56220.

50498. DEMUTH, HAL P. Tellurometer traverse surveys. Washington, D.C., 1958. 8 p. illus., 2 text maps. (U.S. Coast and Geodetic Survey. Technical bulletin no. 2.)

Contains brief description of the new instrument, designed to measure distances between two points by electronic methods, its two basic qualities: accuracy and portability. First model was received by the Coast and Geodetic Survey in June 1957. The instrument measures the time required for an energy pulse to travel from the master to the remote unit and return. This value is multiplied by a constant factor, the velocity of propagation, to obtain the distance. A measurement can be made in about 30 min. under normal weather conditions with trained operators. Results of two surveys, one in June 1957 on Atka Island in the Aleutians, are discussed. Field computations showed an accuracy of 1 in

18,830 over the total closed portion of the traverse of 77,226 m. The entire project, including establishment of 12 stations and closing the traverse, took a total of 14 working days.

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DENISON, M. E., *see* Jasper, R. L., *and others.* Comparison of tissue respiration . . . *1958.* No. 52050.

50499. DENISOV, V. D. Promyslovye okhotnich'i khozîaĭstva. (Okhota i okhotnich'e khozîaĭstvo, Feb. 1958. god 4, no. 2, p. 3–5, illus., port., table.) Text in Russian. ***Title tr.:*** Commercial hunting farms.

In recent years, nine "promkhozes" (promyslovye khozîaĭstva), hunting farms or preserves, managed as governmental undertakings, like state farms, were organized in the R.S.F.S.R. In 1957, the Council of Ministers of the R.S.F.S.R. ordered 94 new promkhozes to be set up during 1958–60 in the taiga regions, raising their total number to 103. Data on their distribution are given (p. 3); three are in Arkhangel'sk Province, 11 in Tyumenskaya Oblast', 13 in Krasnoyarskiy Kray and six in Yakutia. Some 10,500 regular (*shtatnye*) trained hunters are to replace the 40–50 thousand seasonal hunters operating hitherto. The best hunting areas are to be assigned to promkhozes, each of which will be responsible for hunting industry output and for wildlife conservation in its reserve. Fur farming will be promoted and increased effectiveness is expected in hunting fur and game animals. Closer supervision and control are envisaged for the hunting and trapping activities of kolkhozes in Yakutia, Kamchatka and Magadan Province, and in other regions of the far North. ***Copy seen:*** DLC.

50500. DENISOV, V. D. Vsemerno razvivat' zverovodstvo v raĭonakh Severa. (Karakulevodstvo i zverovodstvo, July–Aug. 1957. god 10, no. 4, p. 25–27.) Text in Russian. ***Title tr.:*** Develop in every possible way animal farming in the North.

Outlines arctic animal resources (fur, fish) and explains their limited nature. Achievements in reindeer and animal farming are noted; development of the latter is urged, with aim of increasing production of high-priced fur (arctic fox, ermine, etc.). The question of local food resources transport, etc., is also discussed.

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50501. DENISOV, V. D. Za razvitie okhotnich'e-promyslovogo khozîaĭstva severa. (Okhota i okhotnich'e khozîaĭstvo, June 1957. no. 6, p. 18–21, illus.) Text in Russian. ***Title tr.:*** Develop the commercial hunting in the North.

Reports decree of the Central Committee of the Party and of Council of Ministers of U.S.S.R. issued Mar. 16, 1957: "Measures for development of the economy and culture of the peoples of the North;" it points out shortcomings of the administration, and orders consideration of the actual conditions of life in economic planning for the North.

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50502. DENISOVA, L. V. K morfogenezu izvilistoĭ berezy. (Moskovskoe obshchestvo ispytateleĭ prirody. Bûlleten', n. ser., otd. biol., Sept.–Oct. 1958. v. 63, no. 5, p. 71–76, 5 illus., table.) 5 refs. Text in Russian. Summary in English. ***Title tr.:*** The morphogenesis of the tortuous birch.

Presents results of study of *Betula tortuosa* in the Khibiny Mts. of Kola Peninsula, where the formation of the multitruncal type was observed. Annual growth falls sharply in this tree when over 30 years old; the trunk decays after 20 or 30 years and is replaced by a number of small trunks resembling shoots. The curved shape of the trunk results from the main trunk's decay and replacement by a side branch, also from mechanical injury. ***Copy seen:*** DLC.

50503. DENMARK. GEODAETISK INSTITUT. Bulletin of the Seismological Station Nord, 1957. Copenhagen, 1958– in progress. 8 p.

Contains seismological readings from this station (81°36′ N. 16°41′ W.) North Greenland; lithologic foundation marly shale, height above sea level 35 m.

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50504. DENMARK. GEODAETISK INSTITUT. Bulletin of the Seismological Station Scoresbysund. Copenhagen, 1928– in progress. Issued yearly from 1948 (earlier irregularly) in approx. 10–20 pages, large 4to.

Contains seismological readings from this East Greenland station at 70°29′ N. 21°57′ W.; its lithologic foundation gneiss, height above sea level 69 m. The station was erected during the winter 1927–28. ***Copy seen:*** SPRI.

50505. DENMARK. METEOROLOGISKE INSTITUT. Havets overfla-

detemperatur i det nordlige Atlanterhav og Davis Straede, 1956. (*In its:* Nautisk-meteorologisk årbog, Nautical-meteorological annual, 1956, *pub.* 1957. 12 charts.) Text in Danish and English. ***Title tr.:*** Sea surface temperatures in the North Atlantic Ocean and Davis Strait, 1956.

Contains chart for each month, showing surface temperatures with mean isotherms. (° C.) for the North Atlantic, Denmark Strait, Labrador Sea, and Davis Strait. Number of observations per degree square is shown. For previous years, except for 1940–1944, see No. 39507–39509. ***Copy seen:*** DWB.

50506. DENMARK. METEOROLOGISKE INSTITUT. Magnetisk årbog. 2den del: Grønland, 1926/27– . København, 1944– in progress. Issued yearly in approx. 40 pages., tables, large 4to. Text in French. ***Title tr.:*** Magnetic yearbook, part 2: Greenland.

Contains reports on observations at the magnetic observatory at Godhavn (69°14′04″ N. 53°31′03″ W.) West Greenland, opened in 1926. ***File seen:*** DGS.

50507. DENMARK. METEOROLOGISKE INSTITUT. Summaries of weather observations at weather stations in Greenland 1949–1953. Charlottenlund, 1958. 113 p. tables, diagrs. (Meteorological ICAO statistics.)

Contains tabulation of results of observations made at 13 stations, during all or part of the period 1949–1953. For all stations, number of simultaneous occurrences of specified visibility ranges of base of cloud, number of occurrences of fog, precipitation and drifting snow, and frequency of surface winds in percent, are listed for each month and for the period. Number of occurrences of specified surface temperatures is noted for three stations. Contents table gives location, elevation and index number. ***Copy seen:*** DN–HO.

50508. DE PERCIN, FERNAND. Some observations of the effect of direct and snow-reflected solar radiation on exposed and shielded thermocouples. Natick, Mass., Apr. 1958. 5 p. illus., diagr., table. (U.S. Quartermaster Corps. Environmental Protection Research Division. Research study report RER–19.) 2 refs.

Results of investigation, Apr. 17 and 22, 1957, at Fort Greely, Alaska, during times of relatively low elevation of the sun and with a prevailing snow cover. Equipment and conditions of exposure are given and data tabulated including temperature, solar radiation, wind and cloudiness. Exposed thermocouples were affected by solar radiation, recording temperatures higher than shielded instruments, but the effect of insulation upon small- (36 and smaller) gauge thermocouples is considered insignificant in arctic or subarctic regions. 36- and 20-gauge thermocouples are evaluated and the latter, shielded, is recommended for long-period use in cold regions. ***Copy seen:*** CaMAI.

50509. DEPOCAS, FLORENT, 1923– . Chemical thermogenesis in the functionally eviscerated cold-acclimated rat. (Canadian journal of biochemistry and physiology, July 1958. v. 36, no. 7, p. 691–99, illus.) 16 refs.

A study on the effects of functional evisceration on O_2-consumption by rats acclimated at 30° and 6° C. and then anesthetized or curarized and exposed to 6° C. The variegated experiments lead to the conclusion that the presence of abdominal viscera is not essential "for the manifestation of chemical thermogenesis" in the cold-acclimated rat.

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50510. DEPOCAS, FLORENT, 1923– , *and others.* Energy metabolism of the white rat after acclimation to warm and cold environment. (Journal of applied physiology, May 1957. v. 10, no. 3, p. 393–97, illus., table.) 12 refs. *Other authors:* J. S. Hart *and* O. Héroux.

Report on heat production over a temperature range of −36° to 30° C. in heat-acclimated (I) and cold-acclimated (II) adult male rats. Heat production of II was linearly related to temperature between −36° and 20° C. and was always higher than in I. Heat balance of I and II at −15° C. showed that body cooling in I was caused by failure to produce enough heat to balance its loss. During cold exposure II reached a maximal metabolic rate at temperatures lower than those at which I reached its maximum.

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50511. DEPOCAS, FLORENT, 1923– , *and others.* Studies on glucose metabolism of warm and cold acclimated rats at −5° C. (Revue canadienne de biologie, Apr. 1957. v. 16, no. 1, p. 83–95, illus. table.) 13 refs. *Other authors:* G. K. MacLeod *and* J. S. Hart.

Account of exploratory experiments with animals injected uniformly labeled

C^{14}-glucose (U–C^{14}-glucose). Blood glucose, respiratory CO_2 and liver and muscle glycogen specific activities were subsequently measured at different times. The pattern of exhalation of $C^{14}O_2$ and the distribution of C^{14} in the carcass were also studied. "Certain consistent differences" between warm and cold acclimated rats, especially in exhalation of $C^{14}O_2$ were noted. ***Copy seen:*** DLC.

50512. DERBIKOV, I. V. Élementy tektoniki Uralo-Sibirskoĭ geosinklinal'noĭ oblasti. (Akademiîa nauk SSSR. Zapadno-Sibirskiĭ filial. Gornogeologicheskiĭ institut. Trudy, 1956, vyp. 15, p. 21–25, 2 fold. maps, cross-section.) 6 refs. Text in Russian. ***Title tr.:*** Elements of tectonics of the Ural-Siberian geosyncline zone.

Presents preliminary results on geological interpretation of tectonics of Pre-Mesozoic underlying strata based on geophysical, mainly aeromagnetic, survey recently carried out by the author and other scientists of the West Siberian geophysical trust. The scope of the survey is described. The Ural-Siberian folded zone was studied up to 62° N. Achieved results are presented on two maps, which include the entire arctic zone from the Ural in the west to the Lena in the east. The first map reviews the geology and geotectonics of the Ural-Siberian syncline, and the second, the axes of ridges and depressions of the Pre-Jurassic underlying. The text explains these maps. This preliminary presentation is said to change substantially the view hitherto held from previous investigations.

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50513. DERBYSHIRE, EDWARD. Glacio-geomorphological research in the Howells valley and the watershed district of central Quebec-Labrador. (Arctic, 1958. v. 11, no. 3, p. 189–91.)

Discusses results of field studies during summer 1958. Well-developed subglacial drainage systems, evidence of marginal drainage down to present water-levels and the abundance of thick till deposits throughout the Howells valley (54°44′–55°18′ N.) are noted. The notion of a late-glacial lacustrine phase is dismissed in favor of occupation of the valley by a dwindling ice-mass. The same is true of neighboring valleys investigated. Well-developed drift tails throughout the western part of the area indicate final movement of ice from the south-southeast to north-northwest.

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50514. DERBYSHIRE, EDWARD. The identification and classification of glacial drainage channels from aerial photographs. (Geografiska annaler, 1958. årg. 40, häfte 3–4, p. 188–95.) 10 refs.

Discusses use of air photographs to identify and classify channels of fluvioglacial origin, its advantages and limitations. The form such channels assume on the ground is compared with their appearance on air photographs. The latter are required at comparatively large scale for positive recognition and classification; the scale 1 in. =1,000 ft., that of the Knob Lake area photos used in this study, is the minimum for detailed field and laboratory work of this nature. Three types of drainage channels can be recognized with some certainty on air photographs: lateral or "pro-glacial," subglacial chutes, and sublateral. Some indicators (11 characteristics of lateral drainage channels) are listed as those most reliable; but for positive identification field work is advised in doubtful cases.

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50515. DERIŪGIN, KONSTANTIN MIKHAĬLOVICH, 1878–1938. Bentos èstuariîa r. Leny. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1932. vyp. 15, p. 63–66, map.) Ref. Text in Russian. Summary in German. ***Title tr.:*** Benthos of the Lena estuary.

Report on the benthos collected by P. K. Khmyzhnikov at 12 stations whilst on an upstream journey in 1926. The material contained typical estuarine forms with some local elements. Temperature and salinity are also noted.

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50516. DERIŪGIN, KONSTANTIN MIKHAĬLOVICH, 1878–1938. Fauna Belogo moriîa i usloviîa ee sushchestvovaniîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1928. vyp. 7–8, p. 1–511, illus., tables, maps.) Approx. 350 refs. Text in Russian. Summary in German (p. 446–80). ***Title tr.:*** Fauna of the White Sea and its life conditions.

A comprehensive biological and hydrographic study based largely on explorations conducted during 1922–1926 by the

State Hydrological Institute and the Institute for Exploration of the North with the *Murman*. Derîugin himself carried out the work with his colleagues and students. These investigations are outlined year by year (p. 10–34) with an introductory account (p. 1–9) of the topography and history of the White Sea. Results of the hydrological and biological investigations of 1922 and 1923 are presented (p. 35–89): temperature, chlorinity, salinity, etc., with depth; benthonic forms collected at stations, and depth and bottom character of them. Chap. 5 (p. 90–181) covers the hydrography of the White Sea: thermic conditions and salinity, oxygen and CO_2, pH, transparency, ice, currents. The bottom deposits are outlined (p. 182–97). An extensive treatment of the fauna (p. 198–362) reviews past faunistic research and continues with descriptions of the forms collected (in taxonomic order, from protozoans to mammals), including notes on occurrence, geographic distribution, taxonomic position, etc. The general characteristic of this fauna and its negative traits are outlined. Phyto- and zooplankton collected, its character, origin, etc. (p. 363–78), and the seaweeds (p. 379–82), are dealt with briefly. Zonation and ecological aspects, from the littoral down to the "pseudoabyssal" are discussed (p. 383–426). Quantitative aspects of the benthos are presented and zonation of the area is dealt with (p. 427–40) on the basis of the benthonic population. Finally the geographic origins of the studied fauna are considered, and an alphabetic list appended of the names of species and genera described, some 1,500 forms. ***Copy seen:*** DLC.

50517. DERÎUGIN, KONSTANTIN MIKHAÏLOVICH, 1878–1938. Gidrobiologicheskie issledovaniîa u Novoĭ Zemli. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1927. vyp. 4, p. 5–16, map.) 2 refs. Text in Russian. Summary in German. ***Title tr.:*** Hydrobiological investigations at Novaya Zemlya.

Shallow waters (down to 25–30 m.) of Matochkin Shar and the southwest coast were studied during 1923–1926, chiefly temperature and salinity, to a lesser degree reaction, and gas content as well as tidal currents. In addition observations were made on ecological problems and such of ornithology, ichthyology, general geography, etc. The warm character of the west coast is noted together with the northward advancement of cod, etc.

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50518. DERÎUGIN, KONSTANTIN MIKHAÏLOVICH, 1878–1938. Gidrologiîa i biologiîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1930. vyp. 11, p. 37–45.) 2 refs. Text in Russian. Summary in German. ***Title tr.:*** Hydrology and biology.

After reference is made to the relation between hydrography, especially temperature, and life in the sea, the author points to the recent warming of the Barents Sea and the biological changes thus brought about. The latter include penetration of northern Norwegian planktonic and benthonic forms into the Kola Fjord and the central Murman. Cod moved as far east as Novaya Zemlya with a corresponding benefit to fisheries.

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50519. DERÎUGIN, KONSTANTIN MIKHAÏLOVICH, 1878–1938. Iglokozhie i mollîuski iz moriîa Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1932. vyp. 15, p. 147–56, illus., tables, map.) 7 refs. Text in Russian. Summary in German. ***Title tr.:*** Echinoderms and molluscs from the Laptev Sea.

Description of 19 species of molluscs and two echinoderms, the latter so scarce because of the brackish condition of the area. A new species of mollusc *Bela amundseni* n. sp. is described in detail. As to the other forms, location of finds, nature of bottom, water temperature, geographic distribution, etc., are noted. The material was collected by P. K. Khmyzhnikov and A. Popov in 1926 and 1927. ***Copy seen:*** DLC.

50520. DERÎUGIN, KONSTANTIN MIKHAÏLOVICH, 1878–1938. Materialy po gidrologii i biologii moriîa Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1932. vyp. 15, p. 5–9, map.) Ref. Text in Russian. Summary in German. ***Title tr.:*** Materials on the hydrology and biology of the Laptev Sea.

As introduction to International Polar Year activities, Russian exploration of the Barents, White and Kara Seas, the northwest Pacific, also the Laptev and East Siberian Seas, is outlined. Expedi-

tions and research on these seas since 1926 are reviewed, in particular the *Polûrnaîa Zvezda* expedition of 1927–28, its difficulties and achievements.

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50521. DERÎUGIN, KONSTANTIN MIKHAÏLOVICH, 1878–1938, *and* **A. IVANOV.** Predvaritel'nyĭ obzor rabot po izucheniîu bentosa Beringova i Chukotskogo moreĭ. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1937. vyp. 25, p. 247–59, illus., map.) Text in Russian. Summary in German. ***Title tr.:*** Preliminary review of studies on the benthos in the Bering and Chukchi Seas.

An account based on the work of several expeditions active since 1929. A series of areas both in the shallow and deep sea are outlined and their more common forms listed. The distribution and occurrence of the latter are viewed as determined by the nature of the bottom, temperature, depth, etc.

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50522. DERÎUGIN, KONSTANTIN MIKHAÏLOVICH, 1878–1938. Raboty Tikhookeanskoĭ ėkspediîsii gos. gidrologicheskogo instituta v 1933 godu. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1935. vyp. 22, p. 5–24, tables, maps.) 4 refs. Text in Russian. Summary in German. ***Title tr.:*** Activities of the Pacific expedition of the State Hydrological Institute in 1933.

A report on investigations of three groups of this expedition, one of which under G. E. Ratmanov on the *Krasnoarmeets*, covered the Bering and Chukchi Seas (p. 17–24). Interesting results were obtained from the study of the "cold spot" in Anadyr Bay, and the effects of the hydrological conditions upon the plankton, benthos and the distribution of fishes were elucidated. Currents in the Bering Strait, ice conditions, and some hydrological as well as biological problems were also studied.

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50523. DERÎUGIN, KONSTANTIN MIKHAÏLOVICH, 1878–1938. Vvedenie v izuchenie Beringova i Chukotskogo moreĭ. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1937. vyp. 25, p. 5–9.) Text in Russian and German. ***Title tr.:*** Introduction into the study of the Bering and Chukchi Seas.

Requirements of the fishing industry and of shipping necessitate a thorough exploration of these little studied areas. Recent work of the State Hydrological Institute is reviewed, and its practical value appraised. The scientific importance of these explorations is also stressed. ***Copy seen:*** DLC.

DERLAGEN, N., *see* Boeré, L. A., *and others.* Hypothermia, its principles and biochemical disturbances. *1957.* No. 49803.

50524. DERRY, DUNCAN R. Joseph Burr Tyrrell. (Geological Society of London. Proceedings. Sept. 17, 1958. Session 1957–58, no. 1563, p. 130–33.)

Obituary of this noted Canadian geologist and explorer, 1858–1957. His trip to Baker Lake and Hudson Bay in 1894, which for many years provided the only information on parts of the area, and his several trips to the Yukon beginning in 1897 are mentioned among other activities. ***Copy seen:*** DGS.

DERZHAVIN, GAVRIIL ROMANOVICH, 1743–1816, *see* Épshteĭn, E. M. Étnograficheskie nablûdeniîa . . . *1958.* No. 50763.

DESGOFFE, CLAUDE, *d.*, **1955,** *see* Laverdière, C. Une des . . . lettres de Claude Desgoffe. *1957.* No. 52684.

50525. DESHERIEV, ÎUNUS DESHERIEVICH. Razvitie mladopis'mennykh îazykov narodov SSSR v sovetskoĭ ėpokhu. (Voprosy îazykoznaniîa, Sept.–Oct. 1957. god 6, no. 5, p. 18–30.) Refs. Text in Russian. ***Title tr.:*** The development of newly written languages of the peoples of U.S.S.R. in the Soviet era.

Describes the various alphabet projects based on Latin and Cyrillic to reduce Samoyed, Ostyak, Vogul, Yakut, Tungus, Chukchi, Eskimo, Kamchadal, etc., languages, to written form. Morphological, grammatical, lexical and other difficulties are noted. Some of the main language works used are listed. A written vernacular is stressed as essential for the development of local literature and elimination of illiteracy. ***Copy seen:*** DLC.

50526. DE SIMONE, S. Sul contenuto in bicarbonati nel vitreo di coniglio in condizione di luce e di oscurità. (Annali di ottalmologia e clinica oculistica, Dec. 1956. anno 82, no. 12, p. 661–64, table.) 17 refs. Text in Italian. ***Title tr.:***

Bicarbonate content of the vitreous body of rabbits under conditions of light and darkness.

Bicarbonates were determined by the manometric method of Warburg. No significant differences in bicarbonate content were found in the vitreous under conditions of the experiments.

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50527. DES MARAIS, ANDRÉ, 1919– . L'acide ascorbique dans l'acclimatation au froid. (Revue canadienne de biologie, June 1957. v. 16, no. 2, p. 189–248, illus. tables.) 80 refs. Text in French. ***Title tr.:*** Ascorbic acid in acclimatation to cold.

A review of the field, dealing in the main with the necessity of ascorbic acid for cold-acclimatization and the mechanism of action of this substance. The needs of cold-exposed rats, guinea pigs and monkeys in vitamin C are discussed and the fate of it in the cold-exposed organism traced. The effects of this vitamin upon the adrenal and its cortex, upon the hypophysis, the thymus and liver are reviewed as well as the effects on tissue metabolism in general. The relation between the thyroid and adrenal during cold stress are also discussed.

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50528. DES MARAIS, ANDRÉ, 1919– . Thyrotrophic hormone activity in hypophysectomized rats exposed to cold and receiving ascorbic acid. (Canadian journal of biochemistry and physiology, Nov. 1958. v. 36, no. 11, p. 1099–1104, tables.) 12 refs.

Exposure to cold (14° C.) or ascorbate treatment had no effect on the thyroid-thyrotrophic hormone relationship. Any effect of ascorbate treatment was apparently mediated through the circulating thyroid hormones.

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50529. DESMEULES, JEAN. Développements miniers au Nouveau-Québéc. (Revue canadienne de géographie, Apr.–Sept. 1957. v. 11, no. 2–3, p. 157–59, text map.) Text in French. ***Title tr.:*** Mining developments in New Quebec.

Notes discovery of large nickel deposits near Sugluk (62°18′ N. 75°23′ W.), Ungava Peninsula, to be investigated by International Nickel Co.; also of iron ore deposits near Mount Wright (52°45′ N. 67°21′ W.) where mining will start in spring 1957. First mining of taconite in the Leaf Lake-Payne Bay areas (approx. 59°–60° N. 70° W.) will start in 1958; after enrichment the ore will be sent via Hopes Advance to the future port of Rype Island south of Godthaab, southwest Greenland, for transshipment to Europe.

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50530. DETLING, LeROY ELLSWORTH, 1898– . The Pacific coast species of *Cardamine*. (American journal of botany, Feb. 1937. v. 24, no. 2, p. 70–76.)

Contains a generic description, key, and an annotated list of fourteen species and varieties, with descriptions, synonyms and distributional data. *C. oligosperma* var. *kamtschatica* n. comb. (type locality: Kamchatka Peninsula) occurring in Alaska and adjacent islands, is included.

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50531. DETTERMAN, ROBERT L., *and others*. Glaciation on the Arctic Slope of the Brooks Range, northern Alaska. (Arctic, 1958. v. 11, no. 1, p. 43–61, maps, illus., table.) 14 refs. *Other authors:* A. L. Bowsher *and* J. T. Dutro, Jr.

Reconstructs glacial history of the area (approx. 68°–69°30′ N. 147°–162° W.) on the basis of observations during 1944–1953 of the nature and extent of glacial deposits in the central part of the Range between Shainin and Itkillik Lakes and in the southern part of the Foothills Province from the Shaviovik River west to Etivluk River. Distribution is mapped and characteristics described of deposits from six glaciations for which a tentative chronological sequence is established: Anaktuvuk and Sagavanirktok of Pre-Wisconsin age; Itkillik and Echooka of Early Wisconsin; Alapah Mountain of Late Wisconsin; and Fan Mountain of Recent age. Terrace deposits and Pleistocene alluviations are mentioned.

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DEUTSCH, S., *see* Angelakos, E. T., *and others*. Sensitivity . . . hypothermic myocardium to calcium. *1957*. No. 49322.

50532. DEVOLD, FINN, 1902– . Fiskeridirektoratets sildetokt med M/S "Vartdal", 1949. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier 1949, *pub.* 1950, no. 7, p. 128–36, illus.) Text in Norwegian. ***Title tr.:*** The fisheries directorate's herring cruise aboard M/S *Vartdal*, 1949.

With aim to increase the herring catch,

their routes of travel, the plankton occurrence, and hydrographic conditions were studied, also the possibility of enlarging the area of pelagic herring fishery. Investigations were made between Norway, Jan Mayen, and Iceland, and localization of shoals was aided by radio reports obtained from fishing vessels. The herring off Jan Mayen were of the Norwegian species. At this location, changes in fish occurrence with changes in ocean temperatures should be determined over a period of years.

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50533. DEVOLD, FINN, 1902– . Rapport over tokter for sildeundersøkelser med "G. O. Sars" vinteren 1953–54. (Fiskets gang, May 27, June 3, 1954. årg. 40, nr. 21, p. 261–64, nr. 22, p. 275–78, 5 maps.) Text in Norwegian. ***Title tr.:*** Report of cruises for herring investigations aboard the *G. O. Sars* in the winter 1953–54.

Hydrographic investigations of the flow of arctic waters north of the Faroe Islands during the 1953–54 winter are discussed in connection with occurrence of herring and mackerel during the pre-spawning season. Echo hunting of fish concentrations was used. By December, fish assembled northwest of the Faroes and later moved toward the Norwegian coast. Further, seasonal investigations are necessary before relationship between dates, water temperatures, and fish movements can be established. ***Copy seen:*** DLC.

50534. DEVOLD, FINN, 1902– . Svalbard-Grønlandstoktet 1948. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier 1949, *pub.* 1950, no. 7, p. 103–109.) ***Title tr.:*** The Svalbard-Greenland cruise, 1948.

Exploratory cruises on cod banks off Spitsbergen, Bjørnøya, and Greenland are discussed. Sea-water temperatures on shallow banks are cold in early summer, and cod are generally caught below 100 fathoms. Norwegian fishermen interrupt their West Greenland fishing in July to deliver their take in Norway, and on return to Davis Strait find the fish in deeper water. To avoid this interruption when fishing is at its best (in July, with the fish at shallow depths as far north as Disko), a mother ship should be sent to collect the vessels' catch. ***Copy seen:*** DLC.

50535. DEVOLD, HALLVARD, 1898–1957. Trøndere på Ishavet i forrige århundrede. (Polarboken 1958, p. 128–32.) Text in Norwegian. ***Title tr.:*** Men from Troms on the Arctic Ocean during the last century.

Describes two successful crossings in small boats from north Norway to Spitsbergen in 1839 and 1893.

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50536. de VOS, ANTOON, *and* **A. T. CRINGAN.** Fur management in Ontario. (Canadian geographical journal, Aug. 1957. v. 55, no. 2, p. 62–69, 14 illus.)

Mean annual value of wild-fur catch in Canada, with approx. 47,000 trappers, is $15 million; Ontario: $4 million, from beaver, mink, otter, muskrat, etc. Indian trapping and the early fur trade, white men's trapping from latter 19th century and depletion of fur-bearers are outlined. Government moves toward conservation since 1925, the Registered Trapline System, objectives and development of fur management are treated in turn, with production statistics, and statement of need for research on fur-bearers.

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50537. DeWEESE, JAMES ARVILLE, 1925– , *and others.* Myocardial metabolism during hypothermia with caval occlusion and low flow coronary perfusion. (Surgical forum, 1958. v. 8, p. 298–302, illus.) 10 refs. *Other authors:* T. I. Jones *and* E. B. Mahoney.

Account of experiments with dogs cooled to a rectal temperature of 30.4° to 26° C. Changes in the coronary blood as to pH, bicarbonate levels, lactic acid, potassium, and glucose are outlined and the effects of the described perfusion summarized. ***Copy seen:*** DNLM.

50538. DIAMOND, MARVIN. Air temperature and precipitation on the Greenland Ice Cap. Wilmette, Ill., Oct. 1958. 9 p. 3 text maps, 6 tables. (U.S. Army. Corps of Engineers. Snow, Ice and Permafrost Research Establishment. Research report 43.) 17 refs.

"Mean annual air temperatures and precipitation on the Greenland Ice Cap, as estimated from snow profile studies and long-term meteorological records at coastal stations, have been used to prepare mean annual air temperature and mean annual precipitation charts for the Greenland Ice Cap. Melting of surface snow may occur at elevations of about 1,300 m. in North Greenland and up to 2,700 m. in South Greenland. The warming trend in the Arctic, as indicated by increases in mean annual air tem-

perature, may have occurred to a lesser extent on the ice cap than at sea-level coastal stations. Annual accumulation of precipitation is two or three times as great at 2,500 m. on the west side of the ice cap than at the crest. South of 66° N., precipitation may be about twice as great on the east side of the crest as on the west side." Data from two U.S. Air Force weather stations, Site 1 (1953–56) and Site 2 (1953–57); from Eismitte (1930–31), Station Centrale (1949–50) and from Northice (1952–54), and from six other ice-cap stations; from ten coastal stations, and from seven expeditions, were used.—From author's summary. ***Copy seen:*** CaMAI.

50539. DIAMOND, MARVIN, *and* **R. W. GERDEL.** Occurrence of blowing snow on the Greenland ice cap. Wilmette, Ill., Apr. 1957. 5 p., diagrs., tables. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–56, v. 2. SIPRE research report 25.) 2 refs.

Study of this phenomenon and its attendant restriction in visibility, based on U.S. Air Force data from Site 1 (July 20, 1953–Aug. 1954) and Site 2 (July 7, 1953–June 1956). Blowing snow occurs more than one-third of the time in this part of the icecap; most often in winter, least often in June-Aug., and commonly associated with winds of more than 20 knots. Periods of continuous blowing snow are usually less than 24 hrs. in duration, and nearly half less than 6 hrs. Relation between blowing snow and several meteorological elements is also discussed. ***Copy seen:*** CaMAI.

50540. DIAMOND, MARVIN. Precipitation trends in Greenland during the past thirty years. (Journal of glaciology, Mar. 1958. v. 3, no. 24, p. 177–80, diagrs.) 6 refs.

"The record of annual precipitation as obtained from stratigraphic studies on snow profiles in the interior of northern Greenland (200 miles east of Thule) made in 1954 by SIPRE personnel shows a decreasing precipitation trend since 1920 with the largest decrease occurring since 1932. A residual mass curve analysis of the data indicates that, in spite of large fluctuations in the accumulated precipitation, the decreasing trend may be considered valid over a period of several years."—Author's abstract. ***Copy seen:*** DGS.

50541. DIBNER, A. F. O vozraste verkhnepaleozoĭskikh otlozheniĭ Nord. vikskogo raĭona po dannym palinologicheskogo analiza. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958, t. 67, Sbornik statteĭ po geologii Arktiki, vyp. 7, p. 73–86, 2 plates, table.) 9 refs. Text in Russian. ***Title tr.:*** The age of Upper Paleozoic deposits of the Nordvik region according to data of pollen analyses.

Presents results of the author's investigation in 1950–56 on fossil spores and pollen in the Permian deposits of the Nordvik region. From 15 locations, 994 samples were examined. Distribution of spores and pollen in rocks of different lithological composition are outlined and various fossil plants, mostly of the families Anaceae and Podocarpaceae, indicated. Several series of Permian deposits are distinguished and described. Conclusions are made concerning the age of Permian deposits and the vegetation of the period is evaluated.

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50542. DIBNER, A. F. Sporovopyl'ĝevye kompleksy verkhnepaleozoĭskikh otlozheniĭ severovostoka Sibirskoĭ platformy i verkhov'ev Vilûĭ i ikh stratigraficheskoe znachenie. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statteĭ po paleontologii i biostratigrafii, 1958. vyp. 9, p. 76–98.) 7 refs. Text in Russian. ***Title tr.:*** The spore-pollen complexes of Upper Paleozoic deposits in the northeast of the Siberian platform and in the upper course of the Vilyuy, and their stratigraphic significance.

Presents results of 1949–57 investigation on stratigraphy and age determination of upper Paleozoic deposits with special attention to the dissected bore in the Olenek River region, near the town of Tyumyati (approx. 71°50′ N. 123°45′ E.) made by pollen analysis and its spectra. Of 492 samples studied, 102 were found with well-preserved spores and pollen. Two strata of tufaceous and two terrigenous series are distinguished and pollen spectra are described with identification of spore and pollen groups and their species. Comparison is made between the Tyumyati and Vilyuy region deposits. ***Copy seen:*** DGS.

50543. DIBNER, V. D. Geologicheskoe stroenie ostrova Viktoriĭa. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut

geologii Arktiki. Geologiia Sovetskoĭ Arktiki, 1957, p. 21–22.) Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** The geological structure of Viktoriya Island.

Outlines in brief the geology of this island (80°08′–80°10′ N. 36°32′–36°55′ E.) mentioning investigations by Nansen (1898), G. Horn (1930), M. V. Klenova (1932), and the author in 1953. The entire island is always ice-covered, except for a small area on Cape Klinovicha, where detritus with shells and algae was found. The surface deposits consist of dolomite and dolomitized organogenic limestones, stated by A. D. Miklukha-Maklaĭ, to be Carboniferous. There are also boulders of basalt, agate, chalcedony, quartzite and gneiss of glacial, probably, iceberg origin. The geological structure of the island, is closely related to that of Franz Josef Land. ***Copy seen:*** DLC.

50544. DIBNER, V. D. Geologicheskoe stroenie ostrovov tsentral'noĭ chasti Karskogo moria. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiia Sovetskoĭ Arktiki, 1957, p. 97–104.) Text in Russian. ***Title tr.:*** Geological structure of the islands in the central part of the Kara Sea.

Reviews the geology of 21 islands with a total area of 1,500 sq. km. The three largest of these islands are: Ushakova (390 km.²), Vize (288 km.²), and Isachenko of the Sergeya Kirova group (150 km.²); among the smaller are: Uyedineniya, Arkticheskogo Instituta islands, Izvestiy TSIK islands and others. They have been little explored geologically, only on short trips of M. M. Ermolaev, V. I. Vlodavets, R. L. Samoĭlovich, and others. A description of the stratigraphy, volcanism and tectonics of the islands is given. Coal has been found or indicated on the Sergeya Kirova Islands, Uyedineniya, Vize and Ushakova.

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50545. DIBNER, V. D. Geologicheskoe stroenie Zemli Frantsa-Iosifa. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiia Sovetskoĭ Arktiki, 1957, p. 11–20.) Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** The geological structure of Franz Josef Land.

Outlines the relief, stratigraphy, volcanism and tectonics of the archipelago, which consists of 132 islands, 16,510 sq. km. in area, 87% of it ice-covered. The article is based on an expedition in 1953 for the Institute of Geology of the Arctic and review of earlier literature. The geologic construction of the archipelago includes continental Rhaetian deposits of the Upper Triassic, marine deposits of middle Jurassic series, volcanogenic formations of the Lower Cretaceous, Quaternary sediments. As mineral resources, brown coal with transitions to bituminous, and Iceland spar are reported.

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50546. DIBNER, V. D. K voprosu o proiskhozhdenii rel'efa Urala v sviazi s problemoĭ poleznykh iskopaemykh, sviazannykh s mezokaĭnozoĭskimi otlozheniiami. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Mar.–Apr. 1957. t. 89, vyp. 2, p. 131–37, fold. table.) 27 refs. Text in Russian. ***Title tr.:*** Origin of the relief of the Ural, in connection with the problem of useful minerals relating to Mesozoic and Cenozoic deposits.

A succession of tectonic upheavals, movements and submersions and correlative processes of erosion and deposition during the Mesozoic and Cenozoic eras in the Ural and adjacent areas are outlined; and the formation of iron, aluminum, nickel, chromium, manganese ores and kaolin is discussed. Conclusion is reached that the useful minerals are located chiefly in meridional depressions; systematic reconnaissance drilling is suggested. Fold. table presents scheme of the tectonic history of the Ural.

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50547. DIBNER, V. D., *and* **L. A. CHAĬKA.** K voprosu ob istochnikakh snosa verkhnepaleozoĭskikh terrigennykh otlozheniĭ gor Byrranga. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958. vyp. 11, p. 38–48, cross-section, map.) 19 refs. Text in Russian. ***Title tr.:*** On the question of sources of dispersal of Upper Paleozoic terrigenous deposits of the Byrranga Mts.

Outlines the essentially carbonaceous formation of Lower-Middle Paleozoic age and the volcanogenic-terrigenic formation of Paleozoic-Triassic age of this mountain range of northern Taymyr Peninsula (73°–76° N. 92°–112° E.),

and considers the origin and sources of their accumulation. Stratigraphy and paleogeography of the region are discussed and compared with the Polar Ural and Pay Khoy. Two Paleozoic geosyncline zones are identified. The terrigenous stratum of the Byrranga Mts. is considered to have been brought from the west, specifically from the Yamal-Taz buried folded zone, whence also the similar dispersal stratum in the Northern Ural and Pay Khoy. This discovery may be of importance in studying coal and diamond occurrences.

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50548. DIBNER, V. D., *and* **N. G. ZAGORSKAIÂ.** Konusoobraznye kholmy arkticheskikh tundr. (Priroda, Apr. 1958. t. 47, no. 4, p. 90–93, illus.) Ref. Text in Russian. ***Title tr.:*** Cone-shaped hills in the arctic tundras.

Describes such hills observed in Franz Joseph Land, Severnaya Zemlya, Svalbard, and other regions of contemporary glaciation. From 1.5–2.0 m. to 20–30 (occasionally–100) m. in height, they consist of broken rock, conglomerate and gravel. Their form, location, and origin are considered. Their formation is traced to fluvio-glacial action: the materials of which they are composed accumulate in the process of firn formation; later by migration and thawing of firn on lower slopes, the rock debris is distributed in conical mounds. Some similarities are noted between these hills and eskers. ***Copy seen:*** DLC.

50549. DIBNER, V. D. Novye dannye o geologicheskom stroenii ostrova Viktoriiâ. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 59–60.) Text in Russian. ***Title tr.:*** New data on the geological structure of Viktoriya Island.

Gives the results of author's field investigation in summer 1953. The composition of dolomite rocks lying on the surface of Cape Klinovicha was studied and polished sections made. The organic forms are described. The age of these rocks is considered similar to that of the Vereya and Kashira series of the Russian platform, which belong to Middle Carboniferous. The geologic history and structure of Viktoriya Island is discussed. ***Copy seen:*** DLC.

50550. DIBNER, V. D. Novye dannye po stratigrafii mezozoĭskikh otlozheniĭ i geomorfologii severo-vostochnogo Taĭmyra. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik stateĭ po geologii Arktiki, vyp. 5, p. 15–22, illus., fold. map.) Text in Russian. ***Title tr.:*** New data on the stratigraphy of Mesozoic deposits and geomorphology of northeastern Taymyr.

Presents characteristics of types and forms of relief and stratigraphy of Mesozoic and Quaternary deposits in the Bikada-Nguoma River basin (approx. 74°50′–75°50′ N. 105°20′–110°05′ E.). The geologic structure and hydrographic net of the region are outlined. Lower and Upper Jurassic and Cretaceous deposits are reviewed and faunal characteristics given. Morphology of various structures is treated and summarized on map. ***Copy seen:*** DGS.

50551. DIBNER, V. D. Vozmozhnaiâ diapirovaiâ struktura v basseĭne reki Piâsiny. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik stateĭ po geologii Arktiki, vyp. 5, p. 134–38, maps.) Text in Russian. ***Title tr.:*** Possible diapir fold in the Pyasina River basin.

Describes a peculiar hillock, named Kruglyy, in the Pyra basin (approx. 71°45′–72°45′ N. 82°–86° E.), discovered by the author in an air-photo survey in 1952. Measurements of this hillock are given; its morphologic structure is described and magnetic anomalies characterized. The hillock is considered to be a diapir fold or, rather, a salt dome oil field. Further combined geologic and gravimetric study is urged.

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50552. DIBROV, V. E. K geomorfologii i istorii oledeneniiâ severo-zapadnogo poberezh'iâ zaliva Shelekhova. (Akademiiâ nauk SSSR. Izvestiiâ, seriiâ geograficheskaiâ, Sept.–Oct. 1958, no 5, p. 35–41, illus., text map.) 4 refs. Text in Russian. ***Title tr.:*** Geomorphology and the history of glaciation on the northwest coast of Shelekhova Bay.

Reports on the region between the Nayakhan and Shirokaya Rivers (approx. 62° N. 157°–159° E.) on the Okhotsk Sea coast. The predominant Mesozoic volcanic and sedimentary rocks, mainly folded by alpine-type block faulting, are described; present orography of the region is outlined. The occurrences of glacial cirques in the Gydan Ridge and the interfluve between the Kolyma basin

and the Okhotsk, are described and considered as signs of former glaciation. Evidence is noted of two glaciations of the alpine type, and the glacial activity for final shaping of local relief is studied. The existence of independent centers of glaciation on the slope of the Okhotsk is confirmed, against opinions to the contrary: such centers existed on some of the highest peaks of Gydan Ridge.
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50553. DICKIE, FRANCIS. Phantom of the icefloe. (Alaska sportsman, July 1957. v. 23, no. 7, p. 28–33, 43–44, illus.)

Reviews history of the Hudson's Bay Co. steamer *Baychimo,* abandoned in the ice off Point Barrow in 1931, later sighted and boarded several times in its drift, the last in 1937. ***Copy seen:*** DI.

DICKIE, GEORGE *d.* **1882.,** *see* Hooker, J. D. An account . . . plants . . . Walker . . . *1861.* No. 51803.

50554. DICKINSON, L. A. Castable elastomers based on diisocyanates and polyether glycols. (Rubber age, Oct. 1957. v. 82, no. 1, p. 96–101, tables, graphs.) 9 refs.

Laboratory investigations down to about −70° F. of elastomers based on commercial available glycols, found polypropylene glycols to be superior to polyethylene in low temperature service; only one elastomer, based on polytetrahydrofuran, was potentially better than butyl rubber. Castable elastomers with exceptionally low temperature properties may be formed by using hydroxy hydrocarbon-terminated silicone oils.
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DICKSON, B. A., *see* Crocker, R. L., *and* B. A. Dickson. Soil development . . . moraines . . . *1957.* No. 50388.

50555. DICKSON, JAMES GEVE, 1891– . Preliminary report on Alaska survey of forage plants and their diseases during summer of 1957. Palmer, Alaska Agricultural Experiment Station, 1957. 19 p., tables.

Reports on second summer's field investigations: weather (warm and dry contrasting with 1956 cool and wet); areas re-surveyed; new areas surveyed (Kuskokwim, lower Yukon, etc.); special range management problems (Big Delta Bison range, caribou and sheep ranges); problem of planting burned-out forests with economically valuable grasses; survey of summer legumes for forage, cover and soil improvement; proposed investigations. ***Copy seen:*** CaMAI.

50556. DICKSON, JOHN A. The effect of limb position on the vasodilator response to cold in the finger. (Journal of physiology, Jan. 1957. v. 135, no. 1, p. 93–97, illus.) 6 refs.

Account of observations on vascular response and heat elimination in the finger immersed in cold (0° to 4° C.) water at various positions of the arm. A progressive decrease in heat elimination during the cold vasodilatation was observed as the finger was raised from 4 to 55 cm. above the sternal notch. The decreased heat elimination, paralleling the fall in blood flow, can be attributed to reduction in perfusion pressure as the arm is raised. ***Copy seen:*** DNLM.

50557. DIEDE, G., *and others.* Motorfracht- und Fahrgastschiff "Finnmarken." (Schiff und Hafen, July 1956. Jahrg. 8, Heft 7, p. 563–79, illus., plates, diagrs.) Text in German. *Other authors:* H. Christiansen *and* J. Wätje. ***Title tr.:*** The cargo and passenger motor ship *Finnmarken.*

Describes in detail the construction, equipment, engine (3,150 HP diesel), and accommodations (205 passengers, crew of 60–65) of this new addition to the Bergen-Kirkenes coastal route. The ice-strengthened 2,189 br.t. ship was built by Werft Blohn & Voss AG, Hamburg, for Vesteraalen Dampskibsselskap, Norway. ***Copy seen:*** DLC.

50558. DIETRICH, GÜNTER. Bjørn Helland-Hansen. (Deutsche hydrographische Zeitschrift, Feb. 1958. Jahrg. 11, Heft 1, p. 36–37.) Text in German.

Obituary and brief biography of this noted Norwegian oceanographer (1877–1957), with bibliography of his major contributions. ***Copy seen:*** DN–HO.

50559. DIETRICH, GÜNTER. Die Meereskunde im Internationalen Geophysikalischen Jahr 1957–58 und der deutsche Beitrag. (Geographische Rundschau, Oct. 1958, Jahrg. 10, Heft 10, p. 366–73, 4 maps.) 4 refs. Text in German. ***Title tr.:*** Oceanography during the International Geophysical Year and the German contribution.

Outlines tasks of contemporary oceanography, the IGY program, and work of the research vessels *Anton Dohrn* and *Gauss* between southeast Greenland and

Iceland. *Maps* show the IGY program for 1957; Greenland-Iceland ridge; temperature and salinity Greenland-the Azores; potential bottom temperature in Denmark Strait and Irminger Current. Study is noted of East Greenland and Labrador Currents. ***Copy seen:*** DLC.

50560. DIETRICH, GÜNTER. The oceanic polar front in the waters round Greenland and Iceland in August 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 33–34, maps.) Ref.

Report on surface temperature and salinity, parts of the region dealt with synoptically. The so-called polar front was found to be very narrow, meandering, with the meanders following in their main direction the edge of the Greenland Shelf.
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50561. DIETRICH, GÜNTER. Ozeanographische Probleme der deutschen Forschungsfahrten im Internationalen Geophysikalischen Jahr 1957/58. (Deutsche hydrographische Zeitschrift, Apr. 1957. Jahrg. 10, Heft 2, p. 39–61, diagrs., maps.) 29 refs. Text in German. Summary in English and French. ***Title tr.:*** Oceanographic problems of the German research cruises in the International Geophysical Year 1957/58.

Outlines objectives of the IGY operation "Polar Front Survey," in which the German research vessels *Anton Dohrn* and *Gauss* are to participate. Two almost synoptic surveys of the North Atlantic between 40° N. and the ice limit are to be made; bottom topography, subsurface, deep-water, and bottom circulation will be studied. Areas and fields of observation are specified for both vessels. Background data, partly derived from their 1955–1957 research cruises off southeast Greenland and in Denmark Strait, are summarized. Several maps and profiles of topographic features, temperature and salinity distribution, etc. are provided.
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50562. DIETRICH, GÜNTER. Stratification and circulation of the Irminger Sea in June 1955. (International Council for the Study of the Sea. Annales biologiques, 1955, *pub.* 1957. v. 12, p. 36–37, illus.) Ref.

Analysis and discussion of temperature and salinity sections based on 126 stations of the R/V *Anton Dohrn*. Four main masses of water of different origin were found in this sea; forming "a great cyclonic (counter-clockwise) movement."
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50563. DI GIORGIO, A. M. Riflessi respiratori nella ipotermia; reazioni da termorecettori e da meccanorecettori trigeminali. (Archivio di fisiologia, 1957. v. 57, fasc. 2–3, p. 148–81, illus., tables.) 49 refs. Text in Italian. Summary in English. ***Title tr.:*** Respiratory reflexes in hypothermia; reaction of trigeminal thermo- and mechanoreceptors.

A study of conditions in guinea pigs, made hypothermic without narcosis. Critical extinction temperatures produced by mechanoreceptors were very different: 27° C. for sneeze and 20° for nostril expansion. Reflexes from thermoreceptors produced by water of different t° were elicited up to a body t° of about 24° C. At body temperatures lower than 24° first reactions to warmth disappear; reflexes to cold stimuli disappear at 22° C. (the head reflex), and at about 20° (the apnea). Temperature increase at the nerve centers did not produce reaction during hypothermia. Vagotomy did not change the critical temperature of the respiratory reflexes. Progressive extinction of the various reflexes appears to initiate the decrease in respiratory activity during hypothermia.
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DIK, N. E., *see* Avetisiān, G. A., *and others*. Nasha rodina . . . *1957*. No. 49441.

50564. DI MACCO, GENNARO. Hypothermic test for adrenergic reactivity. (Scientia medica italica, English edition, July–Sept. 1957. v. 6, no. 1, p. 20–36, illus.) 18 refs.

A review of author's work on the subject since 1940. The test has been applied in the study of thermoregulatory response to "a sudden and marked" decrease of ambient temperature. It can serve as means in estimating the efficiency of the adrenergic reactive capacities in the function of both the thermoregulatory mechanisms and the metabolic and organic functions connected with thermoregulation (water, glucide, lipid and mineral metabolism, etc.)

An Italian version of this article entitled: *Test ipotermico della reattività adrenergica* appeared subsequently in *Rassegna clinico-scientifica*, Nov. 1957. p. 275–81. ***Copies seen:*** DNLM.

50565. DIMMLER, R. Das Beaufort-Becken im Nordpolarmeer. (Deutsche

hydrographische Zeitschrift, Apr. 1958. Jahrg. 11, Heft 2, p. 86–88, map.) 4 refs. Text in German. ***Title tr.:*** The Beaufort Basin in the Arctic Ocean.

Presents, with brief comments, section of U.S. Hydrographic Office Sea Chart No. 6605 (1957) with added depth lines for 200, 1,000, 2,000, and 3,000 m. It is noted that two maximum depth soundings at approx. 72° N. 147° W., one Russian of 4,689 m. and one British of 4,683 m. have not been adopted in the chart.

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50566. DINESMAN, L. G. Materialy k lesokhozîaĭstvennomu znacheniîû losîa v Evropeĭskoĭ chasti SSSR. (Moskovskoe obshchestvo ispytateleĭ prirody. Otd. biol. n. ser. Bûlleten', July–Aug. 1957. t. 62, no. 4, p. 5–12, 8 tables.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** The significance of the elk to forestry in the European part of the U.S.S.R.

Study of the damage in new forests caused by elk when its hunting was prohibited. Young pine in the first age of the stand was affected most; other varieties of useful timber and older trees suffered to a negligible degree. The damage to pine sapling was from the animals biting off or breaking off the tops (59%), gnawing the bark (34%), and devouring young shoots (about 7%). The study, carried out in Moscow province, includes some data from the Arkhangel'sk region.

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50567. DINGLE, WALTER B. Oil and gas in the far North. (Western miner and oil review, Oct. 1958. v. 31, no. 10, p. 130, +.).

Reviews recent drilling activities and discusses potentials and marketing possibilities. Estimated potentials of the Northwest Territories and Yukon are ten billion barrels oil and 60–90 trillion cu. ft. gas; of the Arctic Islands, 23 billion bbl. and 138 trillion cu. ft. Production and transportation are physically and economically feasible; crude products should be based on North American market when local needs are covered; refineries are considered impracticable due to present and future rigid quality requirements and corresponding expensive installations. Crude oil shipped by nuclear-powered submarine tankers could compete with Middle East oil on the European market. ***Copy seen:*** DGS.

DI PALMA, J. R., *see* Cookson, B. A., *and* J. R. DiPalma. Effect of quaternary nitrogen compounds on the S.A. node . . . hypothermia. *1957.* No. 50332.

50568. DITTMAR, KURT. Infantry problems attendant to war in the far North. (Marine Corps gazette, Oct. 1958. v. 42, no. 10, p. 20–27, illus.)

Analyzes combat requirements, based on experiences during the 1941 German/Finnish offensive in Lapland. Selection of equipment and troop training are discussed, and the organization of a combat unit (brigade) is outlined. A relative increase in infantry troops is indispensable; training in mountain warfare and/or skiing experience essential. The rifleman is the basic element of the battle; tracked vehicles should replace heavy, motorized equipment to pull carts or sleds to the front line. Types of Finnish light sleds, horse- or man-drawn, are reviewed. ***Copy seen:*** DLC.

50569. DITTMAR, KURT. "Motti"; war in the far North. (Marine Corps gazette, Feb. 1957. v. 41, no. 2, p. 34–42, illus., maps, diagr.)

Describes and analyzes encounters between German/Finnish and Russian troops east of Kairala at about 66°50′ N. 30° E. in Aug. 1941. The Russians were routed by an enveloping surprise attack of infantry advancing through trackless forests in rain. Value of mobility (increased in winter) and air support is stressed. Small armoured groups may be employed; thick armour is more important than high speed.

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50570. DIVIN, VASILIĬ AFANAS'EVICH. K beregam Ameriki; plavaniîa i issledovaniîa M. S. Gvozdeva, pervootkryvateliîa Severo-Zapadnoĭ Ameriki. Moskva, Gos. izd-vo geogr. lit-ry, 1956. 47 p. illus., map. 50 refs. Text in Russian. ***Title tr.:*** Toward the shores of America; voyages and explorations of M. S. Gvozdev, the first discoverer of Northwest America.

Biography of Mikhail Spiridonovich Gvozdev, geodesist with the Great Northern Expedition of 1725–1743, based in part on unpublished materials. Following note of his education (1716–27), his travels are recounted: the trip with I. Fedorov on the *Gavriil* in 1732 from Kamchatka to Bering Strait, discovery of the Diomede Islands, and the voyage

southward along the North American coast, regarded as the discovery of Northwest America (p. 20–28); exploration of Okhotsk Sea coasts and Shantarskiye Islands, etc. Rivalry among members of the expedition, Gvozdev's arrest and release, his geodetic work in Siberia, etc., are noted. A brief survey of earlier Russian attempts to reach North America is given (p. 5–9); and text of three documents relating to Gvozdev's activities (one signed by him) are appended. Map, p. 35, shows route of the *Gavriil* in 1732.

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50571. DIXON, H. ROBERTA. Layered gabbro of Seiland, Norway. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1716.) Abstract of a paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957.

Describes a gabbro, considered to be a separate intrusion, approx. 700 m. thick on Seiland Island off the coast of northern Norway. ***Copy seen:*** DGS.

DJACZYSZYN, HENRYKA, *see* Wilimowski, M., *and* H. Djaczyszyn. Badania . . . leków . . . hipotermii. *1956*. No. 56040.

50572. DJINGHEUZIAN, L. E. Technical advances in milling and process metallurgy in Canada during 1957. Ottawa, 1958. 7 p. (Canada. Dept. of Mines and Technical Surveys. Mines Branch. Information circular IC103. Mar. 24, 1958.) 7 refs. Reprinted from Canadian mining journal, 1958. v. 79, no. 2.

Includes note on construction of a solvent extraction section in the leaching plant of Eldorado Mining and Refining at Port Radium, Mackenzie District. The unit, nearly completed at end of 1957, will replace present aluminum precipitation section. ***Copy seen:*** DGS.

50573. DJURBERG, HANS. Är kärrfräken ett giftigt ogräs? (Beten, vallar, mossar, Sept. 1955. årg. 7, nr. 8, p. 108.) Text in Swedish. ***Title tr.:*** Is marsh horsetail a poisonous weed?

The poisonous quality of *Equisetum palustre* is questioned (cf. No. 55716). Its debilitating effect may be due to a *Streptococcus* sp. commonly on its stalks. *Glyceria maxima* and *Ustilago longissima* have also been reported as poisonous. ***Copy seen:*** DLC.

DMITRIEV, G. V., *see* Orlov, B. P. Problema Kaspiia. *1957*. No. 53773.

50574. DMITRIEV, NIKOLAĬ ALEKSEEVICH. O promysle saĭki. (Rybnoe khozĭaĭstvo, Nov. 1958. god 34, no. 11, p. 12–14, tables.) Ref. Text in Russian. ***Title tr.:*** The polar-cod fishery.

Information is presented on the geographical distribution of this species (*Boreogadus saida*, Lepechin), its ecology and migrations, growth, reproduction, present catches (small), and prospects of development, nutritive value. Its use as food for cattle and poultry is also considered. ***Copy seen:*** DLC.

50575. DMITRIEV, NIKOLAĬ ALEKSEEVICH. Rezul'taty issledovaniĭ na Belom more v 1951–1952 gg. (Akademiia nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniiu Belogo moria, 1957, vyp. 1, p. 7–14.) 13 refs. Text in Russian. ***Title tr.:*** Results of investigations of the White Sea in 1951–1952.

Reviews investigations of the fish reserves, their possible utilization, food resources of the fish, present condition of the fishing industry and its potential. The species mainly considered are: herring, navaga (*Eleginus navaga*), cod, smelt and salmon. ***Copy seen:*** DLC.

50576. DMITRIEV, NIKOLAĬ ALEKSEEVICH. Sostoianie rybolovstva v Cheshsko-Pechorskom raione. (Rybnoe khozĭaĭstvo, Sept. 1958. god 34, no. 9, p. 79–82, tables.) Text in Russian. ***Title tr.:*** Condition of fishery in the Chesha-Pechora area.

Presents information on the coastal fisheries of the southeastern Barents Sea, specifically from the Cheshskaya Guba (67° N. 48° E.) to Pechorskaya Guba (68°30′ N. 54° E.) Catches in recent years are discussed including the most common, cod-like navaga; areas of fishing are indicated, and data given on yield of salmon fishery, catches of various species of whitefish, etc. Comparisons are made with earlier conditions, etc.

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50577. DOBBIN, K. C. Natural airfields in the North. (Aircraft, Aug. 1957. v. 19, no. 8, p. 29–32, 71–73, illus.)

Landing and take-off possibilities on frozen and open lakes, snow-covered and bare land configurations in the Canadian North are considered. Natural landing fields could be utilized more, and special

amphibious aircraft with nose- or rear-loading facilities are required for maximum performance. Present and future use and importance of such landing strips for development and military purposes is discussed. ***Copy seen:*** DLC.

50578. DOBROKHOTOV, IU. S. Aėros"emka v vulkanologicheskikh ėkspeditsiiakh Akademii nauk Soiuza SSR. (Akademiia nauk SSSR. Laboratoriia aėrometodov. Trudy, 1950, t. 2, p. 77–87, illus., 6 plates, maps.) Text in Russian. ***Title tr.:*** Aerial survey of Volcanological Expeditions of the Academy of Sciences of U.S.S.R.

Includes account of the Kamchatka Volcanological Expedition in 1946 sponsored by the Laboratory of Volcanology and Laboratory of Aeromethods of the Academy of Sciences and headed by A.N. Zavaritskiĭ (p. 78–84). Ten survey flights over the main Kamchatka volcanoes were made by a party under the author, Aug. 24–Oct. 2, and approx. 3,000 photographs taken. The apparatus, its installation in aircraft and methods of work are described. Photographs of Zhupanova, Klyuchevskaya and Avachinskaya Sopka are reproduced; flight route is mapped.

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DOBROVOLNY, ERNEST, 1912– , *see* Miller, R. D., *and* E. Dobrovolny. Origin . . . Pt. Campbell-Pt. Woronzof area . . . "blue clay" . . . Anchorage. *1957*. No. 53304.

DOBROVOLNY, ERNEST, 1912– , *see also* Miller, R. D., *and* E. Dobrovolny. Pleistocene . . . Anchorage . . . *1957*. No. 53305.

DOBRYNINA, A. F., *see* Shishkin, I. V. Sadovodstvo . . . *1958*. No. 54809.

50579. DOBSON, LAWRENCE. Army field forces feeding problems. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, Oct. 1948, v. 1, no. 4, p. 343–51, table.)

Includes scattered references to arctic conditions, and a chapter on Arctic Trail Ration, which deals with special ration requirements of troops on patrol or "trail," weight components, container, package, palatability, etc.

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50580. DODD, ARTHUR V. January temperatures in North America as a basis for sleeping bag issue. Natick, Mass., Apr. 1958. 6 p., 8 text maps, table. (U.S. Quartermaster Corps. Environmental Protection Research Division. Research study report, RER–15.) 4 refs.

Describes practical methods for evaluating sleeping bag requirements in cold environments; several types of data are utilized and maps are presented to aid in determining adequacy of those now available. Mean daily minimum temperatures by month should be used as criterion in sleeping considerations instead of mean monthly temperatures. Cold stress is indicated by data on temperature frequencies and on durations of low temperatures. A change in sleeping bag requirements is proposed.

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50581. DODGE, HENRY. A historical review of the mollusks of Linnaeus; pt. 4, the genera *Buccinum* and *Strombus* of the class Gastropoda. (American Museum of Natural History, New York. Bulletin, 1956. v. 111, art. 3, pl. 153–312.) 284 refs.

Contains a critical revision of 87 species of molluscs described by Linné either in his *Systema naturae*, 1767, or in his *Mantissa*, 1771, with the interpretation in the light of modern systematics. The distribution data is meagre, but *B. lapillus*, is recorded in eastern Greenland and Novaya Zemlya (p. 204) and *B. glaciale* "in O. Septentrionali ad Spitzbergam insulam" (p. 212).

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50582. DODIMEAD, A. J., *and* **H. J. HOLLISTER.** Progress report of drift bottle releases in the Northeast Pacific Ocean. (Canada. Fisheries Research Board. Journal, Sept. 1958. v. 15, no. 5, p. 851–65, illus., table, maps.) 4 refs.

A study of 816 returns up to April 1958 out of 25,000 bottles released since April 1956. The surface water movement was found to be in agreement with the "geopotential topography, allowing for a component of movement generally to the right across the isobars." Seasonal and periodic changes were also established as well as "most probable time at sea" and "most probable speeds."

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DODIMEAD, A. J., *see* Tully, J. P., *and* A. J. Dodimead. Canadian oceanographic research . . . *1957*. No. 55546.

50583. DODIN, V. Z. Paromekhanicheskiĭ sposob razrabotki merzlykh gruntov. (Stroitel'naîa promyshlennost', Sept. 1958. god 36, no. 9, p. 8–13, illus., tables.) Text in Russian. ***Title tr.:*** Thermo-mechanical method of excavating frozen ground.

Excavation of trenches and tunnels for geological surveys and for construction of underground communication systems by preheating of frozen ground is described with details and illus. Initially the ground is wetted by a warm (60° C.) water-salt solution for convenient cutting of the top layer by a scraper machine. Equipment is installed above the proposed excavation using a set of electric drills for drilling holes in the frozen ground. Steam-heated boxes are then placed above the drilled holes. After 40 minutes, required for thawing, the equipment is moved forward and a steam shovel is used to take off the first layer. The operation is repeated for the length and depth of the trench. Cost and time requirements for the various equipment are tabulated. ***Copy seen:*** DLC.

50584. DÖÖS, BO R., *and* **M. A. EATON.** Upper-air analysis over ocean areas. (Tellus, May 1957. v. 9, no. 2, p. 184–94, charts, graphs.) 3 refs.

The adequacy of upper air data over the North Atlantic for numerical weather analysis is discussed. The existing number of weather ships in the area is considered the minimum required, and in certain cases the data must be supplemented from other sources. A method is given for determining heights of given pressure surfaces by extrapolating from observed values of surface pressure and temperature based on interpolated mean lapse rates. Attempt is made to determine statistically the true mean error in the numerical analyses of upper-air charts. ***Copy seen:*** DLC.

50585. DOGEL', V. A. Neue parasitische Infusorien aus dem Magen des Renntieres, *Rangifer tarandus.* (Russkiĭ arkhiv protistologii, 1925. t. 4, vyp. 1–2, p. 43–65, illus. tables.) 4 refs. Text in German. Summary in Russian. ***Title tr.:*** New parasitic Infusoria from the stomach of the reindeer, *Rangifer tarandus.*

Description of 18 forms belonging to 12 species and three genera of *Ophryoscolecidae.* Thirteen of these forms are new and described for the first time. Eleven of the forms are specific for the reindeer, the others are also found in cattle. The general character of this fauna, the tendency to gigantism (in the reindeer) and parallelism to forms in other herbivores are also discussed.
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DOGMAROV, M., *see* P'esy îakutskikh dramaturgov. *1957.* No. 53949.

50586. DOHERTY, JAMES R. Probing the northern radar shield. (Air Force, July 1958. v. 41, no. 7, p. 48–50, illus.)

Describes duties of the 5040th Radar Evaluation Squadron on St. Lawrence Island. Its mission is to probe for weak spots in the network of aircraft control and warning stations of the Alaskan interior and shoreline facing Siberia. Equipped with long-range search radars, AC&W stations backstop the DEW Line.
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50587. DOHERTY, JAMES R. Top cover for America. . . . Alaskan Air Command. (Air force, Jan. 1958. v. 41, no. 1, p. 52–59, illus., map.)

Lists, with brief explanations, the location of U.S. Air Force bases throughout Alaska. A total of two air divisions, and nearly 100 aircraft control and warning stations, DEW Line sites, and White Alice (microwave communication system) installations are controlled from the Elmendorf headquarters. A survey is given of the various types of aircraft in use, and daily duties, operational readiness, flying conditions, and general living conditions are described. A photochart shows personnel of the Alaskan Air Command as of Nov. 20, 1957.
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50588. DOLGIKH, BORIS OSIPOVICH. O nekotorykh ėtnogeneticheskikh profsessakh, pereseleniîakh narodov i rasprostranenii îazykov, v severnoĭ Sibiri. (Sovetskaîa ėtnografiîa, 1952, no. 1, p. 51–59.) 7 refs. Text in Russian. ***Title tr.:*** On some ethnogenetic processes, migration of peoples and diffusion of languages, in northern Siberia.

Discusses the ethnic and linguistic changes among the aboriginal population of Siberia between the 17th and 20th centuries, and suggests a relationship between the linguistic and economic-cultural advances: the expansion of the Samoyed languages seems related to the spread of reindeer herding; the Tungus languages follow the route of iron diffusion and reindeer riding. The methods of merging and assimilation (conquest, inter-

marriage, cultural-economic domination, etc.) are analyzed and exemplified. The language of a numerically and/or culturally superior group usually supplanted that of the smaller and/or less advanced tribe resulting either in a complete absorbtion (some Evenki clans migrating to Taymyr and merging with the local Nganasan-Samoyeds) or in the formation of new ethnic groups or sub-groups (the Dolgans of Taymyr Peninsula and reindeer-herding Yakuts of northern Yakutia being the result of the integration of Tungus and Yukaghir elements by Yakuts; the absorbtion of Asiatic Eskimos by Chukchis producing the coast-Chukchis). A more primitive group, however, could subjugate a more advanced people after acquiring their higher culture and economy: the Chukchis who took over reindeer herding from the Chuvantsy and Yukaghirs yet absorbed both groups. ***Copy seen:*** DLC.

50589. DOLGIKH, BORIS OSIPOVICH. Plemena Srednei Sibiri v xvii veke. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1949. vyp. 8, p. 35–47, map, tables.) Text in Russian. ***Title tr.:*** The tribes of central Siberia in the 17th century.

A summary of reports delivered at the April and July 1948 sessions of the Siberian chapter of the Institute of Ethnography in Leningrad and Moscow. It describes the preliminary investigations connected with the preparation of an ethnographic map of Siberia for the second half of the 17th century and discusses the source material used: documents, fur tribute (iasak) registers, etc. The tables, compiled for the four central Siberian districts (uezd) i.e., Mangazeya, Yenisey, Ilim, and Krasnoyarsk, list the tribe and clan names, year used for statistics, number of tribute-paying and total population, and the tribal changes in these districts in the 19th century. The map, presented in a preliminary draft, shows the distribution of 17th century ethnic groups of central Siberia (52°–75° N. 80°–115° E.). Cf. Bakhrushin studies on this area, No. 43830.

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50590. DOLGIKH, BORIS OSIPOVICH. Rodoplemennyi sostav narodov Sibiri v xvii veke. Moskva, Izd-vo Akademii nauk SSSR, 1956. 27 p. (Doklady sovetskoi delegatsii na v Mezhdunarodnom kongresse antropologov i ėtnografov.) Text in Russian and French. ***Title tr.:*** The tribal and clan composition of the peoples of Siberia in the 17th century. (Paper presented by the Soviet delegation at the Fifth International Congress of Anthropological and Ethnological Sciences.)

Reports on the new ethnographic map of the aboriginal population of Siberia (including peoples of the North) prior to the advent of the Russians. Research in source material, mainly tribute (iasak) lists, toponymics, folklore, etc., is discussed. The difficulties encountered in compiling and systematizing data are stressed, as due to incomplete documentation, application of the same tribal name to unrelated ethnic groups, use of clan names without indication of tribal affiliation by aboriginal sources including Tungus and Yukaghir, linguistic changes among territorially divided clans of the same tribe, etc. Comparison between native population in the 17th and 20th centuries shows a fluctuation in the ethnic and structural composition of tribes and clans, indicating that tribal and clan systems are subject to changes from internal development or external influence.

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50591. DOLGIKH, BORIS OSIPOVICH. Tamgi nganasanov i ėntsev. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1957. vyp. 27, p. 20–34, illus., table, graphs.) 6 refs. Text in Russian. ***Title tr.:*** Branding marks used by the Nganasans and Entsy.

Discusses the origin, branchings, interrelationship, etc., of Samoyed (Nganasan and Enets) families and clans on the basis of reindeer brand-marks, which were distinct and hereditary within each family. Used with little, if any, variation by all male descendants, the brands provide a clue for establishing the provenience of families or clans. Brands used since the 17th century are described and deduced findings on lineage presented. Most of the brand signs are of totemic origin; their use as signature is noted.

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DOLGIKH, BORIS OSIPOVICH, *see also* Gantskaia, O. A., *and* N. IA. Merpert. Issledovaniia sovetskikh arkheologov . . . *1958*. No. 51079.

DOLGIKH, BORIS OSIPOVICH, *see also* Gantskaia, O. A. Sessii . . . issledovanii 1957 g. *1958*. No. 51080.

DOLGIKH, BORIS OSIPOVICH, *see also* Grach, A. D. Sessiia . . . arkheologiche-

skikh i ėtnograficheskikh issledovaniĭ . . . *1957*. No. 51318.

DOLGIKH, BORIS OSIPOVICH, *see also* Levin, M. G. Polevye issledovaniĭa . . . 1948 g. *1949*. No. 52792.

50592. DOLGIN, I. M., *and* **V. V. FROLOV.** Dvadtsat' piăt' let issledovaniĭ svobodnoĭ atmosfery v Arktike. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 59–66, diagr., tables.) Refs. in text. Text in Russian. ***Title tr.:*** Twenty-five years' exploration of the free atmosphere in the Arctic.

Outline of the development of upper air observations in the Soviet Arctic, occasioned by the 25th anniversary of the first radiosonde release by its inventor P. A. Molchanov in Jan. 1931 at Aleksandrovsk (now Polyarnyy) in Kola Peninsula. The five aerological stations set up in 1932 increased to 21 by 1956; as a rule they release two radiosondes daily, during 1932–1956: over 72,000; the mean altitude on several stations is now 18–19 km. with maximum 30–31 km. Seven new arctic stations were established for IGY. Besides these permanent stations, vessels and drifting stations have been sending up radiosondes, and the vertical soundings are complemented by the flying observatories' horizontal soundings. Manuals, etc. for arctic observers are listed (p. 65), the main results of upper air observations in the Soviet Arctic are briefly discussed and plans for network development noted. Soviet aerology prior to the radiosonde is also briefly sketched.

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50593. DOLGIN, I. M., *and* **V. T. TIMOFEEV.** Nauchnaiă inspektsiiă dreĭfuiushchikh stantsiĭ i observatoriĭ v 1956 godu. (Problemy Arktiki, 1958, vyp. 4, p. 109–110.) Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Scientific inspection of drifting stations and observatories in 1956.

North Pole-4 and -6 and observatories at Pevek, Tiksi Bay and Dikson Island, were inspected by a party of scientists, Sept. 8–Oct. 23, 1956, to check methods and equipment of scientific observations, and to brief the personnel on objectives and scope of work in IGY, as ordered by the Council of the Arctic Institute.

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50594. DOLGOV, P. K. Poiskovo-issledovatel'skie raboty v Datskom prolive i prolive Dėvisa. (Rybnoe khoziăĭstvo, Aug. 1958. god 34, no. 8, p. 11–14, maps.) Text in Russian. ***Title tr.:*** Exploratory research work in Denmark and Davis Straits.

Account of survey made by three trawlers during July 1–22, 1957, to ascertain the conditions favoring shoaling of herring and the distribution of water masses. Studies were made of temperature distribution, vertical and horizontal; water movements, ice conditions, "dead water," salinity and oxygen; plankton was investigated. Currents and water temperature distributions are diagrammed.

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50595. DOLGOV, PETR NIKOLAEVICH. Novye granitsy chasovykh poiăsov v SSSR. (Priroda, Jan. 1957. god 46, no. 1, p. 57–61, maps incl. 1 fold. col.) Text in Russian. ***Title tr.:*** New boundaries of the time belts in U.S.S.R.

In 1919, U.S.S.R. was divided into eleven time belts or zones numbered from 2 in the west (including Moscow) to 12 in the Far East (Chukotka), each zone being 15° wide and the boundaries coinciding as nearly as possible with the meridians. Many inconveniences of such theoretical zoning have appeared with the economic development of the country. A special interdepartmental commission of unified time service was created in 1947, which revised the zonal boundaries and adjusted them to geographic, administrative and economic requirements; meridional boundaries were left only in the Arctic and in sparsely inhabited areas of northern Asia. These new zonal divisions, which came into effect on Mar. 1, 1957, are shown on col. folded map.

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50596. DOLGOV, PETR NIKOLAEVICH. O poiăsnom vremeni. (Grazhdanskaiă aviatsiiă, May 1957. god 14, no. 5, p. 36–37, map.) Text in Russian. ***Title tr.:*** The time zones.

Eleven time zones were established in the U.S.S.R. by a decree of Feb. 8, 1919 and their boundaries were revised on Mar. 1, 1957; purpose of the zones is discussed and their boundaries shown on map. The zones are numbered from 2 on the west to 12 on the east; in principle their boundaries are drawn along the meridians, with one hour time, i.e., 15 degree, intervals and they are adjusted

to practical (administrative, economic and geographic) considerations.

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50597. DOLGUSHIN, IVAN. Na almaznoĭ zemle; pis'mo iz ĬAkutii. (Znanie-sila, Apr. 1957. god 32, no. 4, p. 11–14, illus.) Text in Russian. ***Title tr.:*** In the land of diamonds; a letter from Yakutia.

Geographer's notes on his flight to the diamantiferous fields above the Arctic Circle in the Vilyuy River basin, and on his trip to the new diamond-bearing kimberlite pipe, recently found, from air photographs, in the wild forest taiga. Methods of enriching the ore and of picking up the diamonds are briefly described. Over forty pipes of kimberlite are said to be found so far in western Yakutia.

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50598. DOLLFUS, WALTER. Der schweizer Gletscherpilot Hermann Geiger. (Aero, Monatszeitschrift für das gesamte Flugwesen, Mar. 1957. Jahrg. 8, Heft 3, p. 50–51, illus.) Text in German. ***Title tr.:*** The Swiss glacier pilot Hermann Geiger.

Using a Piper Super-Cub airplane equipped with wheels and skis, Geiger has a record of 5,000 landings without accident in the Swiss Alps. By a special technique (landing uphill and taking off downhill), required length of the landing strip can be reduced to 60 m. Rescue service is carried out in addition to regular freight and passenger transport.

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50599. DOMOKHOTOV, S. V. Biostratigrafiĭa verkhnepermskikh i mezozoĭskikh terrigennykh otlozheniĭ Vostochnogo Verkhoĭan'ia. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statei po paleontologii i biostratigrafii, 1958. vyp. 9, p. 3–20.) Text in Russian. ***Title tr.:*** Biostratigraphy of Upper Permian and Mesozoic terrigenous deposits of the eastern Verkhoyansk region.

Presents results of the author's 1954–57 investigations on widespread terrigenous deposits in the region (approx. 62°–65° N. 135°–142° E.) of the Aldan's tributaries Tara, Vostochnaya Khandyga, Tampo and the upper Indigirka's Suntar and Agayakan. Identification of the stratigraphy of Upper Permian, Triassic and Jurassic terrigenous deposits is based mostly on the brachiopod, pelecypod, gastropod fauna. The new stratigraphic division, characterizing systems, series and horizons of these deposits, is presented in a tabular summary.

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50600. DONDALE, C. D. Two new species of *Ceraticelus*, Araneа, Erigonidae, from western North America. (Canadian entomologist, May 1958. v. 90, no. 3, p. 155–57, 13 illus.) Contrib. no. 3675, Entomology Div., Science Service, Canadian Dept. of Agriculture.

Includes description of *C. silus* n. sp., type locality Wrangell, Southeast Alaska.

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50601. DONHOFFER, S., *and others.* Über die Lokalisation der erhöhten Wärmeproduktion bei der chemischen Wärmeregulation. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 265, Heft 2, p. 104–111, illus.) 51 refs. Text in German. *Other authors:* G. Szegvári, I. Varga-Nagy *and* I. Járai. ***Title tr.:*** On the localization of increased heat production in chemical thermoregulation.

In cool environment, the temperature of intestine and liver increases synchronously with periods of increased heat production, whilst muscle temperature first remains stable or even falls. When increased heat production stops, intestinal (and liver) temperature falls instantly, whilst muscle temperature remains constant, or even rises, before falling. Muscle thus appears to be not the only heat producer.

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50602. DONHOFFER, S., *and others.* Über die Periodizität der chemischen Wärmeregulation der Ratte. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 265, Heft 2, p. 97–103, illus.) 16 refs. Text in German. *Other authors:* G. Szegvári, I. Varga-Nagy *and* I. Járai. ***Title tr.:*** On the periodicity of chemical thermo-regulation in the rat.

A pronounced, more or less regular periodicity in chemical thermoregulation was observed at ambient temperatures below the neutral zone. The periodic increase in O_2-consumption is usually associated with increased motor activity. Larger fluctuations in heat production were elicited by urethan without any visible muscle activity.

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DONHOFFER, S., *see also* Andik, J., *and* S. Donhoffer. Die Wirkung des Thyroxins . . . *1957.* No. 49299.

DONN, WILLIAM L., *see* Ewing, M., *and* W. L. Donn. A theory of ice ages, 2. *1958.* No. 50818.

50603. DONNER, J. J., *and* **R. G. WEST.** The Quaternary geology of Brageneset, Nordaustlandet, Spitsbergen. Oslo, Fabritius & Sønner, 1957. 29 p. illus., 5 plates, maps, table. (Norway. Norsk Polarinstitutt. Skrifter, nr. 109.) 20 refs.

Contains results of investigations made during Oxford University Expedition to Nordaustlandet in 1955. The region studied is a promontory on southwest Vestfonna, approx. 79°50′ N. 19° E., the surface composed of raised beach shingles, till and dolerite. Stone orientation measurements, raised beaches of Brageneset and neighboring parts of Hinlopenstretet, marine shells from the tills and raised beaches are reported and discussed. The Quaternary history of Brageneset is traced. The stone orientation measurements confirm the generally held view (long axes parallel to direction of ice movement), but this parallel orientation sometimes may be complicated by transverse direction, which in narrow-band tills, may even predominate. The beaches at Brageneset cannot be grouped into stages on the basis of morphology or marine shells, but two shore levels can be distinguished because of the pumice found on them, and a comparison made with the raised beaches on northern Hinlopenstretet. There is a tilt towards the northwest, the upper pumice level dropping from 13.8 m. at Brageneset to 3.0 at Mosselbukta (79°50′ N. 15°30′ E.). The uplift has been rapid, the higher pumice levels are probably about 500 years old. Quaternary events are distinguished as: an early ice advance and retreat, uplift, a second ice advance (probably between 1861 and 1899); ice from the end-moraines formed by the younger advance is in retreat at present.

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DONNER, J. J., *see also* Glen, J. W., *and others.* On the mechanism . . . stones in till . . . oriented. *1957.* No. 51225.

DONNER, KAI, 1888–1935, *see* Joki, A.J. Kai Donners . . . Wörterverzeichnisse . . . *1956.* No. 52098.

50604. DONOVAN, DESMOND THOMAS. The Jurassic and Cretaceous systems in East Greenland. København, C. A. Reitzel, 1957. 214 p. plates, maps, diagr. sections, diagrs. (Meddelelser om Grønland, bd. 155, nr. 4.) 164 refs.

Presents information assembled from geologists' reports, unpublished materials and author's studies during the Danish Expedition to East Greenland led by L. Koch. The principal outcrops of Jurassic and Cretaceous rocks lie in a belt up to 80 km. wide between the northern shore of Scoresby Sund and Store Koldewey Island (70°25′–76°20′ N.). The stratigraphy, tectonic structure and history, geography of East Greenland during the Jurassic and Cretaceous periods, lithological features and probable conditions of deposition of the formations are reviewed. Comparisons are made with Jurassic and Cretaceous rocks of West Greenland and Spitsbergen showing important resemblances. Correlation and affinities of the fossil assemblages are discussed in detail. Evidence on the Continental Drift, the East Greenland coast during the Jurassic and Cretaceous periods, the origin of the North Atlantic Ocean, and the date of the beginning of igneous activity is examined. Work still to be done is surveyed. The appendix contains comments on coal discoveries in the area.

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50605. DORF, ERLING, 1905– . The earth's changing climates. (Weatherwise, Apr. 1957. v. 10, no. 2, p. 54–59, port., 4 text maps, graph.) 10 refs.

General article on climatic changes and methods of study through use of fossil plants, shell-fish assemblages, climatically-sensitive vertebrates, diagnostic features of rocks, and computations based on heights of continents, relative percentage of land vs. water areas, volumes of warm currents reaching the Arctic, amounts of volcanic ash in the atmosphere. Climatic changes in the Cenozoic are traced: cool period in the Paleocene; warm period in the Eocene in which temperate forests were formed in central Alaska and West-central Greenland, and polar regions were free of icecaps and extensive glaciers; cooling in the Oligocene and Pliocene, leading to the ice ages of the Pleistocene; the present warming trend toward an interglacial age.

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50606. DORFMAN, M. D. Geokhimicheskie osobennosti protsessov vyvetrivaniîa v nefelinovykh sienitakh Khibinskikh tundr. (Geokhimiîa, 1958, no. 5, p. 424–34, illus., diagrs.) 13 refs. Text

in Russian. Summary in English. ***Title tr.:*** Geochemical features of the weathering processes in nepheline-syenites of the Khibiny Tundra.

Outlines chemical weathering processes in the Khibiny alkaline massif. Minerologic, petrographic and geologic features of the massif are reviewed. Tectonic breaks lead to development of linear weathering which differs in steeply and gently sloping zones. Despite similarity of the rocks and their age the weathering takes place differently because of variation in water movement, surface water drainage, and pH solution. The chemical weathering processes are outlined for two zones; the differences lead to differences in association of minerals.

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50607. DORFMAN, M. D. Novye dannye po mineralogii ĪŪkspora v Khibinskikh tundrakh. (*In:* Akademiīa nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova, 1958. p. 146–64, illus., tables, map.) 7 refs. Text in Russian. ***Title tr.:*** New data on the mineralogy of Yukspor in the Khibiny tundras.

Description is given of six minerals hitherto unknown from this area; they are found in pegmatite rocks in the railway tunnel through Yukspor mountain. Chemical analyses and, for some of them, thermic and X-ray analyses are presented and their properties described. Sodium, potassium, tantalum, and niobium are present in these minerals with chlorides and fluorine sodium. A new colloid mineral is also described, chinglusuite-type; it is characterized by higher manganite content, by presence of beryl, niobium, tantalum and zirconium; it is said to differ from chinglusuite, described as a new mineral by V. I. Gerasimovskiĭ.

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DORMAN, H. JAMES, *see* Bentley, C. R., *and others.* Seismic measurements on the Greenland ice cap . . . *1957.* No. 49658.

DOROFEEV, P. I., *see* Akademiīa nauk SSSR. Botanicheskiĭ institut. Sbornik pamīati A. N. Krishtofovicha. *1957.* No. 49164.

DOROGOSTAĬSKAĪA, E. V., *see* Tikhomirov, B. A., *and* E. V. Dorogostaĭskaīa. Proniknovenie novykh rasteniĭ vo floru Arktiki . . . *1957.* No. 55438.

50608. DOROKHOV, A. Almazy v talge. (Pioner, Apr. 1957. god 34, p. 54–58, illus.) Text in Russian. ***Title tr.:*** Diamonds in the talga.

Notes discovery of two diamond-bearing kimberlite pipes in northern Yakut A.S.S.R: Zarnitsa in 1954 and Trubka Mira in 1955; the diamond-mining settlement Mirnyy started in winter 1955–1956; the diamond searching expedition "Amakinskaīa" was so-called from the Yakut word for bear (amaka) to suggest the inaccessibility of the places to be surveyed.

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DORRIES, FRITZ, *see* Hartwig, W. Ein Beitrag . . . Wirtschaft . . . Golden. *1956.* No. 51613.

50609. DOSTAL', V. G. Promyshlennoe osvoenie lesov Zapadnoĭ Sibiri. (Lesnoe khozīaĭstvo, Apr. 1958. god. 11, no. 4, p. 47–48.) Text in Russian. ***Title tr.:*** Exploitation of forests in West Siberia.

The development of the wood industry is related to expansion of roads and railroad branch lines in the Ob'-Irtysh basin for export of lumber and wood products. The waterway is open only for a short summer period from Krasnoyarsk down to Salekhard. Economic problems in different lumbering regions are discussed. Some 75% of the timber must be processed locally into various products.

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DOSTOVALOV, B. N., *see* TSytovich, N. A., *and others.* O fizicheskikh svīazheniīakh . . . v . . . gruntakh. *1957.* No. 55539.

DOTSENKO, V. A., *see* Troitskiĭ, S. P., *and* V. A. Dotsenko. Rezul'taty . . . Eniseīa . . . *1957.* No. 55525.

50610. DOUGLAS, GEORGE VIBERT, 1892–1958, *and* L. P. COMPTON. A suggested interpretation of the Quebec-Labrador iron deposits. (Economic geology, Sept.–Oct. 1957. v. 52, no. 6, p. 709–711, 2 tables.) 6 refs.

A new interpretation for the sequence of events in the Knob Lake area—suggests that they are more closely allied to the Wabana type (Newfoundland) than the Mesabi (Minnesota). ***Copy seen:*** DGS.

DOUGLAS, JOHN SCOTT, *see* Madsen, C., *and* J. S. Douglas. Arctic trader. *1956.* No. 53039.

DOUGLAS, L. A., *see* Tedrow, J. C. F., *and* L. A. Douglas. Carbon 14 dating . . . soils. *1958.* No. 55362,

DOUGLAS, L. A., *see* **Tedrow, J. C. F., *and others.*** Major genetic soils . . . *1958.* No. 55364.

50611. DOUGLAS, R. J. W. Canadian Operation "Mackenzie," 1957. (Polar record, May 1958. v. 9, no. 59, p. 144–46, map.)

Gives summary account of the Geological Survey's helicopter-assisted reconnaissance of the upper Mackenzie River drainage basin, extending from 60° to 64° N., and from the boundary of the Interior Plains with the Precambrian Shield to 126° W. Objectives were: to investigate and correlate the sequence, variations and mode of origin of bedrock formations; to prepare geological maps of the plains at 1 in.: 8 mi., and at 1 in.: 4 mi. on the mountains; assess oil, gas, coal and mineral possibilities; and collect data on superficial and glacial deposits. The 29-man field party, using two Bell 47D1 helicopters and a De Havilland Beaver, mapped the bedrock and glacial deposits in a 100,000 sq. mi. area, described and sampled 225,000 ft. of stratigraphic section and collected fossils.

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50612. DOUGLAS, R. J. W. Operation Mackenzie. (Canadian mining journal, Aug. 1958. v. 79, no. 8, p. 64–70, illus., text map, tables.)

Reconnaissance study of 100,000 sq. mi. in southwest Mackenzie-southeast Yukon surveyed in May–Aug. 1957 by a party of 29. Nature of terrain and general geology are described; equipment is noted, including two helicopters and a De Havilland Beaver, a river boat and barge, portable radios, etc. Utilization of the aircraft and operational procedure are explained in some detail, also movement of supplies, establishment of bases, and travel by personnel, etc. Results attained in a four-month period by nine geologists at a cost of $167,500, were much greater than could have been achieved by separate parties, or by conventional reconnaissance methods. Limitations and advantages of the Bell helicopters and the Beaver are given.

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DOUGLAS, R. J. W., *see also* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

50613. DOVE, WILLIAM FRANKLIN, 1897. U.S.A.F. survival ration arctic field test; February 1948. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, June 1948. v. 1, no. 2, p. 108–109.)

Report on survival studies conducted at Ladd Field, Alaska. Three rations were tested for ten days on group of healthy subjects, with one group receiving no food at all (for six days). Clothing and environment are also discussed.

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50614. DOVERS, ROBERT. My friends, the huskies. New York, Farrar, Straus and Cudahy, 1957. 236 p. illus. maps.

Narrative of this Australian explorer's experience in Adélie Land, attached as observer to the Paul-Émile Victor Expedition during 1952. In charge of the dog team he had opportunity to study the animals, whose rearing and growth, behavior and character as well as struggle for dominance and leadership, he describes with great insight. A chapter (p. 62–82) is largely devoted to emperor penguins, their biology and ecology, development, and adaptation to extreme cold.

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50615. DOVERS, ROBERT. A surveyor in the Antarctic. (Australian surveyor, Mar. 1957. v. 16, no. 5, p. 272–79, illus., map.)

Describes difficulties in surveying under severe climatic and topographical conditions. Some of the procedures and equipment used on three expeditions are described briefly. The difficulties are not unusual for polar areas; winter surveying was complicated by extra snow cover, but stars available throughout the entire 24 hours facilitated the obtaining of good positions. Heavy clothing on the main part of the body, but light silk gloves or woolen fingerless mittens for the hands is recommended; A method of numbering the exposed plates should be built into the surveying camera.

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50616. DOWLING, HARRY F., *and others.* Transmission of the common cold to volunteers under controlled conditions, 3; the effect of chilling of the subjects upon susceptibility. (American journal of hygiene, July 1958. v. 68, no. 1, p. 59–65, illus., table.) 21 refs. *Other authors:* G.G. Jackson, I. G. Spiesman, *and* T. Inouye.

Male and female volunteers infected with common cold were chilled at 60° F. and 80% humidity, or at 10° F. and

same humidity, or placed in a surrounding of 80° F. with 30% humidity. No significant differences in incidence of colds were noted between the three groups. No relationship was observed between experimental-cold incidence and the seasons or the differences between outdoor and experimental temperatures.
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50617. DOWNING, JOHN A., *and* **S. F. TUDDENHAM.** Developments in Western Canada in 1956. (American Association of Petroleum Geologists. Bulletin, June 1957. v. 41, no. 6, p. 1290–1302, 4 maps, 8 tables.) 5 refs.

Report includes all of the significant sedimentary areas of the Yukon, Northwest Territories, and the four western provinces. Important discoveries made in each of the provinces are described and tabulated. Important exploratory failures are also tabulated, including three in Northwest Territories (five in 1955). ***Copy seen:*** DLC.

50618. DOWNING, S. C. Mammals of the Arctic. (Canadian nature, Jan.–Feb. 1957. v. 19, no. 1, p. 11–12, illus.)

Notes on five mammals especially adapted to the severe arctic climate, most of them widely distributed in the area: ringed seal, Parry's ground squirrel, arctic hare, collared lemming, arctic fox.
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50619. DRAGUNOV, V. I. Nakhodka sabellidites v siniĭskikh otlozheniiakh zapadnogo obramleniia Tungusskoĭ sineklizy. (Akademiia nauk SSSR. Doklady, Oct. 1, 1958. god 26, t. 122, no. 4, p. 685–86.) 15 refs. Text in Russian. ***Title tr.:*** A find of Sabellidites in the Sinian deposits of the western Tungusska syncline.

Reports find of fossil worms on the left bank of Sukhaya Tunguska River, 20 km. from its junction with the Yenisey in a 530 m. well bored for prospecting oil and gas. Cross-section of the well and occurrence of *Sabellidites* in carbonized, lustrous, flattened stripes, are described. Appearance and measurements of the specimens are given. *Sabellidites ex. gr. cambriensis* Jan. in Sinian deposits of the western Siberian platform supports the view that these deposits are Precambrian.
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50620. DRAKE, CARL JOHN, 1885– , *and* **F. C. HOTTES.** Saldidae of the Americas; Hemiptera. (Great Basin naturalist, Oct. 10, 1950. v. 10, no. 1–4, p. 51–61, 3 illus.)

Contains taxonomic and distributional data on 17 species, one described as new, and three European species recorded as new to the fauna of the Americas. *Chiloxanthus stellatus* (Alaska and northern Canada), *Calacanthia trybomi* (typical form and var. *apicola*, Alaska and Canada), *Salda bouchervillei* (Alaska), and *Saldula fernaldi* (Newfoundland and Alaska), are included.
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50621. DRAKE, CARL JOHN, 1885– . An undescribed shore-bug from Manitoba; Hemiptera, Saldidae. (Southern California Academy of Sciences, Los Angeles. Bulletin, Sept.–Dec. 1957. v. 56, no. 3, p. 142–43.)

Contains a description of *Micracanthia ripula* n. sp., a new saldid, from Churchill, collected Aug. 10, 1935, by Dr. W. J. Brown. ***Copy seen:*** DA.

50622. DRALKIN, ALEKSANDR GAVRILOVICH. Dreĭf stantsii "Severnyĭ polius 4" v pripoliusnom raĭone tsentral'nogo poliarnogo basseĭna. (Morskoĭ flot, June 1958. god 18, no. 6, p. 21–22, table, map.) Text in Russian. ***Title tr.:*** Drift of the station "North Pole-4" in polar region of the Central Arctic Basin.

Data on drift of this station in the third and last year of its work, Apr. 1956–Apr. 1957, are given and analyzed by the head of the third team that manned the station. The drift started on Apr. 8, 1954 at 75°48′ N., 178°25′ E.; after two years, on Apr. 18, 1956, the station was at 87°24′ N., 177°49′ W.; on July 5, 1956, it passed the North Pole at 12.7 km. distance (89°53′01″ N.); and it was evacuated on Apr. 20, 1957, at zero meridian (Greenwich) and 85°52′ N. Tabulated monthly data are given on length, mean velocity and direction of actual and net drift, their relation and the mean wind velocity. Factors affecting the drift: distribution of air pressure over the Arctic Basin, cold air currents from Greenland and Canada, ice conditions, and their interrelation are discussed and evaluated. The decisive influence of air pressure and prevailing wind is stressed. Rate of drift from the vicinity of the North Pole toward the Greenland Sea in Oct.–Dec. 1956 was four times slower than that of the first drifting station in 1937 (5 km./day) and

four-and-a-half times slower than that of the ice-breaker *Sedov* in 1939 (5.76 km.).
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DRAŠKOCI, M., *see* Mihailović, L., *and others.* The effects of epinephrine . . . hypothermia. *1958.* No. 53272.

DREIMANIS, VALDA, *see* Demin, I. D. Vliiânie . . . radiolokatsionnoĭ stantsii . . . otsenki splochennosti l'dov. *1958.* No. 50493.

50623. DREMLIŪG, VALENTIN VALENTINOVICH. Taĭna ischeznuvshikh zemel' Arktiki: The secret of the disappearing land of the Arctic. Moscow, State Press of Geographic Literature, 1956. 43 p. illus., maps. Translation into English of No. 44657.
Copy seen: DN–HO.

50624. DREVER, HARALD IRVING, 1912– . Geological results of four expeditions to Ubekendt Ejland, West Greenland. (Arctic, 1958. v. 11, no. 4, sketch maps, illus.) 14 refs.

Outlines petrological discoveries made in 1938, 1939, 1950 and 1957 by British expeditions to this island in the Umanak Fjord region: an abundance of magnesia- and lime-rich intrusions and lavas; a central intrusive complex in the south where acid and basic magmas co-exist; and a suite of dykes, lavas, and pyroclastic rocks on the west coast. Status of research on problems raised by these findings is reported. Discussion is included of author's investigations in 1957 of the olivine-rich rocks in the lower group of lavas and the minor intrusions cutting them. Detailed information on variations in the intrusions and on their relationship with the lavas is presented.
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50625. DREVER, HARALD IRVING, 1912– . The kayakers of Igdlorssuit. (Arctic, 1958. v. 11, no. 2, p. 123–27, illus.)

Describes life in this Eskimo settlement on Ubekendt Ejland in Umanak Fjord, West Greenland, from four summers' experience there. Its economy is based largely on seal hunting in kayaks during summer and dog-sledges in spring. The problem of how Greenlanders can adjust to European civilization without disruption of their indigenous values and integrity is discussed. Need for social anthropological work is stressed.
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50626. DREW, J. V., *and* **J. C. F. TEDROW.** Pedology of an arctic brown profile near Point Barrow, Alaska. (Soil Science Society of America. Proceedings, 1957. v. 21, no. 3, p. 336–39, illus., tables.) 14 refs.

Arctic brown profile forms on medium and coarse ground material of well drained sites of the Alaskan Arctic Slope. Mechanical composition, chemistry (organic matter, pH, cation exchange capacities, etc.), mineralogy of sands and clay are investigated and the genesis of this type reconstructed. It is concluded that similar soil forming processes are active in tundra and alpine regions of other areas. ***Copy seen:*** DGS.

50627. DREW, J. V., *and others.* Rate and depth of thaw in arctic soils. (American Geophysical Union. Transactions, Aug. 1958. v. 39, no. 4, p. 697–701, diagrs.) 7 refs. *Other authors:* J. C. F. Tedrow, R. E. Shanks, and J. J. Koranda.

"Measurements at Point Barrow, Alaska, indicate that rate and depth of thaw in arctic soils are highly related to soil type. Arctic brown soil thawed earlier in the spring, thawed to a greater depth, and froze earlier in the fall than did the adjacent poorly drained areas. During 1956, arctic brown soil thawed to a maximum depth of 40 in. while the depth of thaw in the nearby tundra soil approximated 18 in. Diurnal near-surface temperature amplitude was greater in the arctic brown than the adjacent poorly drained areas. The willow-lichen-moss complex was the dominant vegetation with the arctic brown soil, while in the tundra soil, it consisted mainly of *Dupontia-Carex-Eriophorum scheuchzeri.* Other vegetation units in relation to soils are given."—Author's abstract
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DREW, J. V., *see also* Tedrow, J. C. F., *and others.* Major genetic soils *1958.* No. 55364.

50628. DREW, WILLIAM BROOKS, 1908– . The North American representatives of *Ranunculus, Batrachium.* (Rhodora, Jan. 1936. v. 38, no. 445, p. 1–47, plate 406.) *Pub. also as:* Contrib. from the Gray Herbarium of Harvard University, No. 110.

A critical revision of section *Batrachium* dealing chiefly with phytogeographic affinities. Diagnostic characters and geographic distribution of the section are discussed, followed by a key and a

taxonomic list of nine species and four varieties with records of localities. Two species and one variety are described as new. *R. trichophyllus* with varieties *typicus* (Aleutian Islands, Labrador), *hispidulus* n. comb. (Alaska) and *eradicatus* (Labrador, Newfoundland, James Bay region, Alaska, and Greenland to 76°30′ N., also northern Scandinavia) are included. ***Copy seen:*** DLC.

DRIAT͡SKIĬ, V. M., *see* Kanaki, V. G. Ėkspedit͡sii . . . 1957 godu. *1958.* No. 52155.

DRISCOLL, R., *see* Angelakos, E. T., *and others.* Ouabain . . . hypothermic dog heart. *1958.* No. 49321.

50629. DRIVER, HAROLD EDSOW, 1907– , *and* W. C. MASSEY. Comparative studies of North American Indians. Philadelphia, 1957. 456 p. illus., tables, diagrs. 163 text maps, fold. map. (American Philosophical Society. Transactions, new ser. v. 47, pt. 2.) Approx. 500 refs.

An exhaustive work on means of subsistence, material culture, economics and social organization of North American Indians including the Eskimo-Aleuts, Nadene group (Eyak, Tlingit, Haida and Athapaskan) and the Algonquian language family. The topical data are discussed, mostly in geographical order within the chapters, and summarized on 163 schematic maps (key at end) originally pub. in No. 50630. Arctic material forms a comparatively large part of the study, especially in chapters on hunting, fishing, food preparation, its preservation, storage, and religious rites connected with food providing; means of transportation (snowshoes, dog driving, boats), housing (snow, stone-earth-whalebone and earth-covered houses), clothing, arts and crafts, weapons, trade and barter, inheritance and property rights (hunting grounds), marriage, family and kin groups. Functional, evolutionary and historical theories are reviewed in conclusion. Topical refs. are given at end of each chapter; an extensive bibliography and a subject index are appended. Reviewed (in Russian) by I͡U. Averkieva (Sovetskai͡a ėtnografii͡a, 1958, no. 5, p. 154–61, refs.) who commends the factual data on culture and economy but takes issue with the authors' empiric and nonmaterial approach to problems of social organization in primitive society.
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50630. DRIVER, HAROLD EDSOW, 1907– , *and others.* Indian tribes of North America. Baltimore, Waverly Press, Inc., 1953. 30 p. fold. map in insert. (Indiana University. Publications in anthropology and linguistics. Memoirs 9.) 75 refs.

Map shows 238 North American Indian and Eskimo tribes' territories with tribal boundaries; explanatory text gives linguistic classification and list of linguistic families. Linguistic families, languages within the same family, and tribes of local groups speaking the same language are also delimited on the map. In *General remarks* (p. 1–3) and *Other areas* (p. 4–7) Dr. Driver includes the Canadian Algonquian area, Eskimo, North Pacific Coast, and Northern Athapaskans. Explanatory notes by five co-authors refer to non-Arctic regions. An index of tribal names (over 1,100) with attributions to linguistic families is appended. ***Copy seen:*** DSI.

50631. DRIVER, PETER MICHAEL. Biological studies in Ungava during 1958. (Arctic, 1958. v. 11, no. 3, p. 191–93.)

Discusses field work in the False River area (58°28′ N. 67°51′ W.) of Northern Quebec, on the natural mechanism of carcass disposal; the behavior of colonial web-making spiders; and the maturation of behavior patterns in young sea ducks.
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50632. DROGAĬT͡SEV, D. A. Poperechnai͡a sistema koordinat dli͡a Arktiki. (Problemy Severa, 1958, vyp. 1, p. 346–53, illus., tables, map.) 3 refs. Text in Russian. ***Title tr.:*** A lateral coordinate system for the Arctic.

For solution of some meteorological and hydrological problems, it is convenient to regard the trapezoids between coordinates as uniform. In view of the convergence of longitudinal meridians at the North Pole, this method cannot be applied to the high latitudes. By turning the coordinate system 90° around an axis perpendicular to the earth's axis of rotation, the equator becomes a meridian, and the polar regions divided into relatively uniform squares. The coordinates of any given point in the new system may be found by simple trigonometric computations from its geographical coordinates; computed value of latitude, longitude, and difference in azimuth are tabulated in steps of 2.5°.
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50633. DROGAĬT͡SEV, D. A. Vetrovye techeni͡a v Severnom Ledovitom okeane.

(Problemy Severa, 1958, vyp. 2, p. 5–15, graphs, maps.) 14 refs. Text in Russian. ***Title tr.:*** Wind-induced currents in the Arctic Ocean.

A formula is derived for the velocity of surface currents as a function of the vorticity caused by tangential friction of the wind, and methods of computing each contributing factor are explained in detail. The velocity of the surface currents is charted on the basis of 40-year averages of atmospheric pressure distribution; the computed values agree well with field observations of ice drift.

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50634. DROGAĬTSEV, D. A. Zamanchivaia utopiia. (Vokrug sveta, May 1958, no. 5, p. 7–8.) Text in Russian. ***Title tr.:*** A tempting utopia.

Critical remarks by the head of the Marine Meteorology Laboratory of the Academy of Sciences' Institute of Oceanology, on P. Borisov's plan for improving the climate of the Northern Hemisphere (No. 49848): he simplifies the oceanological aspects of the problem and disregards the influence of air circulation; deeper scientific study of the problem is required. ***Copy seen:*** DLC.

50635. DROGAĬTSEV, D. A. Zimnee vykholazhivanie arkticheskikh morei. (Problemy Severa, 1958. vyp. 1, p. 42–51, charts, tables.) 7 refs. Text in Russian. ***Title tr.:*** The winter-cooling of arctic seas.

Derives a formula for heat emission through a snow-covered ice field, and discusses the connection between winter-cooling and ice conditions in the Arctic during the ensuing navigation season. The winter of 1931–32 and the following summer exemplify the anomaly in ice development in the western and eastern part of the Northern Sea Route due to the formation of two persistant zones of reduced and intensified cooling and subsequent development of cyclonic and anticyclonic centers.

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DROUET, FRANCIS, *see* Gerdel, R. W., *and* F. Drouet. Cryoconite . . . *1958.* No. 51157.

50636. DROZDOV, S. V. Opyt organizatsii bureniia so l'da na r. Enisei. (Moskva. Moskovskiĭ geologo-razvedochnyĭ institut. Trudy, t. 30, 1956. p. 140–42, illus.) Text in Russian. ***Title tr.:*** Drilling through the ice-covered Yenisey River.

Outlines the procedure and difficulties encountered in drilling in the river bed beneath 3–5 m. water and 1 m. ice; the 24 prospecting holes bored averaged 5.5 m. in depth. Two drilling machines and a hand-drill were used; the work was done between Feb. 1 and Apr. 15 near Krasnoyarsk. The time required for setting up a drill shed, drilling, and moving the aggregate is reported and graphed. ***Copy seen:*** DLC.

50637. DRUMMOND, JACK CECIL, 1891–1952, *and others.* The examination of some tinned foods of historic interest. Greenford, Eng., 1938. 20 p. illus., diagrs. (Tin Research Institute. Publications, no. 85.) *Other authors:* W. R. Lewis, T. Macara, G. S. Wilson, and H. L. Shipp.

Summarized in *Tidsskrift for hermetikindustri* Oslo, 1939–1940, årg. 25–26, p. 335–37.

The early development of the canning industry is reviewed. As soon as tinned foods were considered dependable, they were used in large quantities by the English Navy; of £5481 worth contracted for in 1818, £1642 worth was assigned to arctic expeditions. Sir John Ross had taken some on his Baffin Bay expedition in 1814, as did Kotsebu in 1815, and Parry in 1819. Some 75,000 lbs. of tinned meats and vegetables were ordered for his 1824 expedition. Some of this, dumped on the ice when the *Fury* was lost in 1825, was found by Ross (in perfect condition) on his 1829–33 expedition and taken back to England. Tins of carrots and roast beef opened recently and chemically and bacteriologically analyzed, are described. On his second arctic voyage Parry also took lemon juice, sliced lemons, cranberries, pickled cabbage and onions, and potatoes. Some of the tinned food carried by Franklin's last (1845) expedition, found later on Beechey Island, was unfit for consumption. Tinned roast beef returned from Sir Edward Belcher's arctic expedition of 1852, and recently opened, is also described. ***Copy seen:*** DLC.

50638. DRUMMOND, R. NORMAN. Iron ore from sub-arctic Quebec-Labrador, Canada. (Polarboken 1957, p. 124–38, illus., map.) 5 refs.

Describes mining activities of the Iron Ore Company of Canada and the community at Knob Lake (54°48′ N. 66°58′ W.), where about 2,000 men are em-

ployed. Physiography, vegetation, climate and exploration of the Quebec-Labrador Peninsula are outlined. Large-scale development of the ore deposits at Knob Lake was decided upon in 1950, a railway was built between the site and Seven Islands on the Gulf of St. Lawrence (completed in 1954) and the ore is shipped out during April to November. An analysis is given of the ore bodies; all lie at the present erosion surface, so open pit mining is used exclusively. Production in 1954 was 1,781,453 tons; in 1956: 12,000,000 tons (60% of the total Canadian output). Other development programs in mineral exploitation are noted. ***Copy seen:*** DLC.

50639. DRUMMOND, R. NORMAN. Research at the McGill Sub-arctic Research Laboratory. (Canadian geographer, 1958. no. 11, p. 45–46.)

Summary paper presented at the 7th annual meeting of the Canadian Association of Geographers at Ottawa, 1957. Describes the establishment during summer 1954 of McGill University's laboratory at Knob Lake, northern Quebec. Studies in glacial geomorphology, climatology, botany, human and economic geography are noted as typical of problems to be solved in subarctic areas. A meteorological observation station is operated for the Dept. of Transport; properties of snow and lake ice are studied; observations of seismic activity are made. An Ionosphere Research Station has been set up by Dartmouth College, and a project for the measurement of backscatter initiated by the Radio Wave Propagation Laboratory of Stanford University. ***Copy seen:*** DGS.

DRUMMOND, R. NORMAN *see also* International Geographical Congress, 1952. Proceedings. *1957*. No. 51939.

50640. DRURY, WILLIAM HOLLAND, 1921– , *and* R. C. ROLLINS. The North American representatives of *Smelowskia:* Cruciferae. (Rhodora, Apr. 1952. v. 54, no. 640, p. 85–119, illus., plates 1185–86, text map.) 14 refs.

Contains a discussion of the genera *Smelowskia* and *Ermania*, cytological evidence, and *S. calycina* and *S. borealis* complexes and their geographic distribution. Following keys, are descriptions of five species and nine varieties, of which one and four respectively are new. Several forms occur in the North: *S. pyriformis* n. sp. (Alaska, Kuskokwim River), three varieties of *S. calycina* (Alaska and northern Canada) and four varieties of *S. borealis* (northern Alaska and Northwest Territories). A tabular summary of the *pyriformis-borealis* group is added. ***Copy seen:*** DA.

DUBACH, H. W., *see* U.S. Hydrographic Office. An evaluation of the "Morskoi Atlas" . . . *1958*. No. 55626.

50641. DUBROVO, I. A. Ob ostatkakh *Parelephas wüsti* (M. Pawl.) i *Rhinoceros mercki* Jäger iz ĺAkutii. (Akademiíâ nauk SSSR. Komissiíâ po izucheniíû chetvertichnogo perioda. Bûlleten', 1957. no. 21, p. 97–104, illus., 3 tables.) 13 refs. Text in Russian. ***Title tr.:*** Remains of *Parelephas wüsti* (M. Pawl.) and *Rhinoceros mercki* Jäger from Yakutia.

Describes fragments of elephant and rhinoceros teeth found by the geologist, M. N. Alekseev, in 1954 in the fourth stream terrace of the Vilyuy River near the mouth of the Chebyda and the towns of Verkhne-Vilyuysk and Vilyuysk. Detailed description and measurements of the fragments are given and comparisons made with similar species elsewhere. The geologic age of the Vilyuy stream terrace is between the end of the upper and beginning of the middle Pleistocene. *P. wüsti* was previously unknown in Siberia and *R. mercki* known only in western Siberia. These finds therefore not only serve as stratigraphic evidence, but also extend the distribution areas of these two species. ***Copy seen:*** DLC.

DUDAEVA, L. M., *see* Akademiíâ nauk SSSR. Institut ékonomiki. Problemy . . . ĺAkutskoĭ ASSR. *1958*. No. 49171

50642. DUDYKINA, A. S., *and* E. I. SEMENOV. Lovozerskiĭ i Khibinskiĭ massivy, redkometal'naíâ biogeokhimicheskaíâ provintsiíâ. (Akademiíâ nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh élementov. Trudy, 1957, vyp. 1, p. 35–37, tables.) Ref. Text in Russian. ***Title tr.:*** Lovozero and Khibiny massifs, a bio-geochemical province of rare metals.

Reports investigation of rare metals in the plants and soils from the surface of Lovozero and Khibiny nepheline-syenite massifs. Vegetation and soil samples containing rare metals were collected by E. I. Semenov; the spectral analyses were made by A. S. Dudykina. In bilberry (*Vaccinium myrtillus*), meadow grass (*Poa trivialis*), birch (*Betula nana*), willow

herb (*Ephilobium montanum*), and in the soil samples, traces were found of titanium, niobium, zirconium, beryllium, lanthanum and strontium. Their occurrences and the presence of the more common elements are tabulated. The Lovozero and Khibiny tundras represent a specific biochemical province of rare metals. The amounts of zirconium, niobium and especially beryllium in the soils are claimed significant for production purposes. ***Copy seen:*** DLC.

50643. DUE ROJO, ANTONIO. Actualidad geofisica de las regiones polares. (Urania, Jan.–June 1955. año 40, núm. 240, p. 7–16.) 10 refs. Text in Spanish. ***Title tr.:*** Geophysics of the polar regions at present.

Reviews (p. 7–11) U.S. participation in arctic research since 1947. The organization and execution of meteorological flights to the North Pole are described. A 500 km.^{2} ice island (T–1) was discovered by radar during one of these routine flights; two more (T–2 and T–3) were located by reconnaissance flights. Scientific accomplishments of the drifting stations later established on these ice floes, are briefly summarized.

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50644. DUFOUR, DIDIER. Influence de l'hormone de croissance sur la résistance et l'adaptation au froid. (Laval médical, Mar., Apr. 1957. v. 22, no. 3, 4, p. 358–95, 543–74, tables.) 162 refs. Text in French. ***Title tr.:*** Influence of the growth hormone on resistance and adaptation to cold.

Contains a bibliographical review of studies on the role of hormonal and non-hormonal factors upon stress; methods of present study; somatotrophic hormone in the cold-exposed rat; the growth hormone in cold-exposed adrenalectomized rat; the possible effect of this hormone upon adrenal growth; etc. The second and final part of the study presents information and data on the effects of pre-treatment with hypophyseal somatotrophin upon cold-resistance; effect of short pre-treatment with the same substance; results of combined treatment with growth hormone and vitamin C; effect of cold exposure on growth and development of ovaries and testes. The growth hormone while maintaining growth, was found capable of reducing cold-adaptation; its action is linked with that of the adrenal; administered before exposure, it confers on rats considerable resistance to cold but when given with vitamin C it reduces cold-resistance.

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50645. DUGAL, LOUIS PAUL, 1911– . Acclimatization to cold environment. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 70–81, illus., tables.) 10 refs.

Information is presented on the meaning of "acclimatization"; cold exposure and acclimatization in rats, rabbits, guinea pigs and monkeys; the role of ascorbic acid in cold adaptation; cold resistance and maintenance of core temperature, etc. ***Copy seen:*** DNLM.

50646. DUGAL, LOUIS PAUL, 1911– , *and* **G. FORTIER.** Effect of cold environment and ascorbic acid on the respiratory quotient of the monkey *Macacus rhesus.* (Canadian journal of biochemistry, Feb. 1957. v. 35, no. 2, p. 169–72, tables.) 6 refs.

The R.Q. in these animals was significantly lowered by long exposure to mild cold or short exposure to intense cold. Exposure for six months to mild cold did not affect the drop in R.Q. upon subsequent exposure to severe cold, nor did overdoses of ascorbic acid affect it.

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50647. DUKHANIN, S. F., *and* **M. A. KRUTOĬARSKIĬ.** O deshifrovanii aėrofotosnimkov pri poiskakh kimberlitovykh tel. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958, vyp. 10, p. 59–65, illus., plate.) 2 refs. Text in Russian. ***Title tr.:*** Photo interpretation in prospecting kimberlite bodies.

Reports authors' attempt in 1957 to identify kimberlite pipes from black-and-white airphotos (at scale 1:65,000) of the Olenek River basin. Relief, plant cover and geological structure are briefly reviewed. The photointerpretation method is explained in detail and the results are summarized. The "Neva," "Oktiabr'skie," and "Pogranichnye" kimberlite bodies were located by this method. Others found in the region are mentioned.

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50648. DUMAN, MAXIMILIAN GEORGE, 1906– . Range extensions of *Carex neurochlaena* Holm. (Torrey Botanical Club. Bulletin, Sept. 1949, v. 76, no. 5, p. 337–38.) 5 refs.

Supplementary notes in No. 40649, extending the range of this sedge south into the James Bay region, north into Baffin Island and west into Alaska.

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50649. DUMAN, MAXIMILIAN GEORGE, 1906– . Status and distribution of *Carex neurochlaena* Holm. (Torrey Botanical Club. Bulletin, Mar. 1947. v. 74, no. 2, p. 151–52.) 5 refs.

Contains a differential key for *C. neurochlaena* and distributional data on this sedge, occurring in Yukon Territory, Mackenzie District, arctic coast, Hudson Bay region and northern Manitoba. See also No. 4186. ***Copy seen:*** DLC.

DUMAN, MAXIMILIAN GEORGE, 1906– , *see also* Dutilly, A. A., *and others.* Contribution . . . flore . . . Baie James. *1958.* No. 50664.

50650. DUNAGAN, T. T. Helminth parasites of Alaskan muskrats. (American Microscopical Society. Transactions, July 1957. v. 76, no. 3, p. 318–20, table.) 17 refs.

List of parasitic worms found in 326 animals examined, including five species of trematodes, two of tapeworms, a nematode and one acanthocephalan. Degree of infection, origin of material, etc., are noted. ***Copy seen:*** DNLM.

50651. DUNAGAN, T. T. *Paramonostomum malerischi* n. sp.; Trematoda: Digenea: Notocotylidae; from the emperor goose, *Philacte canagica* L. in Alaska. (Journal of parasitology, Oct. 1957. v. 43, no. 5, p. 586–89, illus., tables.) 2 refs.

Description of a new species of these worms based on 15 specimens recovered from the caecum of a single goose. Morphometric and anatomical data; taxonomic position; differential morphology, etc., are discussed.

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50652. DUNBAR, MAXWELL, JOHN, 1914– . The amphipod fauna of Ungava Bay, subarctic Canada, and its zoogeographical significance. (*In:* International Congress of Zoology, 14th, Copenhagen, 1953. Proceedings, 1956, p. 454–55.)

Based on 113 species of these crustaceans (five new) author distinguishes in this area, six zoogeographic groups: an Atlantic group; very small arctic and arctic-boreal groups; a subarctic, panarctic and a Pacific group.

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50653. DUNBAR, MAXWELL JOHN, 1914– . The determinants of production in northern seas; a study of the biology of *Themisto libellula,* Mandt. (Canadian journal of zoology, 1957. v. 35, p. 797–819, illus., tables, map.) 47 refs. *Calanus* series no. 14.

A study of growth rate, breeding cycle and life span of this crustacean, the dominant species of plankton in Hudson Strait and adjacent Canadian waters, food of arctic char and ringed seal. Breeding lasts from September till May or June at temperatures of −1.5° C. and below, and is of the alternating or two-phase cycle. Normal length of life is two years. ***Copy seen:*** DLC.

50654. DUNBAR, MAXWELL JOHN, 1914– . McGill grads in the far North. (McGill news, winter 1957. v. 39, no. 1, p. 27, illus.)

Notes field work of some 30 recent graduates of McGill University, Montreal: locality and problem of study are stated. ***Copy seen:*** DLC.

50655. DUNBAR, MAXWELL JOHN, 1914– . Physical oceanographic results of the *Calanus* expeditions in Ungava Bay, Frobisher Bay, Cumberland Sound, Hudson Strait and northern Hudson Bay, 1949–1955. (Canada. Fisheries Research Board. Journal, 1958. v. 15, no. 2, p. 155–201, illus., tables, maps.) 20 refs. *Calanus* series no. 15.

A summary of the work of these expeditions with bathymetric maps of the Ungava, Frobisher, and northeast Hudson Bay. Temperature, salinity and density profiles are presented; they indicate the presence of Atlantic water below 100 m. in Cumberland Sound, less in Ungava Bay and Hudson Strait. Density inversions, stability conditions, tidal action, vertical water exchange, etc. are also reported. ***Copy seen:*** DLC.

50656. DUNBAR, MOIRA, *and* **K. R. GREENAWAY.** Arctic Canada from the air. Ottawa, Queen's Printer, 1956. 541 p. illus., 50 maps incl. fold. (Canada Defence Research Board.) Approx. 300 refs.

Prepared to aid map reading and for general information of airmen, based on air photographs, the literature and personal observations, and intended to replace No. 35010 which predated the

air photographic program in this area. The Canadian mainland above the treeline, 19 major islands and island groups, the islands waters, and the central Arctic Basin are treated in turn. For each (as relevant), exploration, settlement, topography, drainage, and coastline are described and extensively illustrated. The islands are treated in physiographic sections though simplified, and the coastal configuration emphasized as pertinent for fliers. For the marine areas, submarine topography, surface water and ice conditions are described, the last in some detail with regional accounts of the islands waters. Weather is outlined (p. 450–79) from the airman's viewpoint. Arctic aviation is reviewed from Andrée's attempt in 1897 to about 1955, with special attention to Canadian activities and notable flights, etc., in the North American area. A brief characterization of the Canadian Arctic introduces this basic, though non-technical, study; a chronology of expeditions to the area, glossary, and index are provided, the last including several hundred specific localities treated in text and illus. The photographs, some five hundred in all, though not all in sharp reproduction, are mostly obliques from the tremetrogon series at 20,000 ft. ***Copy seen:*** DLC.

50656A. DUNBAR, MOIRA. Curious open water feature in the ice at the head of Cambridge Fiord. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report 1957. v. 4, *pub.* 1958, p. 514–519, illus.) Refs.

A circular pool was observed in fast ice in this fiord (72°20′ N., 74°44′ W.) in northeast Baffin Island in 1951. It was 312 ft. diam. within a right-angular indentation of the coast, which on each side was 600 ft. from the pool center. Observed regularly the pool remained in the same location but varied in diam. and disappeared temporarily during Feb.–Mar. 1953. Its origin is discussed: it may derive from a spring below the permafrost. ***Copy seen:*** DGS.

DUNBAR, ROBERT D., *see* Adams, J. E., *and others.* Cerebral metabolic studies of hypothermia . . . human. *1957.* No. 49111.

50657. DUNKLE, ROBERT VALENTINE, *and others.* Emissivity of ice, snow, and frozen ground. (Refrigerating engineering, Apr. 1957. v. 65, no. 4, p. 33–35, 89, tables, diagrs., graphs.) 7 refs. *Other authors:* J. T. Gier *and* J. T. Bevans.

"Results of measurements on the emissivity of soil samples, snow and ice particles, and a sheet of clear ice are reported briefly, and the experimental procedure and the special radiometer used are described. The emissivity of the soil samples averaged from 0.92–0.95 at sample temperatures from 7°–66.3° F. and moisture contents from 0.5–50% of dry weight. Mean emissivity of the clear ice sheet varied from 0.964–0.97 (comparing well with values obtained by other investigators); that of crushed ice was 0.950; that of fine snow particles ranged from 0.820–0.825; and that of granular snow was 0.887. Data on the emissivity of the samples tested and the changes in snow emissivity with sample temperature are tabulated and graphed."—SIPRE.

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DUNKLE, W. E., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

50658. DUNSTAN, D. J. Caudal presentation at birth of a humpback whale, *Megaptera nodosa* (Bonnaterre). (Norsk hvalfangst-tidende, Oct. 1957. årg. 46, nr. 10, p. 553–55, illus.) Text in Norwegian and in English. 4 refs.

A pregnant humpback whale was harpooned off Norfolk Island (29°03′ S. 167°55′ E.) in Aug. 1957. About three feet of the tail of a full-term foetus was projecting from the vulva, the first recorded case of a free-swimming humpback taken in this condition. Tail presentation at birth is thus established to occur, evidence indicates it may be the usual method. ***Copy seen:*** DLC.

50659. DUNWOODY, DERM. Arctic crossroads of the air. (Imperial oil review, Dec. 1957. v. 41, no. 6, p. 19–22, illus.)

Discusses background of the airport at Frobisher, Baffin Island, and its development as an international refueling point on trans-polar routes. Built by the U.S. Air Force during World War II, it was turned over, Sept. 1, 1957, to the Canadian Dept. of Transport, which plans to extend runway from 6,000 to 9,000 ft., and build a passenger lounge, etc. Imperial Oil Co. took over construction of storage tanks and pipe lines, and delivered fuel by tanker during summer 1957. Construction costs (given) are roughly four times

those in southern Canada. The Eskimo workers' modern way of life is noted. Six major airlines expect to be routing planes through Frobisher by late 1958.

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50660. DUPONT, M. Les variations de la température des extrémités chez les sujets soumis aux effets du froid. (Société de Biologie, Paris. Comptes rendus, 1958. t. 152, no. 1, p. 64–69, illus., table.) 4 refs. Text in French. ***Title tr.:*** Temperature variations in the extremities of subjects submitted to the effects of cold.

A study of temperature of hand and feet and of the skin, of pulmonary and skin evaporation of subjects dressed in controlled clothing and exposed to an ambient temperature of −20° C. It is concluded that when the protective value of clothing is evaluated, one should in the first place consider the fall of temperature in the extremities.

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DURAND, J., *see* Bargeton, D., *and others*. Échanges de chaleur de la main. *1958*. No. 49542.

50661. DUSEK, EDWIN RALPH. Encumbrance of arctic clothing. Natick, Mass., Apr. 1958. iv, 35 p., 15 graphs (U.S. Quartermaster Corps. Environmental Protection Research Division. Technical report, EP–85.) 7 refs.

Study of the degree to which arctic clothing restricts body movements on the basis of 15 tests of performance. The neck, shoulder, arm, waist, and crotch were most restricted. The movement limits of the individual when wearing heavy arctic clothing as well as when lightly clad are indicated for the designer of clothing and army equipment.

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50662. DUSEK, EDWIN RALPH. Manual performance and finger temperature as a function of ambient temperature. Oct. 1957. 8 p. illus., tables. (U.S. Quartermaster Corps. Environmental Protection Research Division. Technical report EP–68.) 4 refs.

Account of experiments with 18 soldiers which showed that cold "reduces fine finger dexterity more than gross hand dexterity;" increases variability and lowers the level of manual performance, and lowers finger skin temperature. No correlation was found between the skin temperature of the fingers and manual performance. ***Copy seen:*** CaMAI.

DUSEK, EDWIN RALPH, *see also* Gaydos, H. F., *and* E. R. Dusek. Effects of localized hand cooling . . . body cooling . . . performance. *1958*. No. 51107.

DUSEK, EDWIN RALPH, *see also* Gaydos, H. F., *and* E. R. Dusek. Effects . . . localized . . . total cooling . . . performance. *1957*. No. 51108.

50663. DUTCHER, RUSSELL R., *and others*. Petrographic examination of coals from the Arctic Slope of Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1719.) Abstract. *Other authors:* C. L. Trotter *and* W. Spackman, Jr.

Petrographic samples of sub-bituminous coals of Cretaceous age, were collected summer 1956 from Meade River (approx. 71° N. 156° W.), Wainwright (70°39′ N. 160°10′ W.) and Umiat (69°25′ N. 152°20′ W.) Thin-section techniques were used successfully on block and crushed samples. The Meade River coals contain high concentrations of vitrinoid material (all more than 85%) and exceptionally low quantities of fusinoid material (0 to 0.2%). The Wainwright samples have an abundance of exinoids, particularly cutinite. The Umiat samples contain a large amount of highly mineralized attrital coal; the intimate mixture of clay-sized mineral material and organic matter forms a matrix for the attrital coal of these samples. ***Copy seen:*** DGS.

50664. DUTILLY, ARTHÈME ANTOINE, 1896– , *and others*. Contribution à la flore des îles (T.N.O.) et du versant oriental (Qué.) de la Baie James. Washington, D.C., 1958. 199 p. 3 illus., 12 text maps. (Catholic University of America. Arctic Institute. Contribution no. 9F.) 98 refs. Text in French. *Other authors:* E. Lepage, *and* M. G. Duman. ***Title tr.:*** Contribution to the flora of the islands (NWT) and the eastern slope (Que.) of James Bay.

Topographic and ecological conditions are described. The climatic zones (including three coastal belts) are distinguished: Jones (54°34′ N. 79°38′ W.) to Attikuan Point; south to Fort George River; south of this river, including Charlton and Agamaski Islands; the interior region. Typical plants are listed for each zone. Spruce, balsam and birch occupy the islands and coast area (*Picea glauca, P. mariana, Populus balsamifera, Betula papyrifera,* etc.) Seven zonal subdivisions, their habitats, character-

istics, and typical plants are presented: calcareous habitat, dry shores, moist shores, estuaries, coastal marshes, interior swamps, and forest zone. The taxa of the region, comprising 241 genera, 719 species, 255 subspecies and 96 forms, are listed (p. 27–174) with distributional and ecological notes and data on specimens. Information is added on collectors and localities. ***Copy seen:*** DA.

DUTRO, JOHN THOMAS, 1923– , *see* Bowsher, A. L., *and* J. T. Dutro. The Paleozoic section in the Shainin Lake . . . *1957*. No. 49871.

DUTRO, JOHN THOMAS, 1923– , *see also* Detterman, R. L. *and others.* Glaciation . . . Brooks Range . . . *1958*. No. 50531.

DUTRO, JOHN THOMAS, 1923– , *see also* Miller, D. J., *and others.* Geology . . . petroleum provinces . . . *1957*. No. 53294.

DUTRO, JOHN THOMAS, 1923– , *see also* Tailleur, I. L., *and others.* Unusual upper Paleozoic rock sequence . . . *1958*. No. 55316.

DUTRO, JOHN THOMAS, 1923– , *see also* Yochelson, E. L., *and* J. T. Dutro. Late Paleozoic Gastropoda . . . *1958*. No. 56138.

DUVALL, ALLEN J., *see* Aldrich, J. W., *and* A. J. Duvall. Distribution . . . mourning dove. *1958*. No. 49232.

50665. DVORETSKIĬ, IGNATIĬ MOISEEVICH. Storona sibirskaîa. (Novyĭ mir, Sept. 1957, no. 9, p. 23–49.) Text in Russian. ***Title tr.:*** Siberian land.

Describes visit in 1956 to the Angara River and its new industrial centers at Bratsk, Angarsk, etc. Present economic and cultural conditions are contrasted with those of his first trip to this region in 1924. ***Copy seen:*** DLC.

50666. DVORKIN, E. N. K voprosu o primenenii statisticheskikh kharakteristik v gidrometeorologii. (Problemy Arktiki, 1958, vyp. 4, p. 29–38, diagrs., tables.) 5 refs. Text in Russian. ***Title tr.:*** The use of statistical characteristics in hydrometeorology.

The determination of mean and (the more important) median values of hydrometeorological data from long-term observations is explained in general; use of the latter in forecasting the probable (50% probability) location of the ice edge through graphical interpretation of available (limited) observational data, is sketched. Data on ten-day means of air temperatures at the Dikson polar station in 1949, and on mean and median values of sea-water temperature and salinity at the Dikson, Rudolf, and Tiksi Bay stations in Aug. 1953 are tabulated. ***Copy seen:*** DLC.

50667. DYBVIK, REIDAR. Skogrekruttskolen i Tromsø 1950; utdrag av rapport fra den militaere leder. (Tidsskrift for skogbruk, Mar. 1951. årg. 59, hefte 3, p. 60–64, illus.) *Also pub. in:* Skogen, *Oslo*, 1951, årg. 16, hefte 4, p. 38–42. Text in Norwegian. ***Title tr.:*** The military forestry course in Tromsø 1950; summary of report of the military leader.

The first Norwegian military training course in forestry since World War II took place at the Setermoen installation near Tromsø in 1950. Military training, chiefly engineering work (18 days) was followed by the forestry course under civilian instructors: clearing and thinning of forests, ditching, logging, grading new roads, etc., also use of hand and machine tools. ***Copy seen:*** DA.

50668. DYCE, ROLF. More about V.H.F. auroral propagation; recent findings and suggestions for improved results. (QST, Jan. 1955. v. 39, no. 1, p. 11–15, diagrs.) 5 refs.

Contains a statistical report based on studies at Cornell University, and the University of Alaska, and on information supplied by radio amateurs in the United States 1951–54. Openings and times for auroral propagation were detected by an auroral signal recorder at the Cornell Ionosphere Project, tuned to receive transmissions from Cedar Rapids, Iowa, on 49.6 and 49.8 mc. Sept. and March are the most favorable months for auroral propagation, the best time is 6 PM and 2 AM. ***Copy seen:*** DLC.

50669. DYLIK, JAN., *and* **R. RAYNAL.** Program prac komisji geomorfologii peryglacjalney. (Biuletyn peryglacjalny, 1958. sec. 3, no. 6, p. 5–28, 177–93.) 194 refs. Text in Polish and French. ***Title tr.:*** Program of work of the Commission on Periglacial geomorphology.

Describes the research program of this Commission set up by the International Geographical Union, and outlines progress to date. The main problems re-

quiring study include the cartographic representation of periglacial phenomena throughout the world, and the dynamic interpretation of general and local periglacial features and their geographic and temporal variations. The specific general problems requiring special attention are structural soils, chemical weathering, slope formation and equiplanation, depression and asymmetric valley formation, rock debris, pingo-like depressions associated with permafrost degradation, frost-action gullies, and periglacial sedimentation. The most important regional problems needing detailed study include: the extent of permafrost, active-layer thickness, the relation between various glacial and periglacial periods, climatic and morphogenetic types of periglacial phases, differentiation of periglacial phenomena in the general relief, the characterization of present periglacial zones, practical applications of periglacial research, and terminology. The organization of studies and dissemination of information are also considered. The program is to be presented to the International Geophysical Congress in Stockholm in 1960.—From SIPRE.

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50670. DYME, HARRY CHAIM, 1912– . Arctic field trial of USAF survival rations, Blair Lake, Alaska, January 1950. Wright Air Development Center, Wright Patterson Air Force Base, Ohio, Aug. 1950. 135 p. illus., tables, map. (U.S. Air Force. AF Technical report no. 6019.) 22 refs.

Report on the operational suitability, under conditions of arctic winter survival, of two rations viz.: Food packet, individual, survival SA–1; and Food packet, survival, ST–1. Physiological and psychological observations were made for 10 days on men active in making camp and in survival procedures necessary for subsistence. Palatability, acceptability, and dietary value of the rations are analyzed and discussed, and recommendations for improvement made.

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DYME, HARRY CHAIM, 1912– , *see also* Taylor, A. A., *and* H. C. Dyme. Air Force survival feeding. *1957.* No. 55343.

50671. DZERDZEEVSKIĬ, BORIS L'VOVICH, 1898– . T͡Sirkulʹat͡sionnye skhemy sezonov goda v severnom polusharii. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geogr., Jan.–Feb. 1957. no. 1, p. 36–55, graphs, maps.) 19 refs. Text in Russian. ***Title tr.:*** Circulation patterns of seasons of the year in the Northern Hemisphere.

The usual division of the year into four seasons with fixed dates of beginning and end based on astronomical data, does not correspond to the actual changes of climatic, hydrologic, pedologic and biologic processes, which depend upon distribution of atmospheric pressure and circulation. From study of the last 55 years of the Northern Hemisphere, division of the year into six seasons is suggested: pre-spring, spring, summer, fall, pre-winter and winter, each with characteristic type of air circulation. These types are schematically shown on text maps which include the arctic regions. Average beginning dates and data on duration of the six seasons are given (p. 54) for the central area of European U.S.S.R. Scarcity of meteorological data for the arctic regions is noted.

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50672. EADE, KENNETH EDGAR. Geological reconnaissance by helicopter in New Quebec. (Canadian mining journal, Apr. 1958. v. 79, no. 4, p. 118–21, illus.) 7 refs. Paper to 26th annual Convention of the (Canadian) Prospectors and Developers Association, 1958.

Presents historical background, organization of survey party, operational procedure, and appraisal of this method of geological reconnaissance. Operation Fort George (53°50′ N. 79°01′ W.) was carried out by the Geological Survey of Canada, beginning before break-up in 1957; approx. 35,000 sq. mi. east of James Bay was mapped on a scale of 1 in.-8 mi. with a Bell 47G and a De Havilland Beaver helicopter. Of the total area, about 750 sq. mi. is underlain by Archean volcanic rocks with associated minor amounts of meta-sedimentary rocks. The variation in forest cover from barren ground to heavy coniferous forest required a change in mapping technique. On the Hudson Bay coast and the adjacent islands are Proterozoic rocks. Major folding is recognized in granite and granite gneiss in the central part of the area. Presence of copper and iron deposits may be of interest to prospectors.

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50673. EAST, WILLIAM GORDON, 1902– , *and* **A. E. MOODIE,** *Editors.* The changing world: studies in political

geography. London, Harrap, 1956. 1040 p. maps.

Collective work on the impact of events of 1945–55. References to the Arctic and subarctic include discussion on: the North's significance in the national life of Canada by N. L. Nicholson in *The confederation of Canada*, p. 328–29; Soviet territorial gains in the North by W. G. East in *Land frontiers and frontier problems of the Soviet Union*, p. 413–16; effects of Great Circle air routes on Mackinder's theory by W. G. East in *The Soviet Union and the 'Heartland'*, p. 444–45; and influences of arctic Great Circle routes by O. H. K. Spate in *The Pacific*, p. 530–32. In chapter 5, *Problems of Scandinavia and Finland*, W. R. Mead refers to boundaries, the Lapps, economic resources, etc. *The political geography of the Arctic* by T. Lloyd is abstracted in this volume under the author's name.

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50674. EASTWOOD, ALICE, 1859–1953. A collection of plants from the Aleutian Islands. (Leaflets of western botany, Jan. 31, 1947. v. 5, no. 1, p. 9–13.)

Contains a list of 135 species collected by H. Chandler in 1945 while on duty in the Navy, on Attu, Adak and Great Sitkin Islands, consolidated in a table. This seems to be the first recorded collection from Great Sitkin, a small rocky islet in the Aleutian chain.

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50675. EASTWOOD, ALICE, 1859–1953. A list of plants from Dall and Annette Islands, Alaska. (Leaflets of western botany, Jan. 16, 1957. v. 8, no. 5, p. 102).

Contains a simple list of 16 species from Annette and 18 from Dall, islands in the southern part of the Alexander Archipelago in southeastern Alaska. A posthumous publication. ***Copy seen:*** DA.

50676. EASTWOOD, ALICE, 1859–1953. New boreal species of *Castilleja*. (Leaflets of western botany, Feb. 1936. v. 1, no. 17, p. 193–95.)

Contains descriptions of *C. eximia* (Forrester Island, Southeast Alaska, July 1913, by H. Heath), *C. kuschei* (Dawson, Yukon, by A. Kusche, July, 1916), and *C. mexiae* n. spp. (Mt. McKinley Park, Alaska, July 13, 1928, by Y. Mexia). ***Copy seen:*** DA.

EATON, MAX A., *see* Döös, B. R., *and* M. A. Eaton. Upper-air analysis . . . *1957*. No. 50584.

50677. EBELING, FREDRIK HARALD, 1909– . Arbetskraftsfrågor inom ett storskogbruk i Norrbottens län. (Skogen, *Stockholm*, Jan. 1, 1955. årg. 42, nr. 1, p. 4–7, illus.) Text in Swedish. ***Title tr.:*** Manpower problems at a large forestry concern in Norrbotten county.

Describes efforts since 1950 of a state-owned forest district in lower Norrbotten to get and retain workers. The district, which includes a desolate area between the Pite and Lule Rivers, has sparse population and a low standard of living. Lumbering used to be seasonal winter work, and in the 1940's many local workers moved to the cities. Since 1950, the necessity for stream-lining forest work, and providing permanent employment, good wages, housing, etc. is recognized. A community housing program has been started, with schools, health and social facilities; also building loans and vocational courses for forestry employees. ***Copy seen:*** DA.

50678. EBELING, FREDRIK HARALD, 1909– . Lövskogen och återväxtproblemen i det norrländska skogsbruket. (Sveriges natur. Årsbok, 1957. årg. 48, nr. 4A, p. 40–53, illus.) Text in Swedish. ***Title tr.:*** The deciduous forest and the regrowth problem in Norrland's forestry.

Forestry in this northern province of Sweden is now midway from the old regime of exploitation to production of recent growth. The cubic mass is about equal to that of 1926 but large mature trees are mostly replaced by secondary shoots, and the struggle against unwanted deciduous vegetation (birth, willow, alder, and others) is intensive and costly. Seeds of deciduous trees mature in one year, pine requires three consecutive good seasons for budding, blooming, and seed production of a good harvest. Spruce requires two years. Conifers do not grow from roots or stumpage. Clearing and burning are necessary to provide soil nutrients and sunlight which decrease with latitude and altitude. Species must be evaluated for future uses and growth requirements and consideration given to the scenic, faunal, and floral assets of mixed forests. ***Copy seen:*** DLC.

50679. EBELING, FREDRIK HARALD, 1909– . De nuvarande Norrlandslinjen inom svenskt skogsbruk - tillfällig mo-

deriktning eller välgrundad nydaning? (Skogs- och lantbruks-akademien. Tidskrift, 1957. årg. 96, nr. 4, p. 264–88, illus., maps.) Approx. 150 refs. Text in Swedish. Summary in English. ***Title tr.:*** The present policy in Norrland forestry; a passing fashion or well-founded planning?

The new forestry methods have evolved as a result of experiments in the period of transition from former exploitation to production for the future. Biological factors are taken into account in areas where nutritive resources of the soil are scarce and competition is keen among trees, and between trees and other vegetation. Future profits are a factor in planning for larger and uniform wood lots suited to modern techniques, and in study of potential uses of timber in years to come. ***Copy seen:*** DA.

EBNÖTER, PAUL, *see* Gilardi, A., *and* P. Ebnöter. Erfolgreiche Wiedererwärmung . . . *1957*. No. 51183.

ECHEISTOVA, V. B., *see* Vinberg, N. A., *and* V. B. Echeistova. Sovetskaĭa arkheologicheskaĭa literatura za 1950 g. *1953*. No. 55820.

50680. ECKARDT, THEO. Bericht über den gegenwärtigen Stand der "Flora der UdSSR." (Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie, May 1957. Bd. 77, Heft 2–3, p. 218–25.) 2 refs. Text in German. ***Title tr.:*** A report on the present status of *Flora SSSR*.

The history of this important flora (No. 9058, 30132 and 35655 of *Arctic Bibliography*) is outlined and comparison made with the first complete Russian flora of K. F. Ledebour (No. 9808). Some aspects of the work as a whole are critically considered, and each volume in turn is briefly reviewed. In all they cover an estimated 17,000 species (in 160 families), as compared with 6668 species, 1139 genera and 146 families in Ledebour's work. The largest family is Cyperaceae with 533 species, followed by Ranunculaceae (513 species); the largest genus is *Astragalus* with 849 species (compared with 168 species recorded by Ledebour). A tendency to split the genera and the strong influence of the taxonomic concepts of the first editor V. L. Komarov (who died in 1945) are noted, as well as some useful innovations such as giving the species' total distribution, its economic importance, occurrences of fossil representatives, etc. The flora is considered as an important contribution to botanical science.

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50681. ECKBLAD, FINN EGIL, 1923– . Norges Sarcoscyphaceer. (Blyttia, 1957. bd. 15, hefte 1, p. 3–13, 3 illus.) 15 refs. Text in Norwegian. Summary in English. ***Title tr.:*** The Sarcoscyphaceae of Norway.

Contains a key to Norwegian species and brief descriptions of six, also three occurring in Denmark and Sweden. *Plectania coccinea* (Nordland, Norway) and *Anthopeziza protracta* (Nordland and Troms) are included. ***Copy seen:*** DA.

50682. ECKBLAD, FINN EGIL, 1923– . Some operculate Discomycetes new to Norway. (Friesia, 1956. bd. 5, hefte 3–5, p. 223–30.) 18 refs.

Contains an annotated list of ten species, among them *Helvella arctica*, found at Sørfjord in Troms, northern Norway. ***Copy seen:*** DLC.

50683. ECKENHOFF, JAMES E. The physiology of hypothermia. (New York Academy of Medicine. Bulletin, May 1958. v. 34, no. 5, p. 297–302.) 4 refs.

Information is presented on differences between hibernation and hypothermia; means of producing hypothermia, adjuncts to these means; effects of hypothermia on man, specifically with regard to metabolism, respiration, and cardiovascular, nervous and renal functions.

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50684. ECKFELDT, JOHN W. An enumeration of the lichens of Newfoundland and Labrador. (Torrey Botanical Club. Bulletin, June 25, 1895. v. 22, no. 6, p. 239–60.)

Lists the authenticated lichens of these little explored regions, about three hundred species, many varieties and forms, some regarded as new; many types are common to both hemispheres. In Labrador, the collection was made on the Strait of Belle Isle (mainly), along the coast from Battle Harbour north to Seal Islands, thence to Hamilton Inlet.

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50685. ECKHOFF, JOHAN A. R., 1920– . Den norske laksestamme og dens økonomiske muligheter. (Naturen, 1949. årg. 73, nr. 6, p. 161–80, 6 illus., 6 diagrs., text map.) Text in Norwegian. ***Title tr.:*** The Norwegian salmon stock and its economic possibilities.

Salmon are found in rivers throughout Norway but the annual harvest is small. The life cycle is described: increased catch depends on conditions in streams where salmon are hatched, on their return from the sea to spawn, and on regulation of both coastal and inland catch from May to late summer. Adequate fish ladders, and protective measures are required, the latter especially where industrial construction affects fish traffic in rivers. ***Copy seen:*** DGS.

ÉDEL, VIOLETTE, *see* Mouriquand, G., *and others.* L'hypothermie . . . *1957.* No. 53426.

ÉDEL, VIOLETTE, *see* Mouriquand, G., *and others.* L'hypothermie . . . *1957.* No. 53427.

50686. EDERSTROM, HELGE ELLIS, 1908– , *and* D. G. McINTYRE. Metabolic rate changes in newborn dogs exposed to cold. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 33–34.)

In an environment of 3–8° C., metabolic rate in dogs less than six days old, almost doubled from thermoneutrality (ca. 30° C.), yet rectal temperature dropped several degrees. In older animals, especially those more than three weeks old, metabolic rate also doubled but core temperature remained fairly constant, suggesting that inability to regulate temperature in the newborn is not due to low heat production but rather to high heat loss.

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EDERSTROM, HELGE ELLIS, 1908– , *see also* McIntyre, D. G., *and* H. E. Ederstrom. Metabolic factors . . . development of homeothermy in dogs. *1958.* No. 53015.

50687. EDGAR, NORMAN S. The effect of recent developments on prospecting in the North. (Western miner and oil review, May 1958. v. 31, no. 5, p. 41.)

Suggestions for mineral prospecting around Great Slave Lake south to Lake Athabasca are given in connection with recent plans for road and railroad construction in this area. Preparation of prospects for examination by a geologist or engineer, is outlined, and sampling procedures are described.

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50688. EDHOLM, OTTO GUSTAF, 1909– , *and others.* Cold injury. (Journal of physiology, Dec. 1957. v. 139, no. 2, p. 14P–15P.) Ref. *Other authors:* R. H. Fox, H. E. Lewis, *and* R. K. Macpherson.

Report on delayed reaction in arms submerged for short periods in water of 1.5° to 16° C. The injury was confined to the skin and subcutaneous tissue and lasted for several days; it appears to be distinct from frostbite, immersion foot or chilblains. ***Copy seen:*** DNLM.

50689. EDHOLM, OTTO GUSTAF, 1909– . Polar physiology. (Advancement of science, June 1957. v. 13, no. 53, p. 411–12.)

A discussion on the meaning and essence of polar physiology; effect of polar environment: cold, light and darkness; work program of the Spitsbergen Expeditions (Dr. Mary Lobban, 1953 and 1955) and the British Antarctic Expedition (1955–58); special problems to be studied on the latter expedition.

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50690. EDLUND, ERIK. En älgskadeinventering i Åsele. (Skogen, *Stockholm,* Nov. 15, 1957. årg. 44, nr. 22, p. 731–32, illus.) Text in Swedish. ***Title tr.:*** Inventory of elk damage at Åsele.

More than half the pine and spruce planted on 147 (of 926) hectares in the Mo och Domsjö forest property was damaged by grazing elk in summer and early fall of 1957. ***Copy seen:*** DA.

EDMAN, MARJORIE, *see* Mitchell, H. H., *and* M. Edman. Nutrition and resistance to climatic stress . . . man. *1949.* No. 53336.

EDSTRAND, HANS GUNNAR, 1901– . *see* Nordström, H. F., *and others.* Model tests . . . icebreakers. *1952.* No. 53632.

50691. EDWARDS, D. K. Effects of acclimatization and sex on respiration and thermal resistance in *Tribolium;* Coleoptera: Tenebrionidae. (Canadian journal of zoology, June 1958. v. 36, no. 3, p. 363–82, illus., tables.) 36 refs.

Flour beetles acclimatized to 18° C. showed increased survival at −3° C. but no respiratory compensation during acclimation. Males kept at 30° C. survived exposure to −3° C. better than corresponding females. This difference in survival was abolished by prolonged maintenance of the insects at 18° C.

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EDWARDS, R. Y., *see* Ritcey, R. W., *and* R. Y. Edwards. Trapping and tagging moose . . . *1956*. No. 54324.

50692. EDWARDS, WILLIAM HENRY, 1822–1909. Catalogue of the diurnal Lepidoptera of America, north of Mexico. (American Entomological Society. Transactions, 1877. v. 6, p. 1–68)

This catalog of 506 species includes at least 35 recorded in Alaska, northern Canada and Greenland.

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50693. EFIMENKO, PETR PETROVICH, *and* **N. A. BEREGOVAÎA.** Paleoliticheskie mestonakhozhdeniîa SSSR. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Materialy po arkheologii SSSR, 1941. no. 2, p. 254–90, 303.) Refs. Text in Russian. Summary in French. ***Title tr.:*** Paleolithic sites in U.S.S.R.

List of sites, indicating excavation years, finds and main published results; includes those of the Angara and Lena basins (p. 286–88), Kola Peninsula (p. 290). ***Copy seen:*** DLC.

50694. EFIMOV, A. I., *Editor.* Merzlye gornye porody Alîaski i Kanady; sbornik stateĭ. Moskva, Izd-vo inostrannoĭ litry, 1958. 264 p. illus., plates, map (3 fold.). Refs. to each chapter. Text in Russian. ***Title tr.:*** Frozen strata of Alaska and Canada; a collection of articles.

Contains Russian translations of American and Canadian scientists' papers, most of them abstracted in earlier volumes of this bibiography as indicated by number, viz: R. F. Black: Permafrost, a review, 1954 (No. 33613); J. L. Jenness: Permafrost in Canada, 1949 (No. 8054); G. R. MacCarthy: Geothermal investigations on the Arctic Slope of Alaska, 1952 (No. 24067); D. M. Hopkins, T. N. V. Karlstrom, R. F. Black, J. R. Williams, T. L. Péwé, A. T. Fernald and E. H. Muller: Permafrost and ground water in Alaska, 1955 (No. 40405); A. L. Washburn: Classification of patterned ground and suggested origins, 1956 (No. 48863); S. Taber: Origin of Alaska silts, 1953 (No. 32357); T. L. Péwé: Effect of permafrost on cultivated fields, Fairbanks area, Alaska, 1954 (No. 36747); J. A. Pihlainen: Building foundations on permafrost, Mackenzie valley N. W. T. 1951 (No. 25089); W. A. Trow: Frost action on small footings, National Research Council, Highway Research Board, Bulletin 100, Washington, D.C., 1955; E. F. Rowland, L. H. Stolzy, G. A. Grabb: Frost determination by electrical resistance, *ibid.*, Bulletin 100, 1955; K. A. Linell: Frost design criteria for pavements, *ibid.* Bulletin 71, 1953; Haley, J. F.: Cold-room studies of frost action in soils, 1953 (No. 29522). ***Copy seen:*** DGS.

50695. EFIMOV, ALEKSEĬ VLADIMIROVICH, 1896– . Iz istorii kartografii russkikh geograficheskikh otkrytiĭ xvii–xviii vv.; doklad na Bûro Otdeleniîa istoricheskikh nauk. (Akademiîa nauk SSSR. Vestnik, May 1957. god 27, no. 5, p. 100–102, map.) Text in Russian. ***Title tr.:*** From the history of the cartography of Russian discoveries in the 17th–18th centuries; report to the Bureau of the Department of Historical Sciences.

Summary of a paper delivered Feb. 19, 1957, on contemporary maps incorporating results of Russian geographic exploration: those of Chirikov, Bering, and other members of the Great Northern Expedition, one compiled in 1763 by the Chukchi geographer Nikolaĭ Daurkin were discussed. Daurkin's map of the Northeast of Asia, including Chukotka and Kamchatka is reproduced.

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50696. EFIMOV, IVAN KIRILLOVICH. O razvitii sel'skogo khozîaĭstva v Aldanskom gornopromyshlennom raĭone. (Akademiîa nauk SSSR. ĬAkutskiĭ filial, *Yakutsk.* Trudy, seriîa ėkonomicheskaîa, 1957, vyp. 1, Materialy po ėkonomike sel'skogo khozîaĭstva ĬAkutii, p. 104–119, tables, map.) Text in Russian. ***Title tr.:*** Development of agriculture in the Aldan mining region.

Outlines present situation of agriculture in Aldan gold- and mica-mining region, which consists of the Aldan, Uchur, Tommot and Timpton administrative districts. Climate and soils are reviewed. Composition and agricultural character of eleven collective and three state farms are treated. Potato, vegetable and hay production and livestock (horses, cattle, sheep) are discussed, with statistical tables. Prospects for development of agriculture, especially in northern and southern parts of this region are considered; an increase is expected in reindeer, sheep and cattle raising, dairying, and market gardening. ***Copy seen:*** DLC.

50697. EFIMOV, IVAN KIRILLOVICH. Osnovnye puti snabzheniîa produktami

sel'skogo khozîaĭstva severo-vostochnykh raĭonov ÎAkutskoĭ ASSR. (Akademiîa nauk SSSR. ÎAkutskiĭ filial, *Yakutsk*. Trudy, seriîa ėkonomicheskaîa, 1957, vyp. 1. Materialy po ėkonomike sel'skogo khozîaĭstva ÎAkutii, p. 120–24, map.) Ref. Text in Russian. ***Title tr.:*** Main ways of supplying the northeastern districts of Yakut A.S.S.R. with agricultural products.

The Kolyma, Indigirka and Yana River regions are rich in gold, tin, wolframite, lead, silver, iron, coal and building materials; 23% of the population of Yakutia lives there, 70% of it is engaged in industry; only 30% is in agriculture, on 65 collective, three state, and some other, small farms. Natural conditions generally (tundra, forest-tundra and taiga soils) are poor for agriculture, and at present the crops are insufficient to meet the needs of the population. Required improvements are discussed and concrete plans proposed; statistical data and economic map of the area are given.

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EFIMOV, IVAN KIRILLOVICH, *see also* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . ÎAkutskoĭ ASSR. *1958*. No. 49171.

EFIMOV, P. N., *see* Olenin, A. S., *and* P. N. Efimov. Torfîanye resursy . . . *1958*. No. 53749.

50698. EFREMOV, A. Pervaîa Karskaîa. (Vokrug sveta, Nov.–Dec. 1957, no. 11, p. 8–14; no. 12, p. 21–26, illus., maps.) Text in Russian. ***Title tr.:*** The First Kara Expedition.

Account (based on documents) of the First Kara Sea Expedition in 1920 by a fleet of 15 vessels, including four icebreakers under command of Nikolaev; it was undertaken to bring Siberian grain to Arkhangel'sk to relieve the food shortage in northern European U.S.S.R. caused by the civil war. Preparation of the expedition, repairing vessels, salvaging coal from ships wrecked in the White Sea narrows during the war, etc., are described. The vessels left Arkhangel'sk on Aug. 7, passed through Yugorskiy Shar Strait, and arrived at Nakhodka Bay in Obskaya Bay on Aug. 18. Difficulties in loading cargo and departure from Nakhodka on Sept. 20 are recounted. The expedition reached Arkhangel'sk about Oct. 6 with 8,600 tons of flour and 1,700 tons of other goods.

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50699. EFREMOV, IVAN ANTONOVICH, 1907– . Rasskazy. Moskva, Izd-vo "Molodaîa gvardiîa," 1950. 184 p. illus. Text in Russian. ***Title tr.:*** Tales.

Seven short stories by the Soviet paleontologist and writer, one of them *Almaznaîa truba* (Diamond pipe), p. 49–82, tells of Soviet geologists noticing a resemblance between the geological structure of Central Siberia and the South African plateau and beginning to search for diamonds in the Yenisey-Lena region; the story ends with a discovery of the first diamantiferous pipe. When this discovery actually happened in 1955, a full decade after the story was first published, B. Alekseev reviewed it in *Ogonëk*, 1956, no. 29, p. 26, stressing the accuracy of Efremov's fancy.

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50700. EGGAN, FRED. Glottochronology: a preliminary appraisal of the North American data. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958, p. 645–53.) 19 refs.

Reviews the dating results obtained by time-depth analysis including M. Swadesh's calculations (cf. No. 37676) on the separation dates of Eskimo and Aleut, Eskimo dialects, Tlingit and Athapaskan, etc. ***Copy seen:*** DSI.

50701. EGGVIN, JENS. Ekkoskreimelding under Lofotfisket. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier 1949, *pub.* 1950, no. 7, p. 47–50, map.) Text in Norwegian. ***Title tr.:*** Echo reporting of cod in the Lofoten fishery.

Depth, distribution, and concentration of fish have been determined by echo patterns and reported by grid squares of maps for use by the fishing fleet since 1935. Locations of fish in the Lofoten area have been broadcast from Bodø twice daily, since Feb. 1947. Effectiveness of the method is briefly discussed.

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50702. EGGVIN, JENS. Straummåling på fiskefeltet. (Fiskets gang, June 1, 1954. årg. 40, nr. 22, p. 278–79, table.) Text in Norwegian. ***Title tr.:*** Current measurements on the fishing grounds.

Measurements at depth as aid in orienting nets was investigated on the Lofoten fishing field in 1954. Currents at depth are often the reverse of surface flow. Gauges, with time settings, were suspended from floats held at 3 m. depth to

avoid wind effects. Measurements were made at three depths three times daily. Operation of the instrument developed for use by a single fishing vessel is described; a measurement can be made in less than one-half hour.

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EGGVIN, JENS, *see also* Tâning, A. V., *and others.* Records . . . Norwegian-Icelandic herring stock . . . *1957.* No. 55309.

50703. EGIAZAROV, B. KH. Devonskie otlozheniîâ zapadnoĭ chasti arkhipelaga Severnoĭ Zemli. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 67. Sbornik statei po geologii Arktiki, vyp .7, p. 13–35, cross-section.) 5 refs. Text in Russian. ***Title tr.:*** Devonian deposits in the western part of the Severnaya Zemlya archipelago.

Presents the results of 1954 field investigations by the author and K. S. Ageev on Pioneer Island, with use of material collected by the Severozemel'skaîâ expedition of 1950–51. The Silurian deposits are briefly outlined, and stratigraphy of lower, middle, and upper Devonian deposits of Pioneer and the other islands of Severnaya Zemlya are described and divided in series. Their characteristics are compared with those of Devonian deposits in different parts of Taymyr Peninsula. Development of Devonian deposits in Severnaya Zemlya and in Spitsbergen are compared and the differences in their setting noted.

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50704. EGIAZAROV, B. KH. Geologicheskoe opisanie arkhipelaga Severnoĭ Zemli. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiîâ Sovetskoĭ Arktiki, 1957, p. 388–423.) Text in Russian. ***Title tr.:*** Geological description of the Severnaya Zemlya archipelago.

Contains a new and comprehensive outline of the relief, stratigraphy, volcanism and tectonics. The archipelago has an area of 360,000 km.²; and its largest islands are: Oktyabr'skoy Revolyutsii (14,200 km.²) Bol'shevik (11,540 km.²) Komsomolets (8,502 km.²), Pioner (1,547 km.²). Geological exploration and mapping was carried on during 1948–54 by the author, S. V. Voskresenskiĭ, N. G. Zagorskaîâ, K. S. Ageev, and V. F. Medvedev. Stratigraphy is fully treated. Volcanic formations of Precambrian and Caledonian ages are described. Tectonic structures of various ages are discussed. Of useful minerals, cassiterite, scheelite, galenite, sphalerite, and fluorite are reported to have been found. A geological map in scale 1:2,500,000, which accompanies the volume, covers the archipelago. ***Copy seen:*** DLC.

50705. EGIAZAROV, B. KH. Osnovnye rezul'taty rabot Koriâkskoĭ ėkspediîsii za 1957 god. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informaîsionnyĭ biûlleten', 1957. vyp. 6, p. 33–36.) Text in Russian. ***Title tr.:*** Main results of the work of the Koryak expedition for 1957.

Reports, in brief, geologic mapping at 1:1,000,000 scale; investigation of Paleozoic, Mesozoic, Tertiary and Quaternary deposits; and prospecting work in the Koryak Ridge region (approx. 61°–63° N. 168°–176° E.). An area of 23,000 km.² was geologically mapped. The lithology, stratigraphy and tectonics of the region are summarized. Coal seams, cinnabar, chromite and other ores are mentioned. ***Copy seen:*** DGS.

50706. EGOROV, A. D., *and* **V. B. KUVAEV.** O dvukh interesnykh kormovykh rasteniîâkh severnogo oleniîa na severo-vostoke ÎAkutii. (Akademiîa nauk SSSR. Izvestiîa, ser. biol., Mar.–Apr. 1958. no. 2, p. 222–26, table.) 9 refs. Text in Russian. Summary in English. ***Title tr.:*** On two interesting fodder plants for reindeer in northeastern Yakutia.

Contains a study of *Chosenia macrolepis* and *Chamaenerium latifolium,* both valuable in reindeer pastures of the Verkhoyansk Mts., also suitable for cultivated pastures. Chemical analyses of these and some other fodder plants are tabulated. *Chosenia* has a mass of very high foliage and is much better than the others. Both plants may be used for decoration of parks in the northern regions, but *C. macrolepis* can be acclimatized also in the middle zone of the U.S.S.R. ***Copy seen:*** DLC.

50707. EGOROV, A. V. Ėtapy stroitel'stva Novosibirskoĭ GÉS. (Gidrotekhnicheskoe stroitel'stvo, Jan. 1958. god 27, no. 1, p. 8–12, illus., tables.) Refs. Text in Russian. ***Title tr.:*** Construction phases of the Novosibirsk hydroelectric plant.

Ice conditions are described in relation to control of low Ob' waters. Course of

construction of the rock-filled dam is reviewed with illus. and 1956–1957 schedule. Specially-built structures to protect unfinished portions of the dam from spring ice jams are described. Hummock-ice thicknesses exceeded 2 m. in places.
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EGOROV, D. B., *see* Ginzburg, A. I., *and others.* Geologiia mestorozhdenii redkikh ėlementov . . . *1958.* No. 51198.

EGOROV, D. F., *see* Til'man, S. M., *and* D. F. Egorov. Novye dannye po stratigrafii . . . r. Kolymy . . . *1957.* No. 55441.

EGOROV, N. I., *see* Vialov, S. S., *and* N. I. Egorov. Èksperimental'noe opredelenie sil pucheniia gruntov. *1958.* No. 55797.

50708. EGOROV, NIKOLAĬ SERGEEVICH, *and* **A. N. POLIN.** Aktinomitsety-antagonisty pochv srednego techeniia r. Leny. (Mikrobiologiia, Jan.–Feb. 1955. t. 24, vyp. 1, p. 67–72, tables.) 7 refs. Text in Russian. ***Title tr.:*** Actinomycete antagonists in the soils of the middle course of the Lena River.

Lowest number of actinomycetes was found in uncultivated, acid and humid soils. Ninety percent of this flora was made up by *Actinomyces griseus, A. globisporus* and *A. albus.* Seventy-six percent of the studied strains were found to be antagonists; 63.2% suppressed the growth of *B. coli.* ***Copy seen:*** DLC.

50709. EGOROVA, A. A. Issledovanie mikroflory kishechnika arkticheskikh zhivotnykh. (Mikrobiologiia, 1940. t. 9, vyp. 1, p. 59–64, table.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** Investigation into the microflora of the intestine of arctic animals.

A study of this flora in four common mammals (polar bear, hare, walrus and beluga) and five birds. A great variety of microorganisms with different physiological properties, was found. Several forms of *B. coli* were found in most animals. The intestines of single specimens of ptarmigan and tern contained few, except ammonia-producing, bacteria. ***Copy seen:*** DLC.

EGOROVA, I. S., *see* Saks, V. N., *and* I. S. Egorova. Geologicheskoe stroenie . . . Talmyrskoĭ nizmennosti. *1957.* No. 54517.

EGOROVA, I. S., *see* Voronov, P. S. *and* I. S. Egorova. Analiz orientirovki . . . rechnykh dolin . . . *1958.* No. 55878.

EHLE, NILS HERMAN NILSSON, 1873– , *see* Gustafsson, K. Å. The relationship of *Calamagrostis neglecta* . . . *lapponica* . . . *1946.* No. 51453.

EHRET, C. F., *see* Webb, R. B., *and others.* A study . . . temperature dependence of radiation sensitivity . . . spores . . . *1958.* No. 55958.

50710. EHRLICH, PAUL R. Lepidoptera collected in the tundra-taiga ecotone at Kotzebue, Alaska. (Entomological news, Jan. 1958. v. 69, no. 1, p. 17–19.) 4 refs.

Lists 18 species of lepidopters collected in late June, 1956 at Kotzebue (68°52′ N. 162°37′ W.), with notes on ecological distribution. ***Copy seen:*** DSI.

EHRLICH, PAUL R., *see also* Barr R., *and* P. R. Ehrlich. Mosquito records . . . *1958.* No. 49553.

50711. EHRMANTRAUT, WILFRED R., *and others.* Cerebral hemodynamics and metabolism in accidental hypothermia. (Archives of internal medicine, 1957. v. 99, no. 1, p. 57–59, table.) 6 refs. *Other authors:* H. E. Ticktin *and* J. F. Fazekas.

Report on two patients, males, one aged 58 with a body temperature of 21° C. the other 43, chilled to 29.4° C. The second patient was exposed to cold due to drunkenness. Investigations revealed an initial reduction in cerebral blood flow, oxygen consumption and delivery. Cerebral vascular resistance was increased although mean arterial blood pressure was normal. No tissue damage was noted in the patient with 21° temperature; no permanent deterioration in cerebral hemodynamics and metabolism occurred. ***Copy seen:*** DNLM.

50712. EHRSTRÖM, CHRISTMAN, Fåglar på Nordostlandet, Spetsbergen. (Fauna och flora, 1958. årg. 53, häfte 6, p. 257–71, map, illus.) Text in Swedish. Summary in German. ***Title tr.:*** Birds in Nordaustlandet, Spitsbergen.

Reports observations made while with the Swedish glaciological expedition July 15–Aug. 28, 1957; the base camp was at Kinnvika (80°03′ N. 18°18′ E.) on Murchisonfjorden. A general geographical description of the area is given, as well as a brief comparison with bird life

in Vestspitsbergen, where this fauna is considerably richer due to geographical and climate conditions. Seventeen species were observed, the most common being arctic tern (*Sterna macrura*) and northern eider (*Somateria mollissima borealis*). ***Copy seen:*** SPRI.

50713. EICHER, GEORGE JOHN, 1916– . Aerial methods of assessing red salmon populations in western Alaska. (Journal of wildlife management, Oct. 1953. v. 17, no. 4, p. 521–27, illus., table.) Ref.

Description of a method with data on optimal airplane type, speed and altitude. The use of photography, type of camera, filters, etc., are also discussed as well as ways of interpreting photographs.

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50714. EICHNER-LARSEN, IB. Polaregne og frimaerker. (Atuagagdliutit: Grønlandsposten, June 20, 1957. Ukiut 97-iat, nr. 13, p. 12–13, illus.) Text in Danish and Eskimo. ***Title tr.:*** Polar regions and stamps.

Contains details and descriptions of stamps with polar motifs issued during the last few years. ***Copy seen:*** DLC.

50715. EIDE, EGIL HVOSLEF, 1899– . Svalbardkullkomiteen. (Teknisk ukeblad, Sept. 1953. årg. 100, nr. 32, p. 713–21, illus., map, tables.) Text in Norwegian. ***Title tr.:*** The Svalbard Coal Committee.

Contains excerpts with comments on the Committee's proposition concerning mining on Svalbard. Norwegian export and import statistics, data on consumption, coal deposits, composition of Longyear, Kings Bay, and Svea coal, production, use, and coke production and by-products are tabulated and discussed.

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EIDEBO, HOLGER, *see* Ahlborg, F., *and others*. Fotogrammetrisk kraftledningsprojektering. *1958*. No. 49135.

50716. ÉÏDEL'KIND, L. SH., *and* A. A. GUNDOBIN. Modernizafsiâ kitoboînoï bazy "Aleut." (Rybnoe khozîâîstvo, July 1957. god 33, no. 7, p. 22–24.) Text in Russian. ***Title tr.:*** Modernization of the whaling mothership, *Aleut*.

Information is presented on the size and tonnage of the ship, new sanitary arrangement (laundry, bath, shoe repair shop, etc.), boilers, electric generators and services, radio equipment, repair shop, fuel and water tanks; oil extracting and processing equipment, etc.

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50717. EIDHEIM, HARALD. Erverv og kulturkontakt i Polmak. Oslo, Norsk Folkemuseum, 1958. 68 p. maps, tables, diagrs. (Samiske samlinger. bd. 4, pt. 1.) About 30 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Economic life and cultural contacts in Polmak.

Polmak (70°03′ N., 28° E.) in North Norway had, at the 1950 census, 970 inhabitants, 90% Lapp, 10% Norwegian and mixed. The author worked there as a school teacher in 1947 and 1948 and visited the area in 1952 and 1953. The climate (average yearly temperature −0.6° C., average precipitation 350 mm.) and natural resources are outlined. Income per capita is very small and state subsidies large. The population has increased by 90% since 1920 due to a remarkably high nativity rate and decrease in infant mortality. In the same period, emigration and immigration have been in balance. That few people leave the region is attributed to social conflict between Lapps and Norwegians creating a barrier around areas with a predominantly Lapp population.

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50718. ÉÏGENSON, M. S. O vozmozhnoï prirode paleoklimaticheskikh kolebaniï v techenie chetvertichnogo perioda. (Akademiâ nauk SSSR. Komissiâ po izucheniîû chetvertichnogo perioda. Trudy, 1957. t. 13, p. 427–33.) Text in Russian. ***Title tr.:*** On the possible nature of paleoclimatic fluctuations during the Quaternary period.

Presents information on solar activity and its cyclic changes. The various cycles of solar activity have time intervals of 5.5 to 11, 24, 44, 80–90, 600 and 1,500–2,000 years. These intervals are evaluated and comparison with the periods of Quaternary history is discussed. Some coincidence is recognized. Changes of solar activity are considered a cause of earth glaciation, particularly of Quaternary glaciation. The climate of the present period has in general a compensating character, the polar and subpolar zones warming up and a slight cooling in tropical and subtropical zones.

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50719. EIKELAND, H. J. Forsøk med havresortar 1950–1954. (Forskning og forsøk i landbruket, 1956. bd. 7, hefte 4,

p. 317–51, 21 tables.) Agricultural Research Board, Norway, report no. 8. Text in Norwegian. Summary in English. ***Title tr.:*** Trials with oat varieties 1950–54.

Report is made of trials at seven experiment stations. Of the ten varieties tested, five are Norwegian-bred strains, five are Swedish. At the station in Nordland, nothern Norway, oats on sandy soil suffered from drought. On peat soil four early strains were productive. Two of these are not reliable every year.

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50720. EINARSEN, JOHAN, 1903– . Fiskeripolitikk; forelesninger holdt over norsk fiskeripolitikk ved Universitetet i Oslo. Oslo, Nov. 1954. 113 p. tables. Refs. in Text. Text in Norwegian. ***Title tr.:*** Fishing policy; lectures on Norway's fishing policy given at the University of Oslo.

Combined geographic, hydrologic and marine biological factors make the western and northern shores of Norway an unusual fishing ground. Herring in the west and cod in the north are most important. Fisheries are a major part of the national economy, hence the development and regulation of fishing policy is in the national as well as the fishermen's interest. Local labor, financial, and technical changes, and international interests are explained. The rise of seining and trawling in Lofoten since 1942 is dealt with (p. 93–109). The controversy with England over territorial limits is discussed (p. 109–113). The Norwegian law of 1935 concerning a four-mile limit north of 66°28.8′ N. was found in accordance with international law by the Hague ruling of 1951, a decision of importance also to Iceland, where limits were drawn accordingly for the entire coast in 1952.

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50721. EINARSSON, HERMANN. Frequency and distribution of post-larval stages of herring *Clupea harengus*, L. in Icelandic waters. Reykjavik, Leiftur, 1956. 39 p. illus., tables, maps. (Reykjavík. Haskoli Islands. Atvinudeild Fiskideild.) 18 refs.

Account of investigations conducted during 1948–1951 with comprehensive review of earlier stages. All the waters of the coastal shelf around Iceland are covered. A general discussion deals with methodology, temperatures on the spawning grounds, time and duration of spawning, spawning centers, etc.

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50722. EINARSSON, HERMANN. The Icelandic herring and racial problems. (International Council for the Exploration of the Sea. Rapports et procès-verbaux, 1958. v. 143, pt. 2, p. 45–52, illus., tables, map.) 12 refs.

A critical analysis of the concept of races in Icelandic and Atlantic herring, as based on morphological (meristic) and biological (spawning, etc.) characters. Author points out lack of absolute differences or limits between spawning communities; subspecies, micro sub-species, and tribes, etc. This, and the apparent mixing of tribes gives the latter and similar concepts only a limited value. ***Copy seen:*** DLC.

EINARSSON, HERMANN, *see also* Tåning, A. V., *and others.* Records . . . Norwegian-Icelandic herring stock . . . *1957.* No. 55309.

50723. ÉĬNOR, OL'GERT LEONARDOVICH. Korrelя̂tsiя̂ i vozrast osnovnykh razrezov verkhnego paleozoя̂ Pechorsko-Kuznet͡skoĭ uglenosnoĭ oblasti. (Sovetskaя̂ geologiя̂, Jan. 1958. god 1, no. 1, p. 25–39, table.) 60 refs. Text in Russian. Summary in English. ***Title tr.:*** Correlation and age of main cross-sections of the Upper Paleozoic in the Pechora-Kuznetsk coal-bearing province.

Tectonic movements and paleogeography were similar in the Pechora coal basin and the great West Siberian depressions during the Carboniferous and Permian periods. Comparison is made of the character of the geological sections, their fauna and flora and geological history of the Pechora coal basin, the Pay-Khoy Mountain range, the Taymyr, the Tunguska depression of the Precambrian Siberian platform and of the Kuznetsk and some smaller, adjacent depressions. "The replacement of marine formations by coal-bearing lagoon and later on by purely coal-bearing continental formations is typical of all those regions." The results of synchronization of standard sections in the Pechora, West Taymyr, Tunguska, Kuznetsk, and Minusinsk basins are shown (p. 27). The coal-bearing deposits of all these basins belong to the Lower and Upper Permian. The age of the continental-marine Ostrog

series in the Kuznetsk basin is still controversial. ***Copy seen:*** DLC.

EISEMAN, B., *see* Wotkyns, R. S., *and others*. Prolonged hypothermia in experimental pneumococcal peritonitis. *1958.* No. 56118.

EISENHART, JAY N., *see* Barry, T. A., *and* J. N. Eisenhart. Ross' geese . . . Southampton . . . *1958.* No. 49556.

50724. EISLER, RONALD. The influence of light on early growth of chinook salmon. (Growth, Sept. 1957. v. 21, no. 3, p. 197–203, tables.) 6 refs.

A study on the effects of the visible portion of the spectrum upon fingerlings of this species. The results showed that the light-reared groups were 40.5, 41.8, and 41.3% longer than dark-reared controls and 56.2, 58.9, and 56.9% heavier. No significant difference is noted between the light-reared groups. When weight was plotted against time no difference between the groups was noted in the first six weeks of the experiment, but a considerable one in the last six weeks. ***Copy seen:*** DNLM.

50725. EKBERG, DONALD R. Respiration in tissues of goldfish adapted to high and low temperatures. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 40.)

Report on O_2-consumption of excised brain, liver and gills at 30° and 10° C. Only the gills (whole or homogenized) from fish adapted to a 10° environment showed a higher Q_{O_2}. Gill oxygen-consumption was smaller in the winter than in the summer. ***Copy seen:*** DLC.

50726. EKBERG, DONALD R. Respiration in tissues of goldfish adapted to high and low temperatures. (Biological bulletin, June 1958. v. 114, no. 3, p. 308–316, illus., tables.) 20 refs.

Account of experiments with goldfish adapted to 10° or 30° C. Of several tissues tested only gill homogenates showed higher O_2-consumption in cold-adapted fish. Oxygen consumption in both groups decreased from July to February, however, with significant differences between the groups. O_2-consumption in the cold adapted fish was inhibited to a lesser degree by 5.4×10^{-4} M iodacetate than in the other group.

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50727. EKBERG-HEDQVIST, ALLAN. Norrlands roll i vårt näringsliv. (Tidning för byggnadskonst, Dec. 1, 1952. årg. 44, nr. 23, p. 929–31.) Text in Swedish. ***Title tr.:*** Norrland's role in our industrial life.

Development of industry and economy in this northern province is compared with the rest of Sweden.

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50728. EKBLAW, WALTER ELMER, 1882–1949. A letter from Greenland. (Torreya, July 1915. v. 15, no. 7, p. 153–54.)

Extract from a letter written at Thule June 30, 1914, with some notes on plants observed. ***Copy seen:*** DLC.

50729. EKEBERG, LARS OLOF, 1912– . Människor under fjäll. (Svenska turistföreningen. Årsskrift, 1957. p. 93–107, illus.) Text in Swedish. ***Title tr.:*** People below a mountain.

Sketch of a settler's family which has been at Njunjes (approx. 67° N. 17°30′ E.) northern Sweden, for about 150 years. Everyday life (hunting, fishing, etc.) now and in earlier times is described.

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50730. EKLUND, BO. Årsringsbreddens klimatiskt betingade variation hos tall och gran inom norra Sverige åren 1900–1944. Stockholm, 1955. 150 p. tables, graphs. (Stockholm. Statens skogsforskningsinstitut. Meddelanden, bd. 44, nr. 8.) 42 refs. Text in Swedish. Summary in English, p. 140–50. ***Title tr.:*** Variation in the widths of the annual rings in pine and spruce due to climatic conditions in northern Sweden during the years 1900–1944.

From core samples from undisturbed stands of pine and spruce in northern Sweden, annual ring index series were derived which permit evaluation of climatic conditions as expressed by ring widths for individual years. The two trees record the influence of climate in a markedly different manner. But when allowance is made for the difference, the two adjusted index series are in striking agreement. Secondary climatic factors, blooming and cone production, geographic location, site, altitude, latitude, and ground moisture conditions can also be represented by annual ring index series. Comparative studies of extreme good and bad years and meteorological records might enable derivation of climate functions. Methods of deriving the indices

and their use for forest thinning and volume calculations are discussed.

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EKLUND, BO, *see also* Holmsgaard, E. Svenske årringsundersøgelser. *1957*. No. 51791.

EKLUND, CARL MILTON, 1905– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

50731. EKLUND, OLOF. Malmgeologisk forskning på Nordostgrönland. (Teknisk tidskrift, Apr. 1944. årg 74, häfte 14, p. 393–401, maps, table.) 2 refs. Text in Swedish. ***Title tr.:*** Mineralogical investigations in northeast Greenland.

Greenland's geology is outlined with emphasis on the mineralogical development. Pertinent areas are described and illustrated by profiles. Chemical and mineralogical data on assays examined 1933–34 are tabulated, and a geological and technical account is given of discoveries in northeast Greenland, based on the author's field work 1933–34 in the Scoresby Sund area, northern part of Jameson Land, and the area between 73°20′ N. and 76° N.; also on mineralogical observations made by various geologists before 1934. ***Copy seen:*** DLC.

50732. *ELECTRONICS.* Antenna alarm anticipates ice on DEW Line. (Electronics, Oct. 1, 1957. v. 30, no. 10, p. 216, illus., diagr.)

The unit, consisting of a detector mounted on the antenna and an indoor control box, gives warning of conditions (temperature/precipitation) favorable for ice formation. Precipitation on the heated detector coil causes a short circuit which increases the grid voltage of a cathode-follower amplifier, coupled through a transformer to the alarm system. A thermostat is connected in series with the detector coil, and the alarm remains inoperative unless both conditions for ice-formation exist concurrently. The antenna heater can be controlled automatically by the alarm.

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50733. *ELECTRONICS.* Military research pays off. (Electronics, June 1, 1957. v. 30, no. 6, p. 16, 20, graph.)

Contains brief account of some of the developments in the field of electronics which will make polar flight safer and more useful. Navigational radar devices enable a plane's crew to determine the nature of the surrounding terrain, detect bad weather, and locate nearby planes. Planes equipped with radar profile recorders are currently mapping some 40,000 sq. mi. of Baffin Island.

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50734. ÈL'ÎANKO, GARRI. Zimnee plavanie v Khel'sinki. (Fizkul'tura i sport, 1957. god 27, no. 3, p. 31, illus.) Text in Russian. ***Title tr.:*** Winter swimming in Helsinki.

Describes several Finnish winter swimming clubs with a total membership of 500 (50 women). The activities include diving into 4 x 8 m. ice-holes. The therapeutic effects of icy water on rheumatism and other ailments is mentioned. ***Copy seen:*** DLC.

50735. ELIASSEN, ARNT. Carl-Gustaf Rossby. (Naturen, 1958, årg. 82, nr. 4, p. 195–202, port.) Text in Norwegian. ***Title tr.:*** Carl-Gustaf Rossby.

Reviews his work in the fields of meteorology and oceanography. This Swedish scientist (b. 1898, d. 1957) joined the staff of Vilhelm Bjerknes in Bergen in 1920 and went to the Massachusetts Institute of Technology in 1926. His teaching of the basic concepts of the Bjerknes air mass theory and stressing the unsolved problems of meteorologic and oceanographic dynamics are noted. The IGY investigations of chemical composition of the atmosphere and of precipitation were organized as a result of Rossby's pioneer studies.

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ELIOT, THEODORE S., *see* Willson, J. T., *and others*. Blood . . . hypothermic dog. *1958*. No. 56068.

50736. ELISEEV, NIKOLAĬ ALEKSANDROVICH. Genezis sul'fidnykh mednonikelevykh mestorozhdeniĭ. (Leningrad. Universitet. Vestnik, 1958. god. 13, no. 24, ser. geologii i geografii, vyp 4, p. 5–16.) 17 refs. Text in Russian. Summary in English. ***Title tr.:*** Genesis of copper-nickel sulfide deposits.

Study of the genesis of copper-nickel sulfide ores in Monche Tundra and the Pechenga District. Syngenetic and epigenetic ores are distinguished. Nickel, copper, cobalt, and other metals of syngenetic sulphide ores have their source in hydrothermal solutions of ultrabasic and basic magmas; epigenetic sulphides were formed as a result of later recrystallization of syngenetic sulphides

in the process of hydrothermal metamorphism. A similarity between the Noril'sk copper-nickel ores and those in Kola Peninsula is noted.

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50737. ELISEEV, NIKOLAĬ ALEKSANDROVICH. Shchelochnye granity massiva Chagveuaĭv. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 208–210, illus., tables.) Text in Russian. ***Title tr.:*** Alkaline granites of the Chagveuayv massif.

Presents geological and petrographic characteristics of the alkaline pluton 4–5 km. northwest of the lower Zapadnaya Litsa River; based on A. A. Polkanov's work (No. 25189). Geologic structure of the plutonic and country rocks is briefly characterized. Three groups of rocks are reviewed: the albite granosyenites, the quartzic and albite nordmarkites, and the pegmatite and quartzic veins. Two phases of development of the intrusion are noted; chemical analyses of the rocks are presented. ***Copy seen:*** DLC.

50738. ELISEEV, NIKOLAĬ ALEKSANDROVICH. Shchelochnye granity massiva Gremîakha-Vyrmes. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 197–207, tables, map.) Text in Russian. ***Title tr.:*** Alkaline granites of the Gremyakha-Vyrmes massif.

Reviews alkaline granites in the Gremyakha-Vyrmes pluton, southeast of the middle Tuloma River (approx. 68°40′ N. 32°40′ E.). The article is based on previous work by A. A. Polkanov and the author (cf. No. 25186, 25190). The plutonic and country rocks, and their geologic structure are reviewed and illustrated on map. Three complexes of the pluton are characterized: the peridotites-pyroxenites-gabbro-syenites; the nepheline formation, and the alkaline syenites and alkaline granites, the last more precisely than the others. Their structure, component minerals, chemical composition and other petrographic characteristics are given. ***Copy seen:*** DLC.

ELKINS, FRANKLIN T., *see* Davis, T. R. A., *and* F. T. Elkins. Cold weather test . . . evacuation bag. *1957.* No. 50462.

ELKINS, WINSTON A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

50739. ELLINGSEN, JAKOB. A.s Bjørkaasen Gruber. (Tidsskrift for kjemi, bergvesen og metallurgi, Mar. 1950. årg. 10, nr. 2B, p. 57–60, illus., profiles, diagr.) Text in Norwegian. ***Title tr.:*** Bjørkaasen Mines, Inc.

Describes this mine south of Ofotfjord (68° N.) in Norway. A gangue ore of pyrite and quartz blended with copper, iron and zincblende is located in a mica-schist-marble area bordered by granite and gabbro. The ore is believed to have developed as a result of volcanic activity. Layout, equipment and operation, capable of 120,000 tons/year production, are explained in detail. Mine personnel numbers about 300. Since 1917, modernized production totals over 2 million tons of ore concentrates. ***Copy seen:*** DLC.

ELLIOTT, ROBERT IRVIN KEITH, *see* Mann, T. P., *and* R. I. K. Elliott. Neonatal cold injury . . . *1957.* No. 53108.

50740. ELLIS, DEREK V. Some observations on mammals in the area between Coppermine and Pond Inlet, N.W.T., during 1954 and 1955. (Canadian field-naturalist, Jan.–Mar. 1957. v. 71, no. 1, p. 1–6, text map.)

Contains observations (mostly on sight records) on 18 mammal species, including polar bear, arctic fox, wolf, caribou, ringed seal, harp seal, square-flipper, walrus, three species of whales, squirrels, lemmings and mice. The biology and life habits of the jar seal (*Phoca hispida*) are described in rather more detail than the others. ***Copy seen:*** DA.

50741. ELLIS, DEREK V. Some temperature and salinity records from the Canadian Arctic during 1954 and 1955. (Canada. Fisheries Research Board. Journal, 1956. v. 13, no. 4, p. 591–98, tables, map.) 8 refs.

Account of observations made at oceanographic stations in Coronation Gulf, near Cambridge Bay, and near the north coast of Baffin Island. Records were usually collected from six levels down to 100 m. Observations during winter and summer (1954–55) in the Lancaster Sound area showed seasonal changes in conditions studied. Salinities below 30% were found in all depths of two stations at the western end of the section studied. ***Copy seen:*** DI.

50742. ELLIS, FRANK H. Stevenson Field, Winnipeg's memorial airport. (Ca-

nadian geographical journal, July 1957. v. 55, no. 1, p. 38–41, 6 illus.)

Includes story of Western Canada Airways flights by Fred J. Stevenson, Mar. 25–Apr. 20, 1927, from Cache Lake on Hudson Bay Railway to Fort Churchill; his successful transport of men and material, and selection of Fort Churchill as the ocean terminus of the railway.

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50743. ELLIS, JOB BICKNELL, *and* **B. M. EVERHART.** New fungi, mostly Uredineae and Ustilagineae from various localities, and a new *Fomes* from Alaska. (Torrey Botanical Club. Bulletin, Aug. 31, 1895. v. 22, no. 7, p. 362–64.)

Describes 12 new fungi, including *Fomes tinctorius* from Admiralty Island, Alaska. ***Copy seen:*** DLC.

ELLIS, W. A., *see* Wenger, J. N., *and others.* Scatter propagation. *1958.* No. 55991.

EL'NIK, A., *see* Zinchenko, V., *and* A. El'nik. Chto pokazali . . . "Dneprogés." *1958.* No. 56226.

50744. ELOVSKAÎA, L. G. Kratkaîa informaŝsiîa o rabote provedennoĭ ĬAkutskim otdeleniem Vsesoĭuznogo obshchestva pochvovedov za 1957 g. (Pochvovedenie, Nov. 1958, no. 11, p. 99.) Text in Russian. ***Title tr.:*** Brief account of the activities of the Yakut Division of the All-Union Society of Pedologists in 1957.

The Division has 13 members and their work in 1957 was investigation of soils in central Yakutia; a general soil map for districts of the Vilyuy basin resulted, also soil maps of several collective and state farms. ***Copy seen:*** DLC.

ELSNER, ROBERT WELLINGTON, 1920– , *see* Adams, T., *and others.* Racial variations . . . cold stress. *1957.* No. 49113.

ELSNER, ROBERT WELLINGTON, 1920– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

ELSNER, ROBERT WELLINGTON, 1920– , *see* Carlson, L. D., *and others.* Immersion . . . tissue insulation. *1958.* No. 50132.

50745. ELVEY, CHRISTIAN THOMAS, 1899– . Aurora borealis. (Advances in electronics and electron physics, 1957. v. 9, p. 1–42, illus., diagrs., graphs, table.) 68 refs.

Reviews major contributions to experimental studies of auroras, and describes observations since 1954 at the Geophysical Institute, University of Alaska, and IGY rocket observations. Auroral forms, heights and dimensions, motions, noise (audio, radio), development of auroral displays, radio and radar observations, and spectroscopy (spectrum and identifications, spectrophotometry, and hetechrome photometry) are dealt with.

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50746. ELVEY, CHRISTIAN THOMAS, 1899– , *and* **A. BELON.** Description of the all-sky camera, its method of operation; an instrument (Ascagraph) for measuring the film. College, Alaska, 1957? 43 p. illus., diagrs., maps. (Alaska. University. Geophysical Institute. Scientific report no. 1, IGY Project no. 1.1, NSF grant no. Y/1.1/44.)

Contains a comprehensive description of this camera which has been employed on a routine basis for auroral observations. Two camera models, one a synchronous model with an electric 24-numeral clock, the other with a mechanical clock, are planned to operate automatically. The camera will be used to obtain auroral photographs at stations throughout Alaska, the United States generally, and in the Antarctic as part of the IGY program. Instructions for installation and operation of the equipment are given. Observations will be reduced to prepare synoptic maps at 15 min. intervals during the IGY Regular World Days and the Special World Intervals. Two methods used in preparing synoptic maps for observations with cameras located at College and Point Barrow are given. A simple recording device known as an ascagraph is described for transferring, semi-automatically, the data from the camera film to the synoptic map.

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50747. ELVEY, CHRISTIAN THOMAS, 1899– . Problems of auroral morphology. (National Academy of Sciences. Proceedings, Jan. 1957. v. 43, no. 1, p. 63–75, illus., maps, diagr.) 13 refs. *Also pub. as:* Alaska. University. Geophysical Institute. Contributions, ser. B, no. 15.

A general interpretation of auroral and related phenomena is given together with selected illustrative data on auroras observed in Alaska. A graphical presenta-

tion developed by Heppner is shown for the aurora of Jan. 25–26, 1952. Synoptic maps, of the distribution of auroras over Alaska during Mar. 26–27, 1954, and Sept. 30, 1954, are given. Also reproduced are photographs of selected auroras taken at College, Alaska with the all-sky camera. Normal heights of various types of auroral arcs are shown schematically. The auroral program for the IGY is expected to afford solutions to many of the current problems. ***Copy seen:*** DLC.

ELVEY, CHRISTIAN THOMAS, 1899– , *see also* Davis, T. N., *and* C. T. Elvey. Construction . . . all-sky camera. *1955*. No. 50460.

50748. ELY, H. B. A problem and a plea: the fate of a Lapland river. (Norseman, July–Aug. 1957. v. 15, no. 4, p. 244–45, illus., map.)

Damming the Lilla Lule in northern Sweden as proposed would put a stop to salmon fishing, flood reindeer grazing grounds, and destroy beauty of the landscape. Atomic power is suggested as a means of providing electricity without harming such areas. ***Copy seen:*** DLC.

50749. EMEL'IANOV, V. L. Promysel pesʦa na Taĭmyre. (Ratsionalizatsiia okhotnich'ego promysla, 1958, vyp. 7, p. 54–57, illus.) Text in Russian. ***Title tr.:*** Hunting arctic fox in Taymyr.

Arctic fox represents 95–97% of the total catch of hunters in the Taymyr National District. Trapping methods of the Omulevaya hunting station (in the northeast of the peninsula) and of collective-farm hunters, also those of a special hunting expedition to remote areas, are briefly sketched; the most successful hunters are listed.

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50750. EMERTON, JAMES HENRY, 1874–1930. New spiders from Canada and adjoining States, no. 3–4. (Canadian entomologist, Oct. 1923, v. 55, p. 239–43, illus.; Mar. 1925, v. 57, p. 65–69, illus.)

Contains (in no. 3) descriptions of eight new species: *Grammonota* n. sp. (Moose Island, James Bay) and *Cybaeus reticulatus, morosus* and *signifer,* all ranging from Vancouver Island to Alaska are included. Of the six new species described in no. 4, *Ceratinopsis labradorensis* n. sp. is from Cabot Lake, Labrador. No. 1–2 of this series do not contain arctic material. ***Copy seen:*** DSI.

50751. EMSLIE-SMITH, DONALD. The special vector cardiogram in hypothermia. (British heart journal, Apr. 1958. v. 20, no. 2, p. 175–82, illus., table.) 11 refs.

Description and analysis of spatial vector cardiogram loops constructed on the basis of records from five patients and one dog. Controls were made from the same subjects both before and after cooling. Patients were cooled down to 30.5°, the dog to 29° C.

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ENEQUIST, GERD, *see* International Geographical Congress, 1952. Proceedings. *1957*. No. 51939.

ENGER, P. S., *see* Steen, J., *and* P. S. Enger. Muscular heat production in pigeons . . . cold. *1957*. No. 55125.

50752. *ENGINEERING.* By way of the North Pole. (Engineering, Aug. 15, 1958. v. 186, no. 4823, p. 205, illus.)

Reviews voyage of the *Nautilus,* July–Aug. 1958. Layout of the submarine's interior is illustrated, its main specifications are given. ***Copy seen:*** DGS.

50753. *ENGINEERING.* Navigating across the Pole; problems in guiding submarines. (Engineering, Aug. 22, 1958. v. 186, no. 4824, p. 238, illus.)

Discusses systems applicable to submarine navigation: astro-navigation, echo-sounder, dead-reckoning, and inertial guidance; only the latter two effective in the vicinity of the Pole. Navigational equipment of the *Nautilus* is reviewed; position determined by "solar fix" after 1,830 mi. submerged was within ten mi. of that established by its dead-reckoning, estimated, and SINS systems.

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50754. *ENGINEERING AND CONTRACT RECORD.* Soils problems differ on northern roads. (Engineering and contract record, Sept. 1958. v. 71, no. 9, p. 112–13+, illus.)

Main problems are excavation of moss and frozen material, long hauls, and need of special light equipment. One part (by Mannix Co., Ltd.) of a $250 million road (1200 mi.) and bridge-building program in the Yukon and Northwest Territories is described: the Dawson-Aklavik road with subsidiaries to Flat Creek, Eagle Plain Oil Reservation, and Clinton Creek; a 550-mile link between Great Bear and Great Slave Lakes (underway); and the Port Radium-Coppermine road (pro-

jected). Grading of the Fort Rae-Yellowknife road calls for 26-ft. subgrade, with a sand coat and quarry-crushed rock top. Drainage ditches are completed before the scrapers build the fill; fill is placed over moss and brush buried along the centerline to act as insulation for permafrost base. Scrapers remove 12 in. of material at three-four day intervals, allowed for thawing. Transportation of personnel and equipment is briefly dealt with. ***Copy seen:*** DLC.

50755. ***ENGINEERING AND MINING JOURNAL.*** Tractor-ripper slices frozen ground. (Engineering and mining journal, Oct. 1958. v. 159, no. 10, p. 93–94, illus., tables, diagrs.)

A new technique for excavating frozen ground, using a ripper mounted on a Caterpillar D9 tractor, is described. Performance and cost data from a mining company are tabulated and compared with the blasting method. The excavation procedure consists essentially of ripping in an established pattern of furrows 6 in. deep to provide additional traction for further passes, and cross-ripping at right angles to the initial furrows. The ripping patterns and procedures are varied to meet material size, handling, and transportation requirements. A straight shank can successfully be used for a variety of materials and penetration depths due to its ability to stay down in blocky and slabby materials, while curved shanks are best used in non-slaty materials.—From SIPRE. ***Copy seen:*** DLC.

50756. ***ENGINEERING NEWS-RECORD.*** Fast-acting ice remover effective at 30 below zero. (Engineering news-record, Feb. 21, 1957. v. 158, no. 8, p. 222.)

Reports development of a chemical exothermic ice remover in pellet form, known as the Tropical Ice Remover; it may be applied safely to good concrete, and will not damage asphalt surfaces.

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50757. ***ENGINEERING NEWS-RECORD.*** Going up: new line to aid DEW Line. (Engineering news-record, July 17, 1958. v. 161, no. 3, p. 23–24, illus.)

Construction is underway on two Ballistic Missile Early Warning System (BMEWS) stations, one in Alaska and one in Greenland. Scheduled for completion in 1960, the two installations are to cost $800 million. Technical facilities consist of four firing detection or surveillance radars with 400 x 165 ft. reflectors, and three tracking radars for tracing the trajectory; the latter are to be mounted atop the 30 ft. high roof of a 150 x 370 ft. transmitter building, and will have radomes 168 ft. in diameter. Power for the Greenland station will be supplied by three 11,500-kw. steam turbine generators aboard a vessel to be permanently moored near the base and completely enclosed by a wall. Contractors are listed. ***Copy seen:*** DLC.

50758. ***ENGINEERING NEWS-RECORD.*** Insulated forms protect winter pour. (Engineering news-record, July 3, 1958. v. 161, no. 1, p. 56, illus.)

Describes winter concrete protection device used during road construction near Buffalo, N.Y. A blanket of balsam-wool was placed between forms, and wales aggregates were preheated to 50°–60° F.; thermometers inserted into recesses in the concrete to check the heat of hydration. Thermal conductivity of the blanket (two in. thick for pours less than 24 in. thick, one in. for greater pours) was kept under 0.27 BTU/sq. ft./hr./° F. temperature difference between the two surfaces.

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50759. ***ENGINEERING NEWS-RECORD.*** One way to beat the cold. (Engineering news-record, Feb. 14, 1957. v. 158, no. 7, p. 55, illus.)

Describes an insulated cover system, consisting of steel joists, metal encased fibrous glass insulating panels and tarpaulin sides, permitting production of post-tensioned concrete beams at subfreezing temperatures. Heated concrete is placed in metal forms, the trusses with the insulated covers are pushed forward and the protecting exterior tarpaulins dropped down. Steam is then injected underneath the cover to assure a minimum temperature of 70°–80° F. After five days, the pre-stressing cables are placed in the girder, the beams remaining under the cover another two days. Economical production is claimed due to saving in steam and ease in handling of the insulated covers.

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50760. ENGLES, FRANK J. The trip was worth taking. (Alaska sportsman, May 1958. v. 24, no. 5, p. 18–19, illus.)

Recounts impressions from a prospecting trip in 1908 from Deering, then a

mining camp at the mouth of the Inmachuck River, around the head of Kotzebue Sound to the Kivalina River (68° N. 164°25′ W.) and return. Notes on Eskimos and white settlers along the route are included.

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ENISEĬ, see Vysotskiĭ, A. Al'manakh "Eniseĭ." *1956.* No. 55900.

ENTIN, MARTIN A., *see* Ogilvy, W. L., *and others.* Vascular changes . . . cold injury. *1957.* No. 53709.

ENZENBACH, R., *see* Tauber, K., *and others.* Stoffwechseluntersuchungen . . . *1957.* No. 55338.

50761. ENZMANN, ROBERT DUNCAN. The formation of ice platters. (Iowa. Academy of Science. Proceedings, 1958. v. 65, p. 274–77, illus., table.)

Describes circular or ellipsoidal, floating pieces of ice, mostly from 5.5 to 8 cm. in diameter and 0.5 to 0.8 cm. thick at the rim, observed in summer 1955, on a pool about 2 m. in radius and 5 to 50 cm. deep, at a DEW Line site in Labrador. Temperatures of air and water are noted; conditions of formation and behavior of platters are described; size data are given in table. This formation is attributed to the rotary motion of the water, pine oil, fine spray, and suitable temperature.

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50762. EPPLEY, R. A. Earthquake history of the United States, part 1, Continental United States and Alaska. Revised edition through 1956. Washington, D.C., 1958. 80 p. 2 maps incl. 1 fold., tables. (U.S. Coast and Geodetic Survey, no. 41–1.) 44 refs.

Includes (p. 71–78) a chronological list of earthquakes in Alaska, 1786–1956, based largely on fragmentary or partial reports. ***Copy seen:*** DGS.

50763. ÉPSHTEĬN, E. M. Étnograficheskie nablûdeniîa G. R. Derzhavina na russkom Severe. (Sovetskaîa étnografiîa, 1958, no. 6, p. 96–99.) 3 refs. Text in Russian. ***Title tr.:*** G. R. Derzhavin's ethnographic observations in the Russian North.

Notes Derzhavin's sojourn (1784–1785), as governor, in Olonetskaya Guberniya, which included at that time the present Karelian ASSR and part of eastern Arkhangel'skaya Oblast'. An excerpt from his *Podennaîa zapiska* (daily notation) dealing with the life and customs of the local Lapps is cited (p. 97–99) in full. ***Copy seen:*** DLC.

50764. ÉPSHTEĬN, L. M. Zooplankton Onezhskogo zaliva i ego znachenie v pitanii sel'di i molodi ryb. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîu Belogo moriîa, 1957. vyp. 1, p. 315–54, illus. tables, maps.) 32 refs. Text in Russian. ***Title tr.:*** The zooplankton of Onega Bay and its significance in the diet of herring and young fish.

Study based on field work during 1951–1952. Species composition of this plankton and its zonal and seasonal variations are considered; quantitative changes dealt with. Conditions in the numerous inlets of the Bay are also discussed. Nutrition of herring- and smelt-fry is analyzed from emergence to maturity; this is done for different areas on a year-round basis. Changes of diet with age of the fish are also considered as well as fluctuations in the quantity of food taken. ***Copy seen:*** DLC.

50765. ÉPSHTEĬN, L. M. Zooplankton Voronki Belogo moriîa u zapadnogo poberezh'îa Kaninskoĭ zemli. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîu Belogo moriîa, 1957. vyp. 1, p. 350–54, illus. table, map.) 6 refs. Text in Russian. ***Title tr.:*** The zooplankton of the White Sea narrows, near the west coast of Kanin Peninsula.

Reports on investigation made in Aug.–Sept. 1950. Species composition (in taxonomic order); geographic origin of forms; the biomass, etc., are discussed. ***Copy seen:*** DLC.

50766. ÉPSHTEĬN, S. V. Nablûdeniîa nad formami rel'efa, svîazanymi s deîatel'nost'îu lednikov. (*In:* Akademiîa nauk SSSR. Geologicheskiĭ institut. Kratkoe polevoe rukovodstvo, 1957. p. 110–19, illus.) 19 refs. Text in Russian. ***Title tr.:*** Observation on forms of relief influenced by the activity of glaciers.

Outlines the way to conduct a geologic and geomorphic survey of forms of glacial denudation and deposition. Forms of glacial erosion and abrasion: glacial troughs, valleys and hanging valleys, fiords, cirques and trenches, are characterized and method of their survey is described. Forms of glacial accumulation are treated: tills, different types of moraines, drumlins, eskers, kames. Ef-

fect of permafrost on development of glacial forms is mentioned.

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EPSTEIN, H., *see* Blumer, W., *and others.* A technique . . . studying . . . drugs . . . hypothermia. *1957.* No. 49781.

50767. ERÄ-ESKO, AARNI. Rovaniemen kivikauden tutkimuksista. (Suomen muinaismuistoyhdistys. Suomen museo, 1955. v. 62, p. 84–99, illus., maps, graph.) 15 refs. Text in Finnish. Summary in German. ***Title tr.:*** Stone-age investigations in Rovaniemi.

The prospect of land being inundated when dams are built on the Ounasjoki and Kemijoki for power development, has spurred archeological investigations in the Rovaniemi district. The 1954 and 1955 excavations yielded 130 stone-age dwellings, stone implements, and an amber pendant; comb-ceramic sherds of the so-called Äyräpää II,1 style; also discovered were some rock engravings on the west bank of the Marraskoski rapids of the Ounasjoki. ***Copy seen:*** DLC.

50768. ÈRASTOVA, V. M. Kharakteristika belomorskogo rybnogo promysla Karel'skoĭ ASSR. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîu Belogo moriâ, 1957. vyp. 1, p. 243–51, illus.) 3 refs. Text in Russian. ***Title tr.:*** Characteristic of White Sea fisheries of the Karelian A.S.S.R.

Outline based on four years' (1948–52) catch statistics, with data concerning fishing bases, catch per work unit, forms of fishing groups (kolkhoz, goslov, etc.) and their share in the production; species exploited; catches for the period 1933–1952; seasonal changes in fishing activities, etc. ***Copy seen:*** DLC.

50769. EREMEEV, V. P. Petrografiâ i nerudnye iskopaemye îužnoĭ chasti sredinnogo Kamchatskogo khrebta. (Akademiâ nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii, Trudy, 1957, vyp. 17, p. 107–142, illus., tables, map.) 19 refs. Text in Russian. ***Title tr.:*** Petrography and non-ore minerals in the southern part of the central Kamchatka Range.

Presents geologic characteristics and a petrographic outline of intrusive rocks. Prospects are indicated for exploration of non-ore minerals. The rocks characterized are: Proterozoic gneisses, quartz-sericite, micaceous and actinolitic schists, sandstones and quartzites, and Mesozoic porphyritic tufa and flagioclastic porphyrites caught by later intrusions. The occurrence of various intrusions are described. Composition of magmatic rocks, mainly pyroxenites, gneisses, granodiorites, hornblende diorites, is dealt with. As building material, special attention is given to basalts, tufa and pumice stone. ***Copy seen:*** DGS.

50770. ÈRGIS, GEORGIĬ USTINOVICH. G. P. Basharin: Istoriâ agrarnykh otnosheniĭ v ĪAkutii, 1956. (Sovetskaâ ètnografiâ, 1958, no. 1, p. 186–89.) 22 refs. Text in Russian. ***Title tr.:*** G. P. Basharin: History of agrarian relations in Yakutia, 1956.

Review of No. 43897. The merits of Basharin's work are acknowledged, though basic discrepancies with views of Marx, Engels and Lenin and disregard of former investigators' work (Sieroshewski and others) are pointed out and censured. The existence of private ownership of land in Yakutia in the 18th–19th centuries, claimed by Basharin and denied by the classicists of communist theory, is the main point at issue.

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ÈRGIS, GEORGIĬ USTINOVICH, *see also* Akademiâ nauk SSSR. ĪAkutskiĭ filial. Istoriâ ĪAkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957.* No. 49168.

ÈRGIS, GEORGIĬ USTINOVICH, *see also* Akademiâ nauk SSSR. ĪAkutskiĭ filial. Ocherk . . . îâkutskoĭ . . . literatury. *1955.* No. 49169.

50771. ERICKSON, BURT R., *and others.* Effect of environmental temperature in traumatic shock. (Society for Experimental Biology and Medicine. Proceedings, Jan. 1957. v. 94, no. 1, p. 1–4, illus. table.) 6 refs. *Other authors:* D. L. Smith *and* F. E. D'Amour.

Out of nine environmental temperatures studied, that of 20° C. was optimal for survival of rats in traumatic shock, both higher and lower temperatures being increasingly harmful. During shock the animals showed signs of poikilothermia, their body temperature approaching that of the environment.

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ERICKSON, G. P., *see* Kulp, J. L., *and others.* Isotopic studies . . . *1957.* No. 52563.

50772. ERICSON, SIGFRID, 1879– . Akka-Kvikkjokk; genom Sarekfjällen. (Svenska turistföreningen. Årsskrift, 1925. p. 259–72, illus., map.) Text in Swedish. ***Title tr.:*** Akka-Kvikkjokk, through the Sarek mountains.

A foot journey in Aug. 1924, from north to south across the Sarek national park (67° N. 17° E.) in northern Sweden is described. Camping equipment and supplies were carried; a zigzag route was followed along mainstream valleys and over passes between the major mountains. Terrain is described. Establishment of trails and tourist facilities along the route is recommended.

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50773. ERIKSEN, EDVARD ANDREAS. Noen erfaringer fra diamantboringer i Rana. (Tidsskrift for kjemi, bergvesen og metallurgi, May 1951. årg. 11, nr. 5, p. 61–68, profiles, illus., graphs, tables.) Text in Norwegian. ***Title tr.:*** Some experiences from diamond drilling in Rana.

Reviews the diamond-drill search of iron ore and limestone in the Rana region (approx. 66° 20–40′ N. 14–15° E.). Schistosity, folding, and chemical composition of the rock affect direction of the borehole. The nature and operation of the mechanical equipment is discussed in detail; American and Swedish apparatus are compared; efficient use and resetting of diamonds of varying size and quality are explained. Cost accounting per ton proved ore, and per meter of borehole, over a two-year period is divided operationally into 12 categories.

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50774. ERIKSEN, RUNE. Den snöpackade vägen; I, snöns egenskaper. (Svenska skogsvårdsföreningen. Tidskrift, 1954. årg. 52, nr. 2, p. 157–88, illus., tables, graphs.) 32 refs. Text in Swedish. Summary in English. Reprinted as Föreningen skogsarbeten och Kungl. domänstyrelsens arbetsstudieavdeling. Meddelande nr. 52, 1955. ***Title tr.:*** The snow-compacted road; I, snow properties.

Discusses the physical properties of ice, water and vapor, structural changes as result of compaction, and strength of snow. Bearing capacity of snow, measured at intervals after various treatments, increased in all cases with time period, and (possibly) falling temperature. Compaction and dragging by cat tractor and a special road-drag gave greatest bearing capacity; use of tractor alone the lowest. Bearing capacity and resistance to wear can be increased by greater compaction and strengthening union between snow particles, e.g., by crushing particles more thoroughly, mixing fine and coarse-grained snow, or by compaction at higher temperatures. Tables, graphs and illus. have captions in English. ***Copy seen:*** DA.

50775. ERIKSON, HARALD. The respiratory response to acute exercise of Eskimos and white. (Acta physiologica scandinavica, 1957. v. 41, fasc. 1, p. 1–11, illus., tables.) 13 refs.

A study of the respiratory gaseous exchange of ten Alaskan male Eskimos and ten whites, during rest and during and after a standard work performance on a bicycle ergometer. The Eskimos showed a higher resting metabolism but their work efficiency was almost the same as of the white. The Eskimos had a shorter recovery time. ***Copy seen:*** DNLM.

50776. ERIKSSON, BACKA E. Glaciological studies on the Mika Glacier in Sarek, 1956–57. (Geografiska annaler, 1958. v. 40, no. 1, p. 67–80, 4 diagrs., graphs, 7 tables.) 13 refs. Sarekstudier 4.

Results of accumulation, density, and ablation measurements made during the spring and summer 1957, on Mikkaglaciär (67°25′ N. 17°42′ E.) of the Sarek Mts. in northwest Sweden. Depth of snow cover in cm., density in gm./m.^{3}, standard deviations of measurements of thickness and accumulation in gm./m.^{2}, winter 1956–57, were measured at 49 places on four levels of the glacier. Comparisons were made with previous observations; mean density was in agreement with measurements on other European glaciers. Ablation measurements were made daily June 16–July 29, 1957, at eight places. Density of snow and firn at the surface, rate of ablation, and total ablation are summarized. Comparison of mean accumulation (95 gm./cm.^{2}) with mean ablation (170 gm./cm.^{2}) at the meteorological station (1,200 m.) resulted in net ablation of 75 gm./cm.^{2}. Ablation for the lower parts of the glacier was probably greater. ***Copy seen:*** DGS.

50777. ERIKSSON, FOLKE. Vintermerkostnader i Norrland. (Byggnadsindustrin, 1957. årg. 27, nr. 17, p. 533–36, diagrs., tables.) Text in Swedish.

Title tr.: Additional winter costs in Norrland.

Contains tabulated and graphed data on the extra, winter-construction costs of three-family dwellings at Umeå and Luleå in 1954–55 and 1955–56. These costs fall into nine groups: concrete work, site-clearing (ice, snow), inside plastering, heating of sheds, ground work, interruptions and reduced working pace, drying, brickwork, and temporary illumination.

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50778. ERIKSSON, JOHN. Studies in Corticiaceae (*Botryohypochnus* Donk, *Botryobasidium* Donk, and *Gloeocystidiellum* Donk). (Svensk botanisk tidskrift, July 2, 1958. bd. 52, häfte 1, p. 1–17, 9 illus.) 10 refs.

Eight species of the resupinate Hymenomycetes, especially of the Scandinavian Corticaceae are described, four species and one variety as new. *Botryobasidium isabellinus* n. comb. (Norrbotten and Torne Lappmark) and *B. pruinatum* (Torne Lappmark) are included.

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50779. ERIKSSON, JOHN. Studies in the Heterobasidiomycetes and Homobasidiomycetes-Aphyllophorales of Muddus National Park in north Sweden. Uppsala, A.-B. Lundequistska bokhand. 1958. 172 p., 50 illus., 24 plates, front. (Symbolae botanicae upsalienses, no. 16, pt. 1.) 106 refs.

Contains an introductory account (p. 1–36) of the Park, approx. 66°30′ N. 20° E., and of these fungi, and the fungi generally of spruce, pine, deciduous trees and some other substrates; mycofloras of various areas of Muddus Park are compared; and that of burnt wood considered. Swedish distribution of Aphyllophorales, new and rare species, are noted. Enumeration of the species follows (p. 37–160) with index.

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50780. ERIKSSON, RUNE. Medens friktion mot snö och is: 1, grundläggande betraktelser och friktion vid igångsättning; 2, friktion och rörelse, glidfriktion. (Föreningen skogsarbetens och Kungl. domänstyrelsens arbetsstudieavdeling. Meddelande, 1949. nr. 34–35, p. 1–63, illus., graphs, diagrs.). Refs. Text in Swedish. Summary in English. Reprinted from Norrlands skogsvårdsförbund. Tidskrift, 1949, häfte 2–3. ***Title tr.:*** Friction of sled runners on snow and ice: 1, general remarks and starting friction; 2, friction and movement, sliding friction.

English translation by W. Nupen pub. by U.S. Army, Corps of Engineers. Snow, Ice & Permafrost Research Laboratory, Wilmette, Ill., (23 p.) Copy at CaMAI.

"Laboratory and field measurements of friction with metal and wooden runners on snow and ice are discussed. Sliding friction was determined by measuring the retardation of freely moving sleds, and initial friction with a dynamometer. Coefficients of sliding friction varied from 0.006 to 0.3, and initial friction from nearly 0 to over 1. The coefficient of friction depends on the finish and dimension of the runner, air temperature, snow-particle size, water content of the snow, sliding speed and stress. Friction usually increases with falling temperatures: for steel runners, it doubled in the temperature range 0° to −30° C. and increased for wooden runners up to 40%. Sliding depends largely on the lubrication effect of the water layer between the snow or ice surface and the runner."—SIPRE.

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50781. ERLANDSSON, STELLAN. The chromosome numbers of three *Artemisia* forms. (Hereditas, 1939. bd. 25, häfte 1, p. 27–30, illus.) 5 refs.

Includes data on *A. borealis* from Godhavn, West Greenland, the chromosome number of which is 2n=18. It is a very polymorphous species; its variety *bottnica* (2n=36) on the northern shore of the Gulf of Bothnia must have immigrated into the present area when the Baltic Ice Lake was connected with the White Sea via the Kandalaksha Bay and the straits at Salla and Kitakajärvi in north Finland. ***Copy seen:*** DLC.

50782. ERLANDSSON, STELLAN. Cytological studies in *Potentilla anserina* L. and closely allied Scandinavian species; preliminary note. (Hereditas, 1942. bd. 28, häfte 3–4, p. 503–504) 5 refs.

Contains cytological data on *P. egedii*, first described from Greenland and found also on the Scandinavian arctic coast. Both Scandinavian and Greenland species have the somatic number 2n=28. One biotype from Troms has the hexaploid number 2n=42. *P. groenlandica* from Greenland has 2n=28 and 2n=42, but Scandinavian specimens have 2n=35. Both biotypes show bad fructification.

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50783. ERLANDSSON, STELLAN. Notes on *Panurginus romani* Auriv.; Hym. (Entomologisk tidskrift, 1958. årg. 79, häfte 1–2, p. 43–46, 2 illus.) 5 refs.

Contains a taxonomic discussion and data on distribution of *Panurginus romani* occurring in Åsele Lappmark.

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50784. ÉRLIKH, É. N. Voskhozhdenie na vulkan Ichinskiĭ. (Akademiîa nauk SSSR. Vulkanologicheskaîa stantsiîa. Biûlleten', 1958, no. 27, p. 55–59, illus.) Text in Russian. ***Title tr.:*** Ascent of the Ichinskiy Volcano.

Reports results of observations during the ascent with A. I. ÎAt͡skovskiĭ and V. D. Milovanovich, Aug. 30–31, 1956; the summit of Ichinskiy Volcano (55°40′ N. 157°45′ E.), with its three cupolas or dents (3,621, 3,870 and 3,985 m. above the sea level), crater, and ancient lava streams, fumaroles emitting gas and vapors, subterranean rumble and glaciers are noted. The volcano not yet totally extinct is of the solfatara type. Three photographs by A. I. ÎAt͡skovskiĭ are reproduced. ***Copy seen:*** DLC.

ÉRLIKH, R., *see Sovetskiĭ morîak.* Na strazhe morskikh granit͡s. *1957.* No. 55070.

ERMAKOV, N. P., *see* Avetisîan, G. A., *and others.* Nasha rodina . . . *1957.* No. 49441.

50785. ERMOLAEV, MIKHAIL MIKHAĬLOVICH, 1905– . O litogeneze plasticheskikh glinistykh morskikh osadkov. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Jan.–Feb. 1948, no. 1, p. 121–38, table, diagrs.) 22 refs. Text in Russian. ***Title tr.:*** On the lithogenesis of plastic clayey marine deposits.

Discusses various features of the plasticity and lithogenesis of marine sediments. Distinguishes special Atlantic type of bottoms in the aretic seas of Eurasia and describes the origin and occurrence of minerals in them. Bottom sediments taken in a core from the Kara Sea at 80°43′ N. 69°19′ E. are studied in detail; their stratification, physical and chemical characteristics are described and data presented in diagrams and table. Slimes of bottom sediments in various depths are reviewed. Occurrences of regular and irregular lithogenesis are outlined; activity of microorganisms is discussed. Special features of the lithogenesis of clayey marine sediments are noted, the hydrologic regime, and age are considered. ***Copy seen:*** DLC.

50786. ERSHOFF, BENJAMIN H., 1914– . Comparative effects of pantothenic acid deficiency and inanition on resistance to cold stress in the rat. (Journal of nutrition, Mar. 1953. v. 49, no. 3, p. 373–85, table.) 17 refs.

Rats depleted of pantothenic acid died within 72 hrs. of cold exposure, while nine out of 12 similar rats kept at room temperature were still alive after 28 days. No death occurred in cold-exposed rats fed the same diet as above but supplemented with calcium pantothenate. Experiments with several hormones were not successful in prolonging the life of cold-exposed, pantothenic acid-depleted rats. ***Copy seen:*** DLC.

ERSKINE, ANGUS B., *see* Banks, M. E. B. High Arctic . . . *1957.* No. 49518.

ERSKINE, ANGUS B., *see* Simpson, C. J. W., *and others.* North ice . . . *1957.* No. 54901.

ERSPAMER, E. G., *see* Wells, R. R., *and others.* Beneficiation of iron-copper ores . . . Kasaan . . . *1957.* No. 55989.

ÉSBERG, N. A., *see* Ar'ev, T. ÎA., *and* N. A. Ésberg. Izmenenie krovi . . . *1957.* No. 49369.

50787. ESCHMEYER, PAUL HENRY. The lake trout, *Salvelinus namaycush.* Washington, D.C., 1957. 11 p. illus., table. (U.S. Fish and Wildlife Service. Fishery leaflet 441.) Ref.

Contains information on morphology, color, races, size, etc.; geographic distribution, including a belt from Alaska eastward to Laborador; habitat, reproduction, the young, age, size and growth; food, migrations, artificial propagation, fisheries, enemies (sea-lamprey).

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50788. ESCHSCHOLTZ, JOHANN FRIEDRICH, 1793–1831. Zoologischer Atlas enthaltend Abbildungen und Beschreibungen neuer Thierarten, während des Flottcapitains v. Kotzebue zweiter Reise um die Welt, auf der Russisch-Kaiserlichen Kriegsschlupp Predpriactië in den Jahren 1823–1826 beobachtet. Berlin, G. Reimer, 1829–33. 5 pt. in 1 v. 25 col. plates. Text in German. ***Title tr.:*** Zoological atlas, containing illustrations

and descriptions of new animal species, observed during the second round-the-world voyage of Captain Kotsebu on the Russian royal sloop of war *Predpriiatie* in the years 1823–1826.

Includes descriptions and colored engravings of two land mammals, one from Kamchatka, one from Alaska; two species of birds from Kamchatka; one fish and one echinoid (Alaska) and 18 species of molluscs, including a new genus, all from Alaska. The color of the plates is excellently preserved. ***Copy seen:*** DLC.

50789. ESKERÖD, ALBERT JEAN, 1904– . Early nordic-arctic boats. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 57–87, illus., diagrs.) 36 refs.

Discusses the construction, evolution and use of primitive watercraft: rafts, dugouts, bark-, skin- and plankboats. Brøgger's theory of a skin-boat origin of the Nordic clinkerbuilt (of overlapping boards) plankboat is challenged, and the latter's derivation from the dugout suggested. ***Copy seen:*** DSI.

50790. ÉSKIN, I. A., *and* N. V. MIKHAĬLOVA. Fotoperiodichnost' i funktsiia gipofiza i kory nadpochechnikov. (Biulleten' éksperimental'noĭ biologii i meditsiny, Aug. 1958. t. 46, no. 8, p. 100–104, illus. tables.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** Photoperiodicity and function of the hypophysis and of the adrenal cortex.

Data presented by authors indicate the existence of a 24-hr. rhythm in adrenocorticotropic function of the hypophysis and adrenal cortex, depending on light and its duration. This rhythm is manifest in the 24-hr. changes of ACTH in the hypophysis and of ascorbic acid in the adrenal. Disturbance in the normal day-night alternation abolishes these 24-hr. variations. ***Copy seen:*** DNLM.

50791. ESKIN, SAMUEL GEORGE, *and others.* Strength characteristics of ice in contact with various kinds of surfaces. (Refrigerating engineering, Dec. 1957. v. 65, no. 12, p. 33–38, 52, diagrs., tables.) 8 refs. *Other authors:* W. E. Fontaine *and* O. W. Witzell.

Laboratory investigations were made to determine the strength of ice and the forces of adhesion between ice and brass, Teflon (black and white), stainless steel, variously treated aluminum, de-icing lacquer-coated brass, polyethylene, and hardened steel surfaces. White Teflon and polyethylene had the best ice-releasing properties. Data are tabulated on ice strength, adhesion strength, a breaking strength which is a result of a combination of ice and surface structure, and tension and shear strengths of adhesion. ***Copy seen:*** DLC.

50792. ES'KOVA, E. M. Gentgel'vin iz shchelochnykh pegmatitov. (Akademiia nauk SSSR. Doklady, Sept. 21, 1957. v. 116, no. 3, p. 481–83, diagr., table.) 3 refs. Text in Russian. ***Title tr.:*** Genthelvite from alkaline pegmatites.

This mineral first discovered and described from Colorado was found in 1948 in pegmatite veins in Lovozero region of Kola Peninsula. It forms inclusions of irregular shape of colorless or yellow-green grains; specific gravity is 3.55. Chemical analyses of Colorado and Lovozero specimens are presented. The latter has more magnesium oxide (10.21%) and less silicon oxide and beryllium oxide than the Colorado specimen. Spectral analysis shows that genthelvite includes also magnesium, aluminum, calcium, cobalt, tin and titanium. ***Copy seen:*** DLC.

50793. ESKRIDGE, PAUL S. Role played by dietary fat in *Peromyscus* exposed to low temperatures. (Ecology, July 1958. v. 39, no. 3, p. 554–56, table.) 6 refs.

These mice when exposed to cold on diet containing 10% fat began to die within a few hours, but maintained life when the diet contained 35% of the calories as fat. Of two similar groups one kept indoors and the other outdoors (temperature range −21.8° to 66° F.), the latter chose a diet high in fat.

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50794. ESPENSCHADE, P. W. Observed facilities for low-temperature research and test of military materiel. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 9–49, illus.) 12 refs.

A brief survey is given of coldroom test facilities of educational institutions and industrial and military organizations in the United States: those of the U.S. Army, Navy, and Air Force, Cornell Aeronautical Laboratory at Buffalo, N.Y.; Pennsylvania State University, University of Minnesota, Aluminum Corp. of America at Cleveland, Ohio; the Bendix

Eclipse Machine Div., Elmira, N.Y.; Chrysler Corp., Detroit, Mich.; Cummins Engine Co., Columbus, Ind.; Gen. Motors Corp., Detroit, Mich.; Hobart Bros. Co., Troy, Ohio; International Harvester Co., Melrose Park, Ill.; Perfection Stove Co., Cleveland, Ohio; Wolverine Diesel Power Co., Detroit, Mich.; Engineer Research and Development Labs., Fort Belvoir, Va.; Snow Ice and Permafrost Research Establishment, Wilmette, Ill.; Ordnance Aberdeen Proving Ground; Quartermaster Food and Container Institute, Chicago, Ill.; Quartermaster Research and Development Center, Natick, Mass.; Squier Signal Lab., Fort Monmouth, N.J.; Eglin Climatic Hangar at Eglin Air Force Base, Fla.; Wright-Patterson Air Force Base, Dayton, Ohio; and Naval Air Material Center, Philadelphia, Pa. Pertinent data are tabulated for each of the facilities and a varying number of illus. are given. ***Copy seen:*** DLC.

ESPENSCHADE, P. W., *see also* Mardoian, M. G., *and others.* Winterization of construction equipment . . . *1957.* No. 53128.

50795. ESPENSHADE, EDWARD B., Jr., *and* **S. V. SCHYTT.** Problems in mapping snow cover. Wilmette, Ill., Dec. 1956. 92 p. tables, maps, graphs, diagrs. 37 refs. (U.S. Army. Corps of Engineers. Snow, Ice and Permafrost Research Establishment. Research report 27).

"The results of a study on the feasibility of mapping selected snow-cover characteristics for military purposes, taking into account both current synoptic and average conditions, are reported in detail, and suggestions for improvement in presentation and accuracy are made. Problems associated with the construction of isolines for depicting individual or combinations of snow-cover conditions are discussed; the need for other statistical parameters in addition to the means is stressed; and the adaptation of frequency and variability indices is suggested. The use of a regional technique, which identifies areas somewhat homogeneous or substantially different from adjacent areas, is investigated; six of the nine major snow regions are in northern Canada. Problems in mapping snow density are also considered as well as the possibility of estimating snow density from meteorological data. Three sets of codes for the systematic recording and transmission of data are proposed, including a code for ground observers, a simplified code for use where no instruments or trained personnel are available, and a code for aerial observations."—SIPRE. ***Copy seen:*** CaMAI.

50796. ESPING, LARS ERIK. Vad sker med Lule lappmark? (På skidor, 1957. p. 75–80, illus.) Text in Swedish. ***Title tr.:*** What is happening to Lule Lappmark?

Advocates more strict preservation of the Sarek and Stora Sjöfallet National Parks (approx. 67°–67°45′ N. 17°–18° E.) in north Sweden, created in 1909; in particular of the Lilla Lule River valley (approx. 66°30′–67° N. 18°–20° E.), threatened by water-power projects.

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50797. ESSENE, FRANK J., 1908– . A comparative study of Eskimo mythology. (Kroeber Anthropological Society. Papers, Spring 1956. no. 14, p. 96–97.) Abstract of Ph. D. dissertation, University of California.

Compares Eskimo mythology with that of the Indians in central Canada and the Northwest Coast and Northeast Asiatic tribes. The similarity of mythological elements points to an originally close contact between Eskimos and aborigines of the Pacific Northwest and Asiatic northeast, justifying the assumption of a northeast Asiatic homeland. Though all Eskimo mythology shows primary affinities with that of the Old World, Western Eskimos were influenced later by Northwest Indian lore. Central and Eastern Eskimos developed old motifs into a new and distinctive mythology.

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50798. ESSOGLOU, MILON E. Piling operations in Alaska. (Military engineer, July–Aug. 1957. v. 49. no. 330, p. 282–87, illus.)

Describes construction of a reinforced concrete and wood frame composite building by U.S. Corps of Engineers, near Bethel, on the Kuskokwim delta. It is a tundra area of marginal and sporadic permafrost, with average annual temperature 29.6° F. and rainfall 19.07 in. Construction involved artificial freezing of a wooden pile foundation and provision for subsequent refrigeration to keep the ground frozen. Creosoted wood piles, around which were strapped refrigeration coils made of 1-in.-diameter steel pipe, were placed in 18-in. holes of 30 ft. depth, annular space was backfilled

with silty sand of 35% water content, and the piles were frozen back in groups from 4–48 piles. The buildings are raised a minimum of 34 in. above grade; precautions were taken to preserve the tundra intact for 100 ft. from the edge of all roads and buildings.

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50799. ESTOQUE, MARIANO A. Dynamical prediction of the arctic circulation. Montreal, Oct. 1957. 10 p. 12 text maps. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 6; scientific report no. 4, contr. AF 19(604)–1141.) 4 refs.

"The results of a series of experimental forecasts of the 500 and 1000 mb. flow patterns over the Arctic during January 1956 are discussed. The forecasts were made by integrating graphically the equations of a simple baroclinic model. A summary of the performance of the model and an analysis of the errors are presented; some characteristics of the arctic circulation are deduced from these error patterns. In general, the results suggest that the model is capable of producing useful forecasts over the Arctic."—Author's abstract.

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50800. ÉTNOGRAFICHESKOE SOVESHCHANIE, *Moskva 1956.* Tezisy dokladov na plenarnykh zasedaniiâkh. Moskva, 1956. 67 p. (Akademiîa nauk SSSR. Institut ėtnografii) Text in Russian. ***Title etc., tr.:*** Ethnographic conference, Moscow, 1956. Theses of reports at the plenary sessions.

Of 12 papers presented at this conference, two relevant to northern peoples are abstracted in this Bibliography under their authors' names, viz. (titles tr.):

LEVIN, M. G., *and* N. N. CHEBOKSAROV. Economic-cultural groups and historical-ethnographic regions.

DEBETS, G. F. Anthropological types of the population of U.S.S.R. and some problems of ethnogeny.

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EULER, K. H., *see* Hirsch, H., *and others.* Über die Erholung des Gehirns . . . *1957.* No. 51726.

50801. EULLER, JOHN. Arctic world. New York, Abelard-Shuman, 1958. 142 p. illus., maps.

Reviews arctic exploration from the journeys of Nansen to the present. Arctic land regions (defined as the area north of the 50° isotherm), are described. Agricultural possibilities and wildlife resources are discussed; sketch is given of Eskimo life; U.S. military operations and defense possibilities are reviewed.

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50802. EURANTO, ERKKI, *and others.* Perhoshavainnot Turun Eläin-ja Kasvitieteellisen Seuran retkiltä Utsjoen pitäjään (In L) vuosina 1954–1956. (Suomen hyönteistieteellinen aikakauskirja, 1957. v. 23, no. 3, p. 115–33, 5 illus.) 9 refs. Text in Finnish. Summary in English. *Other authors:* M. v. Schantz, *and* O. Sotavalta. ***Title tr.:*** The observations on Lepidoptera during the Utsjoki expedition of the Zoological-Botanical Society of Turku in the years 1954–1956.

The area studied, Utsjoki in Inari Lapland (69°20′–70°05′ N.), consists of low arctic birch (*Betula tortuosa*) woods and treeless regio alpina. The lepidopters recorded during the expedition are given and number of species in each superfamily tabulated. Over 200 species were collected, and 28 recorded as new for Inari.

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50803. EVANS, A. M. A tin-bearing ore from the Coal River area, Yukon Territory. (Canadian mineralogist, 1957. v. 6, pt. 1, p. 119–27, table, 6 microphotos.) 9 refs.

Describes specimens of a tin ore from the Coal River area (approx. 61°25′ N. 126°21′ W.) containing stannite, franckeite, and geocronite, the last a lead arsenic sulpho-salt. The content of franckeite, a tin-bearing sulpho-salt is unusually high; both stannite and geocronite are rare in North America. The ore occurs in a 1–8 in.-wide calcite vein, along a low-angle fault in evenly-bedded slates. Paragenetic sequence is noted; X-ray powder pattern data are tabulated.

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50804. EVANS, ALEXANDER WILLIAM, 1868– . Three species of *Scapania* from western North America. (Torrey Botanical Club. Bulletin, Feb. 1930. v. 57, no. 2, p. 87–111, 8 illus.) 18 refs.

S. granulifera n. sp., *S. bolanderi* and *S. americana* are described with detailed morphological data. The latter two hepatics are both native to Alaska.

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50805. EVANS, DAVID. A revision of the genus *Poecilonota* in America north of Mexico; Coleoptera: Buprestidae. (Entomological Society of America. Annals, Jan. 1957. v. 50, no. 1, p. 21–37, 13 illus., 5 text maps.) 14 refs. *Pub. also as:* Contrib. no. 277, Forest Biology Div., Science Service, Canadian Dept. of Agriculture.

Contains a discussion and description of this genus of wood-boring beetles, a key to the species, and an annotated list of eight, with synonyms, descriptions, data on distribution and lists of specimens. *P. cyanipes,* recorded in Northwest Territories (Fort Smith) and Yukon Territory is included. ***Copy seen:*** DLC.

EVANS, FRANCIS COPE, 1914– , *see* Dawson, W. R., *and* F. C. Evans. Relation of growth and development to temperature regulation . . . sparrows. *1957.* No. 50468.

50806. EVERETT, J. D. Atmospheric electricity. (Belfast Natural History and Philosophical Society. Proceedings, 1878, p. 48–59.)

Includes, p. 56, mention of observations with electrometer, taken by Capt. Parr at winter quarters of the *Alert,* northeast Ellesmere, during the British Arctic Expedition 1875–76. Ice was found a poor ground connection in severe frost; the electrometer was broken after a few weeks of observation during an attempt to make ground connection on the ship's cable. ***Copy seen:*** DLC.

EVERHART, BENJAMIN METLOCK, 1817–1904, *see* Ellis, J. B., *and* B. M. Everhart. New . . . *Fomes* . . . *1895.* No. 50743.

50807. EVERS, W., *and* R. W. GALLOWAY. The mechanical measurement of glacier motion. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 83–84.) 6 refs.

Evers comments upon Galloway's papers on Lyngsdalsbreen (No. 45022) calling attention to possible effects on accuracy of the instrument by forces exerted on it and by ablation. Galloway, in reply, suggests mounting apparatus on tubes driven deep into the glacier and filled with freezing mixtures of ice and salt to minimize ablation and other effects. In its present form, Galloway's instrument cannot record lateral movements. ***Copy seen:*** DGS.

50808. EVERS, W. Ein wichtiges Problem der Gletscherforschung und ein Vorschlag zu seiner Lösung. (Zeitschrift für die gesamte Naturwissenschaft, Jan.–Feb. 1940. Jahrg. 6, Heft 6, p. 17–23, graph.) Text in German. ***Title tr.:*** An important problem of glacier research and a suggestion for its solution.

"An uncertainty in the Finsterwalder photogrammetric method of measuring glacier velocity is indicated. Glacier-velocity values usually obtained during summer cannot be applied to the whole year since the velocity varies. The values obtained in summer are above the average and will yield excessive values of glacier depth and ice economy calculations when used in Lagally's formula."—SIPRE. ***Copy seen:*** DLC.

50809. EVERS, WILHELM, 1906– . Die Bevölkerung Grönlands. (Geographische Rundschau, Feb. 1957. Jahrg. 9, Heft 2, p. 71–74, text map, graph, 3 tables.) Text in German. ***Title tr.:*** Population of Greenland.

Notes growing importance of Greenland due to geographical location in the air age, and status as part of Denmark since 1953. Population in 1954 was 26,192 (in 1901: 11,893); 23,908 in West Greenland, 1,863 in East Greenland, and 421 in Thule district. Numbers in the various age groups are compared with Denmark and, the high proportion of population engaged in fishing, hunting and trapping, and sheep-herding is noted. Map shows location of settlements.

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50810. EVGEN'EV, I., *and* L. KUZNETSOVA. Podvig uchenogo. (Znanie-sila, June 1957. god 22, no. 6, p. 30–34, illus.) Text in Russian. ***Title tr.:*** Heroic deeds of a scientist.

Popular sketch of the life and work of the Soviet mineralogist, Leonid Alekseevich Kulik, 1883–1942; with story of his expeditions, in 1927–30 and 1938–39, to the Podkamennaya Tunguska River basin in search of the Tungus meteorite. ***Copy seen:*** DLC.

50811. EVGENOV, NIKOLAĬ IVANOVICH, 1888– . Gidrograficheskaîa ėkspediîsiîa v Severnom Ledovitom okeane na sudakh "Taĭmyr" i "Vaĭgach," 1910–1915. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiîa, Jan.–Feb. 1957. t. 89, vyp. 1, p. 14–24, fold. map) Text in Russian. ***Title tr.:*** The Hydrographic

Expedition in the Arctic Ocean on the vessels *Taĭmyr* and *Vaĭgach* in 1910–1915.

Brief account, by its aerologist, of the expedition headed by Vil'kit͡skiĭ: its preparation, including construction of special ships; its scope and purpose, the four annual trips of 1910–1913; the voyage from Vladivostok to Arkhangel'sk in 1914–15. The main achievements were the discovery of Severnaya Zemlya, a hydrographic survey of its coasts and that of the Taymyr Peninsula, and the first east-west passage of the Northern Sea Route. Map shows routes of both vessels in 1914–1915. ***Copy seen:*** DLC.

50812. EVGENOV, NIKOLAĬ IVANOVICH, 1888– . O raspredelenii poverkhnostnykh solenosteĭ v zapadnoĭ chasti Karskogo moria v 1927 g. i rol' l'dov pri ėtom. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia moreĭ SSSR, 1935. vyp. 21, p. 57–64, maps.) 7 refs. Text in Russian. Summary in German. ***Title tr.:*** Distribution of surface salinity in the western Kara Sea and the role of ice in it.

Surface salinity was found (Aug.–Sept.) to vary considerably from year to year, influenced by the fresh water coming down the Ob valley and flowing in a westerly direction towards Novaya Zemlya with a countercurrent of salty water apparently of Atlantic origin. Ice acting as a barrier often blocks the stream of freshwater running west, thus exerting its own influence over great areas.

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50813. EVROPEĬTSEVA, N. V. Perekhod v pokatnoe sostoianie i skat molodi lososeĭ. (Leningrad. Universitet. Uchenye zapiski, 1957. no. 228, ser. biologicheskikh nauk, vyp. 44, Vosproizvodstvo rybnykh zapasov v sviazi s gidrostroiteĭstvom, p. 117–54, illus., diagrs., tables.) 19 refs. Text in Russian. ***Title tr.:*** Transition of salmon parr to smolt and its descent down the river.

Hydroelectric construction bars the natural reproduction of anadromous salmon in many rivers and artificial reproduction in pond hatcheries is required. The biological processes of salmon maturation from parr into smolt were studied, and results reported from various parts of the U.S.S.R., including the rivers of Kola Peninsula and the Pechora; and experiments were carried out in artificial breeding. The period between spawning and descent of the smolt to the sea or lake fluctuates between two and four years, depending upon the water temperature, amount of available food and other natural conditions. Ways of shortening the maturation period as tested by hatcheries in Leningrad Province and Latvian S.S.R., are discussed and recommended. ***Copy seen:*** DLC.

50814. EVSEEV, P. K. Raspredelenie livnevykh i oblozhnykh osadkov na territorii SSSR. (Meteorologiia i gidrologiia, Mar. 1958, no. 3, p. 13–20, diagrs., maps) 2 refs. Text in Russian. ***Title tr.:*** Distribution of showers and steady precipitation over U.S.S.R. territory.

Observations from 90 meteorological stations during 1936–1955 were used to graph annual distribution of showers and steady precipitation for various regions of European and Asiatic U.S.S.R. Included are data for Murmansk, Vilyuysk, Salekhard, Verkhoyansk, Anadyr', Bratsk and Chita. Distribution of annual precipitation sums is mapped, including arctic regions. ***Copy seen:*** DLC.

50815. EVSEEV, V. N., *and* **A. A. SOKOLOV.** Dobycha torfa na toplivo v raĭone Kraĭnego Severa. (Torfianaia promyshlennost', 1958. god 35, no. 4, p. 18–20, illus.) Text in Russian. ***Title tr.:*** Peat production for fuel in the far North.

In Kola Peninsula and Chukotka peat may be dried under natural conditions when its moisture does not exceed 40%. Due to permafrost conditions, peat is usually excavated in surface layers and dried during June, July and August. Method and equipment used for excavation and processing are described in detail including production data. A small surface-cutting and excavating machine of 300 ton output per season is used on the individual farm or by the small community of reindeer breeders.

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50816. EWAN, JOSEPH ANDORFER, 1909– . *Juncus mertensianus* and its austro-limital segregate, *J. duranii.* (Rhodora, June 1945. v. 47, no. 558, p. 185–91, text map.)

Describes these two rushes and compares them with a related species, *J. nevadensis; J. mertensianus* is native to Alaska: Kodiak Island, Yes Bay, Unimak and Atka Islands. ***Copy seen:*** DA.

50817. EWERLÖF, KNUT GERHARD, 1890– , *and others.* Till Carl-Julius Anrick. (Svenska turisföreningen. Årsskrift 1958. p. 6–8.) Text in Swedish. ***Title tr.:*** To Carl-Julius Anrick.

Tribute to Anrick, secretary of the Swedish Tourist Association 1919–1958. Development of the Association (84,000 to over 200,000 members) and of tourist mountain stations (built to Abisko at 68° N.) in this period is stressed.

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50818. EWING, MAURICE, *and* **W. L. DONN.** A theory of ice ages, 2. (Science, May 16, 1958. v. 127, no. 3307, p. 1159–1162.) 18 refs.

Continuation of No. 44828, in which the authors maintained that restricted terrestrial changes, rather than global or extraterrestrial factors were responsible for glaciations. Further support is offered from the similarity of conditions in Greenland and Antarctica, and from a reconstruction of climatic, pluvial and glacier conditions in the equatorial zone and Southern Hemisphere, during glacial periods. ***Copy seen:*** DLC.

50819. EXLEY, J. A. Sledge-boats. (Polar record, Jan. 1958. v. 9, no. 58, p. 20–22, illus., plan, diagrs.)

Describes, with directions for construction and assembly, a craft to carry on sledge journeys over ice in unstable condition. The boat, an improved model of that used by the Oxford University Arctic Expedition of 1935–36, is stable, easy to row, capable of carrying more than 600 lbs. load, and can be assembled in 45 minutes or less, according to tests in the Antarctic 1955–1956.

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50820. ***EXPEDITION.*** St. Lawrence Island. (Pennsylvania. University. University Museum Bulletin, Expedition, Fall 1958. v. 1, no. 1, p. 36.)

Notes Robert Ackerman's (current) survey of the south coast of St. Lawrence Island; geographically and ethnographically it forms part of Siberia; investigations there tie in with those currently carried out by Soviet scientists in eastern Siberia. ***Copy seen:*** DSI.

50821. EXPÉDITIONS POLAIRES FRANÇAISES, 1948–1953. Les expéditions polaires françaises et la technique moderne. (Ingénieurs techniciens, Mar. 1952. no. 42, p. 37–40, illus.) 2 refs. Text in French.

Reviews technical aspects of the expeditions of 1948–1951 to Greenland: selection and use of optical instruments, photographic equipment, and required operating conditions. ***Copy seen:*** DLC.

50822. EYERDAM, WALTER JACOB. Largest *Lysichitum* leaf. (Leaflets of western botany, Aug. 23, 1949. v. 5, no. 11, p. 186.)

Note from Port San Juan, Evans Island, Alaska, recording a skunk cabbage (*Lysichitum americanum*), with a leaf standing erect, 158 cm. in length, i.e., 28 cm. longer than J. P. Anderson's reputed record of 130 cm. ***Copy seen:*** DA.

50823. EYERDAM, WALTER JACOB. Marine shells of Drier Bay, Knight Island, Prince William Sound, Alaska. (Nautilus, July 1924. v. 38, no. 1, p. 22–28.)

Lists 139 molluscan species with data on frequency and habitats. Many rare small shells were dredged, including two new species, *Turbonilla* (*Pyrgolampros*) *eyerdami,* and *Puncturella eyerdami;* 26 species were found beyond their geographical ranges. About fifty other invertebrate species were also collected.

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50824. EYERDAM, WALTER JACOB. New records of noteworthy northwestern plants. (Leaflets of western botany, Jan. 24, 1938. v. 2, no. 5, p. 78.)

New Alaskan localities are recorded for *Saxifraga oppositifolia* on Mitrofania and Unalaska, also *Cakile edentula* var. *californica* at Three Saints Bay and Old Harbor on Kodiak Island.

Copy seen: DA.

EYERDAM, WALTER JACOB, *see also* Hedrick, J. Lichens . . . *1936.* No. 51649.

50825. EYTHÓRSSON, JÓN PÉTUR, 1895– . Report on sea ice off the Icelandic coasts, Oct. 1955–Sept. 1956. (Jökull, 1956. ár 6, p. 47–50.)

The average distance of the pack boundary and ice boundary from Straumnes is reported for each month of the report period, computed from observations on different dates of the month. The Icelandic coast was practically free of sea ice throughout the period, but a considerable number of single icebergs and small floes were observed near the northern coast during the summer.

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50826. EYTHÓRSSON, JÓN PÉTUR, 1895– . Report on sea ice off the Icelandic coasts, Oct. 1956–Sept. 1957. (Jökull, 1957. ár 7, p. 60–62.)

Presents scattered reports of observations, with computed monthly average distance of the pack ice boundary from

Straumnes. The Icelandic coasts were free of drift ice throughout the period; some single blocks were observed from the northwestern promontories in June and Sept. ***Copy seen:*** DGS.

50827. FADEEV, E. Pervichnaîa obrabotka shkurok pushnykh zvereĭ. (Okhota i okhtnich'e khozîaĭstvo, Nov. 1958. god 4, no. 11, p. 11–14.) Text in Russian. ***Title tr.:*** The initial processing of skins of fur animals.

Discusses various methods recommended for skinning, and for fleshing, stretching and drying the hides of the main fur animals, including hare, wolverine, marten, arctic fox, muskrat, etc.

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50828. FADEEV, V. A. K voprosu o trappovom magnetizme Severnogo Verkhoîan'îa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biûlleten', 1958. vyp. 9, p. 23–28, diagr.) 5 refs. Text in Russian. ***Title tr.:*** On the question of trap magnetism in the northern Verkhoyansk region.

Reports hypabyssal intrusions and their content in the northern part of the Orulgan Ridge. Appearance of these Upper Paleozoic intrusions in sills and dikes are noted, with comments on features of their occurrence and morphology. Their content, with predominance of diabases and carbonates, is discussed and their chemical composition outlined; magnetic aspects are reviewed; further investigations are urged.

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50829. FAEGRI, KNUT, 1909– . Et norsk mindretallsproblem. (Naturen, 1958. årg. 82, nr. 3, p. 189–90.) Text in Norwegian. ***Title tr.:*** A Norwegian minority problem.

Lappish culture and occupations are endangered by technological and economic change. Ethnographic studies, such as those under supervision of the Tromsø Museum, are important before the cultural transition to another way of life.

Copy seen: DGS.

50830. FAEGRI, KNUT, 1909– . Omkring grønlandsbygdenes undergang. (Naturen, 1957. årg. 81, nr. 7, p. 432–36) Text in Norwegian. ***Title tr.:*** On the Greenland communities' destruction.

The downfall of the early Norse communities as presented by Gini, q.v., is discussed. Climatic and economic deterioration at Vestribygd is believed to have caused the colonists to adopt a mobile hunters' life such as the Eskimos lived. Insect infestation of the pastures in 1341 probably entailed reduction of the cattle, the basis of permanent settlement. Religious and social degeneration and trouble with Eskimos, discussed by Gini, are not regarded as contributory factors. ***Copy seen:*** DGS.

50831. FAEGRI, KNUT, 1909– . Professor Hulténs nye inndeling av *Cerastium alpinum*-gruppen. (Blyttia, 1957. bd. 15, no. 2, p. 69–71). Text in Norwegian. ***Title tr.:*** New classification of the *Cerastium alpinum* group by Professor Hultén.

Contains a republication of a key to northern species of this group and distributional data, based partly on Hultén's Cerastium glabratum *Hartm., species restituenda* (No. 45644), and some other of his works. The area occupied by this group includes northern regions of Europe, Asia, North America and arctic islands.

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FAGERHOLM, PER OLOV, *see* Ahlborg, F., *and others.* Fotogrammetrisk kraftledningsprojektering. *1958.* No. 49135.

FAINMAN, M. Z., *see* Barnes, R. S., *and* M. Z. Fainman. Synthetic ester lubricants. *1957.* No. 49549.

FAIRHURST, ALAN S., *see* Smith, R. E., *and* A. S. Fairhurst. Cellular mechanisms of cold adaptation . . . rat. *1958.* No. 55001.

FAIRHURST, ALAN S., *see* Smith, R. E., *and* A. S. Fairhurst. A mechanism of cellular thermogenesis in cold-adaptation. *1958.* No. 55003.

50832. FAIRLEY, T. C., *and* C. E. ISRAEL. The true North; the story of Captain Joseph Bernier. London, Macmillan, 1957. 160 p. illus. (Great Stories of Canada).

Popular account of the life and exploits of this French-Canadian arctic navigator (1852–1934) based in part on his autobiography (No. 1458). His prediction in 1871, that Capt. Hall's *Polaris* would encounter difficulty in ice due to the shape of the hull is recounted. His plan to allow his ship, the *Arctic,* to freeze in the ice above Bering Strait at 165° W. long. and to attempt a five-year drift is discussed. His voyages of 1906, 1908,

1910, to establish Canadian claim to the Arctic Islands, are treated in detail.

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50833. FAĬVILEVICH, L. G. Novye suda soshli so stapeleĭ Baltiĭskogo zavoda. (Sudostroenie, Oct. 1957. v. 23, no. 10, p. 65–66, illus.) Text in Russian. ***Title tr.:*** New ships launched at a Baltic shipyard.

Reports, among others, launching of the ice-breaking tug *Oka,* first of a series designed for river service. With a 770-ton displacement and 1800 hp. diesel-electric engines, the ship is capable of breaking ice 60 cm. thick.

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50834. FALALEEV, É. N. Nekotorye dannye o vozobnovlenii listvennit͡sy v severnykh ra͡ionakh Krasnoya͡rskogo kra͡ia. (Izvestiia vysshikh uchebnykh zavedeniĭ. Lesnoĭ zhurnal, 1958, no. 3, p. 84–86, table.) 2 refs. Text in Russian. ***Title tr.:*** Some data on larch reproduction in the northern regions of Krasnoyarsk Province.

Studies were carried out in the Angara, Podkamennaya Tunguska and Nizhnyaya Tunguska basins after cutting, and natural reproduction of larch was found to be hampered by the underbrush, etc. which should be burned off.

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FALCONER, JESSIE, *see* Geological Assoc. of Canada. The glacial map of Canada. *1958.* No. 51142.

50835. FALEt͡SKIĬ, MIKHAIL. Romantika trudnykh dneĭ. (Na severe dal'nem, 1957. kniga 7, p. 16–23.) Text in Russian. ***Title tr.:*** Romance of difficult tasks.

Sketches construction work on a power line to the gold placers at Ulakhan-Sidor in the upper Kolyma basin; the mountain-taiga terrain presents a challenge which evokes the enthusiasm of young workers, also eliminates idlers and weaklings.

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50836. FALKOWSKI, SIGMUND J. Climatic analogs of Fort Greely, Alaska, and Fort Churchill, Canada, in Eurasia. Natick, Mass. Dec. 1957. iv, 37 p., 16 fold. maps, 13 tables. (U.S. Quartermaster Corps Environmental Protection Research Division. Technical report, EP–77.) 48 refs.

Climatic elements most affecting personnel and equipment in cold weather are discussed in the text and summarized in tables; their distribution is shown on maps. Comparison is made between conditions at these two cold weather test sites and analogous, semi-analogous, and non-analogous conditions in arctic and subarctic regions in Eurasia. Analogous temperature and windchill conditions are found only in very limited, noncontiguous, areas. ***Copy seen:*** CaMAI.

50837. FALKOWSKI, SIGMUND J. Samples of climatic frequency data. Natick, Mass., Dec. 1958. 13 p. 4 text maps, 2 tables. (U.S. Quartermaster Corps. Environmental Protection Research Division. Research study report RER 24.) Ref.

Makes known the availability, at U.S. Air Weather Service, Directorate of Climatology, of tabulations of frequency, distribution, and duration of temperatures, wind speeds, cold-wet conditions, windchill, ground conditions, etc. for 326 stations in the Northern Hemisphere. Station locations are shown on maps. Frequency data for Dikson Island are used to illustrate the nature and scope of the data to be published: tables of temperature frequency and wind speed distribution, frequency of cold-wet conditions, and of specified states of the ground surface. Two maps of temperature frequency distribution for North America are also given. ***Copy seen:*** CaMAI.

50838. FALKOWSKI, SIGMUND J., *and* **A. D. HASTINGS,** Windchill in the Northern Hemisphere. Natick, Mass., Feb. 1958. 9 p. illus., tables, map. (U.S. Army. Quartermaster Research and Development Center. Technical report EP–82.) 11 refs.

Windchill: cooling power of wind and temperature on human skin; measured in kg. cal. heat loss/sq. km. exposed skin/hr./° C. temperature difference between skin and ambient air. Development of formulas are reviewed, usefulness of the index, and its limitations with respect to evaporation, radiation, other heat losses are cited. Simple computation tables, adapted to English units, are presented, and map of the Northern Hemisphere with mean windchill distribution during the coldest month of the year.

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FALKOWSKI, SIGMUND J., *see also* Hastings, A. D., *and* S. J. Falkowski. Climatic analogs of Fort Greely . . . Churchill . . . *1957.* No. 51619.

FALLER, J., *see* Szekeres, L., *and others.* The effect of hypothermia . . . phosphate and glycogen . . . heart. *1958.* No. 55301.

50839. FARIA, AMERICO. Dez exploradores audazes. Lisboa, Livraria Clássica, 1955. 191 p. (*His* Colecção dez, 25.) Text in Portuguese. ***Title tr.:*** Bold explorers.

Includes (p. 141–57) review of the life of Vilhjalmur Stefansson, stressing his radical view of the Arctic.

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50840. FARLOW, JOHN S., III. Project Ice Skate; oceanographic data. Woods Hole, Mass., Oceanographic Institution, June 1958. 18, 1 p., 26 tables, 10 diagrs. (*Its:* Reference no. 58–28, IGY Proj. no. 9. 18.) 2 refs. Mimeo.

Brief explanation and tabular data of observations May 1957–May 1958 at two floating bases: Ice Skate Alpha (an extensive floe of sea ice in Beaufort Sea) and Bravo (ice island T-3). Tables contain some or all of the following information: date, time, location, depth, wire angle, temperature, salinity, oxygen, and total phosphorus content. Ten bathythermograms from Alpha are included. Data from two additional Alpha stations is being studied. ***Copy seen:*** DWB.

50841. FARQUHARSON, W. I. A tidal survey of Canada's northern seas. (Canadian surveyor, Jan. 1957. v. 13, no. 6, p. 325–30.)

Explains the forces influencing tidal variations and stresses the need for systematic observations in northern waters. Machines are being designed for the Canadian Hydrographic Service with which predictions can be made (by inexperienced operators) of times and heights of high and low water or of hourly heights of the tide, for long periods, or the height at any particular instant. The Service has undertaken to establish two year-round tidal stations in the Arctic (locations not identified) during the IGY, in addition to a number of tide gauges for a one-month observation period during the summer of 1957. ***Copy seen:*** DGS.

50842. FARRAND, RICHARD L., *and* **G. E. FOLK, Jr.** Responses of hamsters during first two weeks of cold exposure. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 35–36.)

A comparative study of animals kept no more than 15 days at temperatures of 25° and 5° C. Weight, water and food intake, O_2-consumption, rectal temperature, also heart, kidney, spleen and skin weight, plasma volume, etc. were determined and compared. ***Copy seen:*** DLC.

50843. FARRE, ROWENA. Seal morning. With illus. by Raymond Sheppard. New York, Rinehart, 1957. 219 p. illus. table.

A story of two animal hobbyists, aunt and niece, in Scotland, rearing (in addition to a few other pets) a seal. The growth, intelligence, learning capacity and achievements of the animal, especially its musical sense and capabilities are described on a background of isolated country life, and that of other animals, free and domesticated.

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FARRIS, EDMOND J., *see* Colton, S. W., *and* E. J. Farris. Low temperature preservation of human spermatozoa . . . *1958.* No. 50315.

50844. FARUTIN, A. Vazhnaîa zadacha. (Narodnoe obrazovanie, Apr. 1958, no. 4, p. 74–77, illus.) Text in Russian. ***Title tr.:*** Important task.

A report by the head of the Monchegorsk Dept. of Education on the literature, music and art courses and extracurricular activities offered by the town's junior high and high schools.

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50845. FASSETT, NORMAN CARTER, 1900– . *Callitriche* in the New World. (Rhodora, June–Sept. 1951, v. 53, no. 630–633, p. 137–55, 161–82, 185–94, 209–22, plates 1167–1175, 24 text maps.)

Contains a critical revision of this genus from Alaska and Greenland to Cape Horn, with data on the structure of the fruit, morphology, cytology and classification; a key to Western Hemisphere species (p. 144–46) and another for identification in the limited area (p. 219–22). Species (24) and some varieties are listed, of which five species and four varieties are new; synomyms, descriptions, critical notes, distributional data and lists of specimens are given. Four of the species occur in the far North. *C. verna* (Greenland, Alaska, Labrador) *C. hamulata* (Greenland), *C. anceps* (Greenland, Labrador, Alaska, Aleutian Islands) and *C. hermaphroditica,* (Greenland, Labrador, Alaska, Aleutian Islands).

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50846. FASSETT, NORMAN CARTER, 1900– . *Juniperus virginiana, J. horizontalis,* and *J. scopulorum,* V; taxonomic treatment. (Torrey Botanical Club. Bulletin, Sept. 1945. v. 72, no. 5, p. 480–82, 2 text maps.)

Contains a key and an annotated list of three species and four varieties with distributional data. *J. horizontalis* is recorded from the Yukon Territory. Pt. 1–4 do not contain arctic material.

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FAUNA FENNICA, *see* Societas pro fauna et flora fennica. Fauna fennica I–II. *1947–56.* No. 55021.

FAUNA SSSR *see* Zakhvatkin, A. A. Paukoobraznye. *1941.* No. 56154.

Kozlova, E. V. Ptitsy, . . . Rzhankoobraznye . . . chistikovye. *1957.* No. 52457.

FAUTEAUX, JEAN P., *see* Jude, J. R., *and others.* Differential cardiac warming . . . *1957.* No. 52113.

50847. FAUVEL, ALBERT, 1851–1921. Les Staphylinides de l'Amérique du Nord. (Société Linnéenne de Normandie. Bulletin 1878. ser. 3, v. 2, p. 167–266) Text in French. ***Title tr.:*** Staphylinides of North America.

Contains Latin diagnoses, synonyms, keys, critical notes and data on the ecology and distribution of about 125 species of rove beetles. At least 35 are native to Alaska, Aleutian Islands, northern Canada and Greenland.

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50848. FAVORITE, FELIX, *and* **C. M. LOVE.** Northeast Pacific Ocean and Gulf of Alaska, physical and chemical data, summer and fall 1955. Seattle, May 1957. 88 p., fold. map, tables. (Washington, State. University. Dept. of Oceanography. Special report no. 28.)

Presents data on weather, depth, water temperature, salinity, density, dissolved oxygen, and soluble inorganic phosphate information; zoo-plankton displacement volumes. Observations were made in the course of exploratory fishing cruises of vessels of the U.S. Fish and Wildlife Service; ship tracks and station locations are shown on map. Data for 1956 and 1957 were compiled by C. M. Love, q. v. ***Copy seen:*** DN–HO.

50849. FAY, FRANCIS H. History and present status of the Pacific walrus population. (North American Wildlife Conference, 22nd. Transactions, 1957. p. 431–45, table, map.) 62 refs.

A chronological outline of herd distribution since 1650, with a detailed account of 20th century conditions. Harvest of ivory, whaling (since 1848), recent and current kill in the U.S. and the U.S.S.R., as well as general population trends are also considered.

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FAZEKAS, JOSEPH F., *see* Ehrmantraut, W. R., *and others.* Cerebral hemodynamics and metabolism in accidental hypothermia. *1957.* No. 50711.

FEDÎAKINA, N. I., *see* Zaborshchikov, F. ÎA., *and* N. I. Fedîakina. O svîazi mezhdu polîarnymi siîaniîami . . . *1957.* No. 56144.

50850. FEDOR, EDWARD J., *and* **B. FISHER.** Effect of hypothermia and rewarming on blood volume determined simultaneously with Cr–51 and T–1824. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 45.)

During hypothermia (23° C.) in dogs, blood volume was lowered; one and five hours after cooling it approached normal and was the same 24 hours after rewarming. Hematocrit decreased but red-cell mass remained the same during cooling.

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50851. FEDOR, EDWARD J., *and others.* Observations concerning bacterial defense mechanisms during hypothermia. (Surgery, May 1958. v. 43, no. 5, p. 807–814, illus., tables) 22 refs. *Other authors:* B. Fisher *and* E. R. Fisher.

Account of experiments with dogs made hypothermic to 23°–24° C. The leucopenia observed during lowered temperature was transitory and was followed by leucocytosis. No reduction of phagocytosis by blood leucocytes was noted during hypothermia or rewarming. Electrophoretic patterns of plasma showed no change in phagocytosis promoting factors (PPF). ***Copy seen:*** DNLM.

50852. FEDOR, EDWARD J., *and others.* Rewarming following hypothermia of two to twelve hours, 1; cardiovascular effects. (Annals of surgery, Apr. 1958. v. 147, no. 4, p. 515–30, illus., tables.) 15 refs. *Other authors:* B. Fisher *and* S. H. Lee.

A study of 100 dogs submitted to hyopthermia of 23–24° C. for 2–12 hrs., and subsequently rewarmed. The longer hypothermia lasted, the higher was

mortality and the longer it took for total readjustment. Even after restoration of normal cardiovascular hemodynamics, animals were in a state of balance, new stresses often being fatal. "Rewarming shock" was very rare in up to eight hours of hypothermia. ***Copy seen:*** DNLM.

50853. FEDOR, EDWARD J., *and others.* Rewarming following prolonged hypothermia. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 36.) *Other authors:* C. Russ, S. H. Lee, and B. Fisher.

Account of investigation aimed at determining "how complete and at what rate" changes caused by hypothermia revert to normal. In animals maintained at 23° C. most changes in blood circulation and chemistry returned promptly to normal upon rewarming, with a 100% survival. Twelve hours at the same temperature caused 50% mortality due mainly to failure of the cardiac index to return to normal. ***Copy seen:*** DLC.

FEDOR, EDWARD J., *see also* Fisher, B., *and others.* Effect of hypothermia . . . oxygen consumption and cardiac output . . dog. *1957.* No. 50900.

FEDOR, EDWARD J., *see also* Fisher, B., *and others.* Rewarming . . . hypothermia . . . 2; metabolic effects. *1958.* No. 50901.

FEDOR, EDWARD J., *see also* Fisher, E. R., *and others.* Pathologic and histochemical observations in experimental hypothermia. *1957.* No. 50902.

FEDOR, EDWARD J., *see also* Fisher, E. R., *and others.* Stressor effect of hypothermia . . . rat. *1957.* No. 50903.

50854. FEDORAKO, B., *and* **V. BAZHENOV.** Okhotovedenie v lesokhoziaĭstvennykh vuzakh. (Okhota i okhotnich'e khoziaĭstvo, May 1958. god 4, no. 5, p. 33.) Text in Russian. ***Title tr.:*** Hunting science in higher schools of forestry.

The forest fauna provides raw materials for clothing and footgear, and its protection is the duty of the forest administration. Forestry schools, therefore are to include a special and obligatory course on hunting science, with 30–40 hrs. of lectures and 8–10 hrs. of laboratory and practical work. ***Copy seen:*** DLC.

FEDOROV, IVAN, d. 1733, *see* Divin, V. A. K beregam Ameriki . . . *1956.* No. 50570.

50855. FEDOROV, S. Nad tundroĭ i taĭgoĭ. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 30, illus.) Text in Russian. ***Title tr.:*** Over tundra and taiga.

Notes operations of the Yakutsk airport and activities of the Yakut flier, Valeriĭ Il'ich Kuz'min, now logging his third million km. of flight.

Copy seen: DLC.

50856. FEDOROV, S. F. Usloviia obrazovaniia neftianykh i gazovykh mestorozhdeniĭ v riade neftenosnykh oblasteĭ SSSR. (Akademiia nauk SSSR. Doklady, Apr. 21, 1958. god 26, t. 119, no. 6, p. 1212–15, 4 diagrs.) 12 refs. Text in Russian. ***Title tr.:*** Conditions for the formation of oil and gas fields in certain oil-bearing areas of the U.S.S.R.

The Ukhta-Pechora area is outlined, among others, and the conditions examined for oil and gas development in Pechora depression, between Timan Ridge and the Northern Ural. In the Ukhta and Boy Bozh region, both oil and gas are indicated and in the Nibel' region only gas; the occurrences are diagrammed.

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50857. FEDOROV, V. Pushnoĭ promysel v Iakutii. (Okhota i okhotnich'e khoziaĭstvo, Jan. 1957. no. 1, p. 6.) Text in Russian. ***Title tr.:*** Fur hunting in Yakutia.

In the summer of 1956, the hunters of Yakutia exceeded the planned catch with a take worth 3,381,000 rubles. In the winter, nearly 500 professional hunters were active in the Verkhoyansk District, and a rich take of fox and ermine is reported. ***Copy seen:*** DLC.

50858. FEDOROVA, N. A. Uglevodnofosfornyĭ obmen serdechnoĭ myshtsy v usloviiakh gipotermii i vykliuchenііa krovoobrashcheniia. (Voprosy meditsinskoĭ khimii, 1957. t. 3, vyp. 4, p. 301–311, tables.) 18 refs. Text in Russian. Summary in English. ***Title tr.:*** Phosphate and carbohydrate metabolism of cardiac muscle during hypothermia with circulatory occlusion.

Rabbits made hypothermic to 22°–23° C. showed no change in ATP, phosphocreatine, inorganic phosphate and lactic acid of the heart muscle, indicating a sufficient oxygen supply to the myocardium. Stopping circulation caused less changes in cooled than in normothermic animals, and the changes are reversible. ***Copy seen:*** DNLM.

50859. FEDOROVA, N. I. Infrakrasnyĭ spektr severnogo nochnogo neba v oblasti 9500–11500 Å. (Astronomicheskiĭ zhurnal, Mar.–Apr. 1957. t. 34, no. 2, p. 247–49, illus., diagr., tables.) 7 refs. Text in Russian. Summary in French. ***Title tr.:*** The infrared spectrum of the northern night sky in the 9500–11500 Å range.

Results of author's observations of the relative intensity of the hydroxyl bands in the night sky, as determined in Feb. 1955 near Murmansk using a spectrograph with image-converter tube. Results are compared with absolute intensities of hydroxyl bands computed by Roach; considerable disagreement is disclosed. ***Copy seen:*** DLC.

50860. FEDOSENKO, A. K. Ornitologicheskie nakhodki v Krasnoĭarskom krae. (Moskovskoe obshchestvo ispytateleĭ prirody. Bŭlleten', July–Aug. 1958. n. ser., otd. biol., v. 63, no. 4, p. 137–38, text map.) 4 refs. Text in Russian. ***Title tr.:*** Ornithological finds in Krasnoyarsk province.

Contains notes on the distribution of five species in the Yenisey basin, including three at Potapovo, 67° N.: *Erythrina erythrina, Bombycilla garrulus,* and *Cuculus saturatus.* ***Copy seen:*** DLC.

50861. FEDOSOV, V. V dalekoe plavanie. (Sovetskiĭ moriŭk, Nov. 1956. god 16, no. 21, p. 12–13, illus.) Text in Russian. ***Title tr.:*** On a long voyage.

Photographs of activities of the submarines of the Soviet northern fleet, with brief note on a training trip and participation in naval maneuvers.

Copy seen: DLC.

50862. FEDOTOV, E. Promysel v Turukhanskoĭ taĭge. (Okhota i okhotnich'e khoziŭstvo, Sept. 1958. god 4, no. 9, p. 6) Text in Russian. ***Title tr.:*** The hunting industry in the Turukhansk taiga.

The Turukhansk District, some 150,000 sq. km. in area, is covered with coniferous forests abounding in fur animals: bear, wolverine, wild reindeer, sable, fox, arctic fox, muskrat. Many million rubles worth of skins are taken each year by its collective farms; the most successful and their best hunters are listed; poor supply of equipment, administrative indifference, etc. are criticized. ***Copy seen:*** DLC.

FEDOTOV, V., *see* Sablina, T., *and* V. Fedotov. Vesnoĭ u Belogo moriŭ. *1957.* No. 54486.

FEĬGIN, V. I., *see* Zubkov, G. A., *and* V. I. Feĭgin. Avtomatizaŭsiiŭ . . . *1957.* No. 56255.

50863. FEILDEN, HENRY WEMYSS, 1838–1921. On the birds of the north polar basin. (Zoological Society of London. Proceedings, 1877. p. 28–32.)

Contains a general outline of the bird fauna and notes on birds encountered in the area 78°–83° N. 60°–75° W. during the Nares expedition of 1875–1876. The birds met with are listed in systematic order with notes on frequency, food, breeding, etc. ***Copy seen:*** DLC.

FEILDEN, HENRY WEMYSS, 1838–1921, *see also* Fries, T. M. On the lichens collected . . . 1875–76. *1880.* No. 50994.

50864. FEINSTEIN, BERNARD. A new gray-crowned rosy finch from northern Alaska. (Biological Society of Washington, Proceedings, Apr. 1958. v. 71, p. 11–12.)

Describes: Leucosticte tephrocotis irvingi subsp. nov. (U.S. Nat. Mus. no. 435409, adult, June 29, 1949 at Anaktuvuk Pass, Alaska, by T. Brower, a type) only known from the Brooks Range.

Copy seen: DSI.

50865. FELBO, JØRGEN. Det frie ord i Grønland. (Grønland, Dec. 1957. nr. 12, p. 454–58.) Text in Danish. ***Title tr.:*** Free speech in Greenland.

Stresses the importance of the many small privately published local newspapers in Greenland, and of *Grønlandsposten.* The latter is the only newspaper covering the whole of Greenland. It is supported by public means but completely independent. ***Copy seen:*** DLC.

50866. FELBO, JØRGEN. Hverdag i Godthåb. (Grønland, July 1957. nr. 7, p. 252–60, illus.) Text in Danish. ***Title tr.:*** Everyday life at Godthåb.

Life and problems at this West Greenland town (64°11′ N. 51°43′ W.).

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50867. FEL'DMAN, IŭA, I. Vliŭanie snezhnogo pokrova na pogodu i klimat. (Priroda, Apr. 1957. god 46, no. 4, p. 89–90, diagr.) Text in Russian. ***Title tr.:*** Influence of snow cover on weather and climate.

"Features of the modification of air masses and daily variations in air temperatures and other meteorological elements over snow-covered areas are ex-

amined on the basis of observations on the Russian plain in 1937–1941. The albedo of fresh, uncompacted snow cover averaging about 80–90% and the low thermal conductivity of snow are the main factors determining differences in meteorological conditions between snow-covered and snow-free areas. The low dust content of the air over snow and the roughness of the snow surface increase the intensity of outgoing radiation, effect intense cooling of the air near the ground, and raise the rate of daily temperature variations."—SIPRE.

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50868. FEL'DSHTEĬN, ÎA. I. Geograficheskoe raspredelenie polîarnykh siîanieĭ v zapadnoĭ chasti sovetskoĭ Arktiki. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 4, p. 45–49, diagr., map.) 7 refs. Text in Russian. English translation by E. R. Hope, *issued as* Canada. Defence Research Board. Directorate of Scientific Information Service. Translations, July 1959, T329R. 5 p. Copy at CaMAI. ***Title tr.:*** Geographical distribution of auroras in the western part of the Soviet Arctic.

Daily and hourly variations in auroral activity as a function of latitude are discussed for days of low magnetic activity and during magnetic storms, based on hourly observations at 50 stations in the area 67°.3–87°.5 N. 50°–110° E. The analysis indicates a second zone of increased auroral activity at approx. 78° N. in addition to that at 65° N.; its intensity is lower than that at the lower latitude.

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50869. FEL'DSHTEĬN, ÎA. I., *and* E. I. KURDINA. Magnitnye variatsii v raĭone zony polîarnykh siîanieĭ. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 3, p. 53–59, diagrs., tables) 2 refs. Text in Russian. ***Title tr.:*** Magnetic variations in the auroral zone.

Simultaneous recordings of magnetic activity made in 1956 at Dikson Island, Ust'-Tareya, Sopochnaya Karga, and Cape Chelyuskin, also at short (10 km.) distances from the Dikson Observatory, are compared and analyzed with respect to variation in intensity pattern with distance. Greatest difference in form and phase displacement with distance was observed in the vertical intensity; at 800 km. a 180° displacement was not uncommon. Absolute values of horizontal and vertical intensity showed little change at 180 km. south of Dikson, while the change in declination was more pronounced. At limited (10 km.) distances, no change in the fluctuation pattern was observed. ***Copy seen:*** DLC.

FELTS, J. M., *see* Masoro, E. J. *and others.*

Effect of prolonged cold exposure on hepatic lipogenesis. *1957.* No. 53175.

50870. FEL'ZENBAUM, A. I. O szhatiîakh i razrezheniîakh l'dov v Arkticheskom basseĭne. (Akademiîa nauk SSSR. Doklady, Sept. 1957. t. 116, no. 2, p. 217–20.) 7 refs. Text in Russian. English translation by E. R. Hope *issued as* Canada. Defence Research Board, Directorate of Scientific Information Service. Translations, T271R, Jan. 1958. 5 p. copy at DGS. ***Title tr.:*** Compression and rarefaction of ice in the Arctic Basin.

Presents new formulas for calculating changes in ice distribution density under steady and non-stable drift conditions. An index of atmospheric circulation, defined as a quantity proportional to the divergence of the vector-gradient of atmospheric pressure, is introduced, also integral-indices of the atmospheric circulation with respect to area and time, for use in short- and long-range forecasting of local ice conditions. ***Copy seen:*** DLC.

50871. FEL'ZENBAUM, A. I. Teoreticheskie osnovy rascheta dreĭfa l'dov v tsentral'nom Arkticheskom basseĭne. (Akademiîa nauk SSSR. Doklady, Mar. 11, 1957. t. 113, no. 2, p. 307–310.) 7 refs. Text in Russian. ***Title tr.:*** A theoretical basis for calculating ice drift in the central Arctic Basin.

Average (monthly or seasonal) drift is mathematical analyzed. Actual drift, which depends on intermittent factors varying rapidly with time and space, is not considered. The average drift, depending largely on geostrophic (lower tropospheric) wind, can be calculated by integration of Laplace's equation with limits determined from the formulas given. Average drifts of the *Fram* and *Sedov* and the drift stations North Pole 1–4 confirm the conclusions, since they can be resolved into 2/3 gradient (geostrophic) drift and 1/3 wind drift.—From SIPRE. ***Copy seen:*** DLC.

50872. FEL'ZENBAUM, A. I. Teoriîa ustanovivshegosîa dreĭfa l'dov i raschet srednego mnogoletnego dreĭfa v tsentral'noĭ chasti Arkticheskogo basseĭna. (Problemy Severa, 1958. vyp 2, p. 16–46, tables, charts.) 37 refs. Text in

Russian. ***Title tr.:*** A theory of steady ice drift and calculation of the average drift over several years in the central part of the Arctic Basin.

Analyzes factors influencing the drift and presents formulae for computing long-range averages of its speed and direction in general, and at any given location in the Arctic Basin. Mean values of speed and direction of the wind, gradient, complementary gradient, and total drift at junction points are computed, tabulated, and charted. The gradient drift accounts for ⅔ and pure wind drift for ⅓ of the total speed; the gradient drift depends entirely on the water exchange between the Arctic Basin and adjacent seas and oceans (Atlantic, Pacific). Drift over shorter periods (monthly, seasonal), may show great deviation from the several years' averages. ***Copy seen:*** DLC.

50873. FENGER, NIELS. Under Narssak-fjaeldet, indtryk fra Grønland. København, Gyldendal, 1954. 152 p. illus. Text in Danish. ***Title tr.:*** Below the Narssak mountain, impressions from Greenland.

Describes life at Narssaq (60°54′ N. 46° W.) West Greenland, with emphasis on hunting and fishing expeditions. Author was in charge of the fox-breeding experiments in Greenland during 1947–1954. ***Copy seen:*** DLC.

50874. FERGUSON, ALBERT THOMAS, 1926– , *and others.* The effect of hypothermia on hemorrhagic shock. (Annals of surgery, Mar. 1958. v. 147, no. 3, p. 281–88, illus.) 30 refs. *Other authors:* J. N. Wilson, D. Jenkins *and* H. Swan.

Account of experiments with splenectomized dogs made hypothermic prior to or following hemorrhage, with normothermic animals as controls. Eighty percent of dogs cooled prior to bleeding succumbed; all others survived. The value of hypothermia as treatment against hemorrhagic shock "is neither confirmed nor refuted by this study." Blood volume deficits should however, be avoided during hypothermic surgery. ***Copy seen:*** DNLM.

FERGUSON, G. M., *see* Beals, C. S., *and others.* A search . . . lunar and terrestrial topography . . . *1956.* No. 49591.

FERNALD, ARTHUR THOMAS, 1917– , *see* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958.* No. 50694.

50875. FERNALD, MERRITT LYNDON, 1873–1950. *Achillea sibirica* in eastern America. (Rhodora, Oct. 1929, v. 31, no. 370, p. 219–20.)

This species of yarrow, found recently in Quebec, is shown to be *A. multiflora,* treated by Gray as an endemic American species with a range from Saskatchewan to Fort Franklin and Bering Strait, and by Rydberg as strictly American: Manitoba to Alaska, and the arctic coast. The conclusion is offered that northwestern American multiflora should be treated as *A. sibirica* Ledeb. ***Copy seen:*** DA.

50876. FERNALD, MERRITT LYNDON, 1873–1950. *Coptis trifolia* and its eastern American representative. (Rhodora, July 1929. v. 31, no. 367, p. 136–42.)

Contains a comparative taxonomic study of the true *C. trifolia* of northeastern Asia (Kamchatka) and Alaska, and *Anemone groenlandica* northeastern America and Greenland. The latter treated as a species, at least for the present, must be called *Coptis groenlandica* (Oeder), n. comb. ***Copy seen:*** DA.

50877. FERNALD, MERRITT LYNDON, 1873–1950. *Menyanthes trifoliata,* var. *minor.* (Rhodora, Oct. 1929. v. 31, no. 370, p. 195–98.)

Discusses the identity of the common white-flowered buck bean or bog bean occurring in southern Alaska, Newfoundland and southern Labrador. The plant of eastern North America constitutes a good geographic variety.

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50878. FERNALD, MERRITT LYNDON, 1873–1950. Notes upon some northwestern Castilleias of the *parviflora* group. (Erythea, May 1898. v. 6, no. 5, p. 41–51.)

Describes 14 forms (one new) of this herbaceous group; *C. parviflora* first described by Bongard from a specimen collected by Dr. Martens on Baranof Island (Sitka) and later by F. Funston at Disenchantment Bay in Alaska, Aug. 5, 1892, is included. ***Copy seen:*** DA.

50879. FERNALD, MERRITT LYNDON, 1873–1950. The relationships of some American and Old World birches. (American journal of science, Sept. 1902. ser. 4, v. 14, no. 81, p. 167–94, plates 5–6) *Pub. also as:* Contrib. from Gray Herbarium of Harvard University, new ser. no. 23.)

Contains critical revision of 16 birch forms, at least ten species and varieties native to northern regions of Europe, Asia and North America.

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50880. FERNÁNDEZ, C., *and others.* Effect of short term hypothermia on cochlear responses. (Acta oto-laryngologica, May-June 1958. v. 49, fasc. 3, p. 189–205, illus.) 21 refs. *Other authors:* H. Singh *and* H. Perlman. A study of cochlear microphonics (CM) and action potentials from the first turn of the cochlea of hypothermic guinea pigs. The latency of CM remained constant over the temperature drop of 18° C.; the latency of action potentials within the range measured increased by 1.3 and 2.3 m. sec. respectively. Action potentials also showed changes in amplitude and shape; threshhold and amplitude of CM varied together. Reversibility of all parameters lagged during rewarming.

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50881. FERRERO, R., *and* **P. A. GIUDICE.** Considerazioni sul comportamento delle temperature cutanea e muscolare dell'arto inferiore dopo interruzione del simpatico lombare. (Minerva cardioangiologica, Feb. 1957. anno 5, no. 2, p. 45–49, tables.) 12 refs. Text in Italian. Summary in English. ***Title tr.:*** Considerations on the behavior of skin and muscle temperature in the lower limb, following lumbar sympathectomy.

Authors studied skin and muscle temperatures of the leg both before and after ganglionectomy. A temperature increase was observed both on the surface and internally. This increase, though not of the same degree, affected both skin and muscle. ***Copy seen:*** DNLM.

FERRES, HELEN M., *see* Lewis, H. E., *and others.* Selection . . . measuring . . . human subcutaneous tissue thickness. *1958.* No. 52803.

50882. FERRIANS, OSCAR J., Jr., *and* **H. R. SCHMOLL.** Extensive proglacial lake of Wisconsin age in the Copper River basin, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1726.)

Abstracts paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957. Description, based on evidence from strand lines, glacio-lacustrine deposits, stratigraphy and radiocarbon data, of a proglacial lake of 1000 sq. mi. maximum extent. ***Copy seen:*** DGS.

50883. FERRIANS, OSCAR J., Jr., *and others.* Pleistocene volcanic mudflow in the Copper River basin, Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1563.) *Other authors:* D. R. Nichols *and* H. R. Schmoll.

Contains abstract of a paper presented at the Society meeting in St. Louis, Nov. 6–8, 1958; describes a pre-Wisconsin deposit of volcanic debris. Distribution, character and stratigraphic relations indicate that it originated as a volcanic mudflow from the Wrangell Mts.

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FERRIANS, OSCAR J., Jr., *see also* Williams, J. R., *and* O. J. Ferrians. Late Wisconsin and recent . . . Matanuska Glacier . . . *1958.* No. 56057.

50884. FERTOIS, G. La pêche au Grand Lac de l'Esclave: expérience d'exploitation raisonée de la nature. (Nature, *Paris,* Aug. 1957. no. 3268, p. 328–32, illus., map, graph) Ref. Text in French. ***Title tr.:*** Fishing at Great Slave Lake: scientifically regulated use of nature.

Describes this commercial fishery in Mackenzie District as studied and regulated from the beginning by the Canadian Fisheries Research Board. Methods of investigation and principles governing regulation are explained. Results indicate that the fishing is good, and that the lake can be fished more intensively without depleting the stocks. The experience can be applied to other Canadian lakes. Fish species of Great Slave, discovery and settlement of the region, differences between summer and winter fishing, and facilities for shipment to markets are described. ***Copy seen:*** DLC.

FIBIG, G., *see* Zorin, B., *and* G. Fibig. Vozrozhdennyĭ kraĭ. *1957.* No. 56246.

50885. FIELD, WILLIAM BRADHURST OSGOOD, 1904– . Observations of glacier behavior in southern Alaska, 1957. (*In:* American Geographical Society. Preliminary reports of the Antarctic and Northern Hemisphere glaciology programs. 1958. p. X 1–5, text map.)

Reports observations, carried out July 1–Sept. 15, in the Alaska Range, Wrangell Mts., Chugach and Kenai Mts., seeking to determine changes in position of termini and other features, and to study the terrain. Field data, supplemented by analysis of air photography,

are being correlated with pre-IGY observations, meteorological records, etc. to elucidate present glaciation and the response of glaciers to changes in climate. Map shows location of glaciers studied. Preliminary outline of results in 1957 is given. Most glaciers were receding, but the long-and-short-term advances of the past 50 years were conspicuous.
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FIELD, WILLIAM BRADHURST OSGOOD, 1904– , *see also* American Geographical Society. Geographic study of mountain glaciation. *1958*. No. 49276.

FIELDHOUSE, TERRY, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

50886. FILATOVA, Z. A., *and* **L. A. ZENKEVICH.** Kolichestvennoe raspredelenie donnoĭ fauny Karskogo moriâ. (Vsesoûznoe gidrobiologicheskoe obshchestvo, Trudy, 1957. t. 8, p. 3–67, illus., tables, maps.) 39 refs. Text in Russian. ***Title tr.:*** Quantitative distribution of the bottom fauna in the Kara Sea.

Account of quantitative and also qualitative distribution of the main bottom forms of this area are given with information on its relief and sediments; distribution of the total biomass and the biomass of bivalves, polychaetes, echinoderms, etc.; main biocenoses; qualitative and quantitative composition of these biocenoses; some characteristic traits of the bottom fauna of the Kara Sea.
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50887. FILATOVA, Z. A. Nekotorye novye predstaviteli semeĭstva Astartidae, Bivalvia, dal'nevostochnykh moreĭ. (Akademiâ nauk SSSR. Institut okeanologii. Trudy, 1957. t. 23, p. 296–302, illus., map.) 4 refs. Text in Russian. ***Title tr.:*** Some new representatives of the family Astartidae, Bivalvia of the Far Eastern seas.

Description of forms collected by the research vessel *Vitâz'* 1949–1954, from the Okhotsk and Bering Seas, including two new species *Astarte* (*Astarte*) *multicostata* and *A.* (*A.*) *derjugini*. Morphometry, location, color of valves, etc., are noted. ***Copy seen:*** DLC.

50888. FILATOVA, Z. A. Obshchiĭ obzor fauny dvustvorchatykh mollûskov severnykh moreĭ SSSR. (Akademiâ nauk SSSR Institut okeanologii. Trudy, 1957. t. 20, p. 3–59, illus., tables, maps.) 63 refs. Text in Russian. ***Title tr.:*** General review of the bivalve molluscs of the northern seas of the U.S.S.R.

Account of the composition and geographic distribution of this fauna, based on materials of Zoological Institute of the Academy of Sciences and the author's collections during 1934–38 and 1945. The coastal seas, west to east, and the abyssal molluscs of the Arctic Ocean proper are treated in turn; 145 species and 45 subspecies are recorded and their quantitative and qualitative distribution analyzed. For each area, the physical and ecological conditions are outlined, the molluscan fauna and characteristics are presented, and general descriptions given in conclusion. ***Copy seen:*** DLC.

50889. FILATOVA, Z. A. Zoogeograficheskoe raĭonirovanie severnykh moreĭ po rasprostraneniû dvustvorchatykh mollûskov. (Akademiâ nauk SSSR. Institut okeanologii. Trudy, 1957. t. 23, p. 195–215, map.) 24 refs. Text in Russian. ***Title tr.:*** Zoogeographic zonation of the northern seas according to the distribution of bivalve molluscs.

Attempt based on qualitative and, where data available, quantitative distribution of bivalves. Author distinguishes two regions (oblast'), boreal and arctic, the latter further divided into low-arctic and high-arctic sub-regions. Further zonation is based on a depth distribution of these molluscs (e.g. littoral, abyssal) and on geographic provinces, as Polar-Greenland province, etc. ***Copy seen:*** DLC.

50890. FILIPPOV, A. I. Pervyĭ opyt ispol'zovaniâ parovykh i dizel'nykh traulerov na drifternom love sel'di v Severnoĭ Atlantike. (Rybnoe khozâĭstvo, July 1958. god 34, no. 7, p. 26–28, illus., table.) Text in Russian. ***Title tr.:*** First attempt at using steam and diesel trawlers in driftnet fishing of herring in the North Atlantic.

Due to decline of trawl fisheries in the Barents Sea, 14 trawlers were diverted by the end of 1957 to the North Atlantic for herring fishing. Types of trawlers, changes made in them, their operation under new conditions, economic aspects, plans for the future, etc., are discussed.
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50891. FILONOV, V. Polety na Tu-104 v zimnikh usloviâkh. (Grazhdanskaâ aviatsiâ, Dec. 1957. god 14, no. 12, p. 15–17) Text in Russian. ***Title tr.:***

Flying the Tu–104 under winter conditions.

Stresses importance of keeping runways snow- and ice-free, use of tarpaulins for protection on the ground, and thorough knowledge of blind-landing devices for snow and fog. The engines' de-icing system should be kept running during starting procedures, also when entering clouds, to prevent pieces of ice from entering the air intake to the engines.

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FINCHER, E. L., *see* Kethley, T. W., *and others.* The effect of low temperatures . . . survival of airborne bacteria. *1957.* No. 52250.

50892. FINDEISEN, HANS, 1903– . Völker und Kulturen Nordasiens. (Geographische Rundschau, Apr. 1957. Jahrg. 9, Nr. 4, p. 136–44, illus.) Text in German. ***Title tr.:*** Peoples and cultures of north Asia.

Discusses the present situation in the area, as of northern minorities forced to abandon their cultural and spiritual traditions in the process of collectivization and technological advance, and being, in effect, exterminated. Colonization of Siberia is reviewed and vital statistics (1926) are given. The native economies of the past (hunting, fishing, reindeer herding) are sketched and the nonmaterial culture, now vanishing, is described: religious cults and rites, magic and shamanism, mythology, art, etc.

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50893. FINDEISEN, HANS, 1903– . Wandlungen der lappischen Rentierwirtschaft. (Geographische Rundschau, Apr. 1958. Jahrg. 10, Heft. 4, p. 129–36, table) Approx. 12 refs. Text in German. ***Title tr.:*** Transformation of the Lappish reindeer economy.

Changes in reindeer herding of the Swedish (especially), Norwegian, Finnish and Kola Lapps are discussed primarily from recent literature. The husbandry by both nomadic and settled Lapps is reviewed; the transfer of some to agriculture, also the increase in size of herds are noted. The shift from extensive to intensive herding (cf. No. 43292–43293) is stressed and some methods indicated for improving the latter. The forced collectivization of reindeer herding among Kola Lapps is mentioned. The question of the number of reindeer per family for subsistence is raised and some information given. ***Copy seen:*** DLC.

50894. FINDLAY, MARJORIE CRAVEN, 1926– . The possibilities of sheep-raising in the Ungava Bay area. (Canadian geographer, 1957. no. 10, p. 20–28, text map, 2 tables.)

In 1954, 763 Eskimos lived in this area of northern Quebec, most families receiving government relief. Caribou have almost disappeared and Eskimos have little inclination to hunt. For their independence, economic security, and adjustment to a mixed community, some small-scale industry is needed. Physical requirements for sheep raising are considered: cold is not detrimental, but freeze-thaw conditions are harmful to sheep; adequate summer grazing exists, but hay must be cultivated for winter fodder; not wolves but Eskimo husky dogs present a hazard. Sheep-raising achievements in West Greenland since 1904 are described; also the Dept. of Northern Affairs sheep-farming experiment at False River and Fort Chimo. A small experimental farm is planned. ***Copy seen:*** DGS.

FINLAND, G. H., *see* Lilge, E. O. *and* G. H. Finland. Proposed development of Northwest Canada. *1958.* No. 52829.

50895. *FINLANDS NATUR.* Förslag till nya natur och nationalparker. (*Its:* Årsbok, 1948, p. 6–15, illus., map.) Text in Swedish. ***Title tr.:*** Plans for new natural- and national parks.

These parks in Finland serve as research localities, and for public recreation, as well as preserves for natural phenomena. They are shown on map and described in turn. When the present plans go into effect, the parks will cover 0.5% of the country's area. Four national and six natural parks, of total area 1016 and 474 km² respectively, are located in northern Finland. These are briefly described and mapped.

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FINNÉ, V. V., *see* Grimberg, A. M. Avtomat otbiraet almazy. *1957.* No. 51378.

50896. *FINNISH TRADE REVIEW.* Ice-breaker exported to Sweden. (Finnish trade review, Apr. 1958. no. 104, p. 63, illus.)

Describes briefly the 5,200 t., 10,500 shp. ice-breaker *Oden,* delivered to its owners from Sandvikens Skeppsdocka. Helsinki, on Nov. 19, 1957.

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50897. FINSTERWALDER, RICHARD, 1899– . Scope, state and development of precise glacier surveys on the earth. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report 1957. v. 4, *pub.* 1958. p. 520–24.)

The requirements for precise glacier surveys and methods of measurement are described briefly, a list of glaciers which have been surveyed at least once is given, and the results are summarized. Glaciers which are repeatedly surveyed include Eqip Sermia in West Greenland and two (Gl. Goes and Gänsgletscher) in Spitsbergen. A number of glaciers in Norway, Spitsbergen, the Himalayas, etc. have been surveyed once. The tongues of long glaciers are still retreating, while short, active glaciers show an advancing trend. Eqip Sermia exhibits a slight frontal recession.—From SIPRE. ***Copy seen:*** DGS.

FINSTERWALDER, RICHARD, 1899– , *see* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

FISCH, CHARLES, *see* Berman, E. J., *and others.* Experimental prevention of ventricular fibrillation . . . *1958.* No. 49692.

50898. FISCHER, ALFRED JOACHIM. A visit to the last genuine Eskimos. (Norseman, Jan.-Feb. 1957. v. 15, no. 1, p. 26–29, illus.)

Contains popular account of life in Kanak (new Thule), northwest Greenland, describing the Eskimos' physical appearance, dwellings, furnishings, clothing, marriage and family life, morality, religion, handicrafts, education, and evacuation from old Thule in 1954.

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50899. FISCHER, ELSE. Jorden rundt på 13 dage med SAS. København, Jespersen og Pio, 1956. 192 p. 26 plates. Text in Danish. ***Title tr.:*** Around the world in 13 days with SAS.

Popular account by a Danish journalist, who accompanied, as stewardess and correspondent, a regular passenger flight of the Scandinavian Airlines System. Includes discussion of the route over Greenland and northern Canada, the crew's reaction to arctic landscape, etc., its visitors and inhabitants. The stopover at Søndre Strømfjord on West Greenland, the tourist accommodations, personnel, etc. are noted.

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50900. FISHER, BERNARD, 1918– , *and others.* Effect of hypothermia of 2 to 24 hours on oxygen consumption and cardiac output in the dog. (American journal of physiology, Mar. 1957. v. 188, no. 3, p. 473–76, tables.) 17 refs. *Other authors:* C. Russ and E. J. Fedor.

Cardiac output and O_2-consumption in hypothermia were the same whether ether or pentobarbital sodium were used as anesthetics. After an initial decrease in O_2-consumption, no further decrease occurred as long as body temperature remained constant. Cardiac output, arterio-venous oxygen difference and coefficient of O_2-utilization remained unchanged for longer periods under constant low temperature than other physiological parameters studied.

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50901. FISHER, BERNARD, 1918– , *and others.* Rewarming following hypothermia of two to twelve hours, 2; some metabolic effects. (Annals of surgery, July 1958. v. 148, no. 1, p. 32–43, illus., table.) 33 refs. *Other authors:* E. J. Fedor *and* S. H. Lee.

Continuation of a study (No. 50852) on dogs chilled to 23–24° C. Hematocrit, blood and plasma specific gravity returned to normal after cooling for four hrs. It took progressively longer for this to occur for animals cooled eight hrs. and more. Clotting time behaved similarly, but no significant changes occurred in prothrombin time, electrolytes, acid-base balance, amino acids and blood sugars, or lactate/pyruvate ratio after hypothermia of 2–12 hrs.

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FISHER, BERNARD, 1918– , *see also* Fedor, E. J., *and* B. Fisher. Effect of hypothermia . . . rewarming on blood volume . . . *1958.* No. 50850.

FISHER, BERNARD, 1918– , *see also* Fedor, E. J., *and others.* Observations . . . bacterial defense mechanisms . . . hypothermia. *1958.* No. 50851.

FISHER, BERNARD, 1918– , *see also* Fedor, E. J., *and others.* Rewarming . . . hypothermia of two to three hours, 1; cardiovascular effects. *1958.* No. 50852.

FISHER, BERNARD, 1918– , *see also* Fedor, E. J., *and others.* Rewarming . . . prolonged hypothermia. *1957.* No. 50853.

FISHER, BERNARD, 1918– , *see also* Fisher, E. R., *and others.* Pathologic and histochemical observations in experimental hypothermia. *1957.* No. 50902.

FISHER, BERNARD, 1918– , *see also* Fisher, E. R., *and others.* Stressor effect of hypothermia . . . rat. *1957.* No. 50903.

50902. FISHER, EDWIN RALPH, 1923– , *and others.* Pathologic and histochemical observations in experimental hypothermia. (Surgery, Nov. 1957. v. 75, no. 5, p. 817–27, illus., table.) 26 refs. *Other authors:* E. J. Fedor, *and* B. Fisher.

Account of investigations of the heart, lungs, adrenals, kidneys and pancreas of dogs made hypothermic for 2–24 hrs. A slightly increased deposition of lipids and depletion of glycogen were found in most of the organs. Only the kidney showed lack of alterations in the substances studied. ***Copy seen:*** DNLM.

50903. FISHER, EDWIN RALPH, 1923– , *and others.* Stressor effect of hypothermia in the rat. (American journal of physiology, Mar. 1957. v. 188, no. 3, p. 470–72, tables.) 10 refs. *Other authors:* E. J. Fedor *and* B. Fisher.

Hypothermia with ether narcosis for two hrs. caused decrease in weight of adrenals due to loss of water and solids, decrease of their ascorbic acid content and in about one-half of the animals loss of sudanophila and cholesterol and/or esters. No such changes were observed in animals similarly treated for six hrs. nor in rats made hypothermic under Nembutal anesthesia. It is suggested that an initial stress accompanies hypothermia with ether anesthesia. ***Copy seen:*** DLC.

FISHER, EDWIN RALPH, 1923– , *see also* Fedor, E. J., *and others.* Observations . . . bacterial defense mechanisms . . . hypothermia. *1958.* No. 50851.

50904. FISHER, HAROLD DEAN, 1922– . Arctic investigations by the Fisheries Research Board of Canada, 1956–57. (Arctic, 1957, v. 10, no. 4, p. 244–45.) 6 refs.

Notes studies and surveys of: fish stocks at Coppermine, the Mackenzie delta region and up the river from Aklavik to Fort Norman; the char run in Rowley River on Rowley Island, Foxe Basin; netting ringed seals at Herschel Island; collection of plankton, benthos and hydrographic samples through a yearly cycle in northern Foxe Basin; etc. ***Copy seen:*** CaMAI.

50905. FISHER, HAROLD, DEAN, 1922– . Fish in the Canadian North. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 96–99, illus., map.) 5 refs.

Reports prospects for exploiting arctic fishery resources. Intensive commercial development for export is not feasible (except at Great Slave Lake), but arctic fish stocks could be of great subsistence value replacing or supplementing caribou and marine mammals as food for the local natives. Such possibilities and a more efficient use of marine mammals have interested the Fisheries Research Board's Arctic Unit since 1947. Development is being considered of local or small-scale commercial fishing, and of a luxury market for arctic char (Eskimo co-operatives, mainly for char fishing at George River and Port Burwell in the Ungava Bay region have been set up according to a government news release, dated June 16, 1959). Greenland halibut, shark and herring fishing may be encouraged. ***Copy seen:*** DGS.

FISHER, HAROLD DEAN, 1922– , *see also* Scott, D. M., *and* H. D. Fisher. Incidence . . . parasitic ascarid . . . porpoise . . . *1958.* No. 54642.

FISHER, JOEL E., *see* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

FISHER, KENNETH CLARKE, 1911– , *see* Pengelley, E. T., *and* K. C. Fisher. Onset . . . hibernation under constant temperature and light . . . *1957.* No. 53928.

FISHER, KENNETH CLARKE, 1911– , *see* Smith, D. A., *and* K. C. Fisher. The distribution . . . varying lemming in a gradient of temperature. *1956.* No. 54989.

50906. FISHER, O. The Soviet North and the Canadian North. (Canadian geographical journal, Sept. 1957. v. 55, no. 3, p. 108–115, 7 illus., 3 text maps.)

Compares climate, soils, vegetation, waterways, and drainage in areas north of contiguous settlement in these countries. Transport routes, population, trade and industry are described in the Soviet North, where physical factors favor development better than in Canada.

The Northern Sea Route and labor settlement of Siberia are briefly described. Expansion in the Soviet North is expected; but in the Canadian, resource development rather than settlement.

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50907. FISHER, R. L., *and others.* Deep-sea bathymetry north of Point Barrow. (Deep-sea research, May 1958. v. 5, no. 1, p. 1–6, map, diagr.) 14 refs. *Other authors:* A. J. Carsola *and* G. Shumway.

Presents a detailed bathymetric chart for a part of the Beaufort Basin approx. 72°30′–76°30′ N. 150°–165° W., and cross-sections of the continental slope north of Pt. Barrow. Procedures are described, and accuracy of the recordings evaluated. Topographic characteristics of the sea-floor area are discussed. A slight rise lies northeast of 74° N. 155° W. The transition from continental slope to flat bottom is abrupt on the northwestern sections; and, from a few isolated spot soundings, the basin seems to extend at least to 76° N. 151° W. The lower continental slope is shown to be a steep scarp (23°) in the area west of the basin, while the gradient of the southeastern flank ranges from 1°9′ to 1°56′. Off the Alaskan coastal plain, southeast of the surveyed area, the upper continental slope is steep, ranging from 4° to 10°. The existence of an isolated area shallower than 500 fm. and centered near 75° N. 158° W., has been established. A broad, flat-bottomed trough which narrows to a steep-walled gap or cleft toward the south, separates this spur from the shallow area to the southwest.

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FISHER, RAYMOND HENRY, 1907– , *see* Belov, M. I. Semen Dezhnev . . . *1957.* No. 49641.

50908. FISKAA, ODD M. Støping av betong om vinteren, teori og praksis. RILEM, København 12.–18. februar 1956. (Teknisk ukeblad, Apr. 26, 1956. årg. 103, nr. 17, p. 394–98.) Text in Norwegian. ***Title tr.:*** Winter concreting, theory and practice. RILEM, Copenhagen 12–18, February 1956.

Reports meeting of the international Association of Testing Materials and Construction Research Laboratories, with summary and evaluation of the more important papers presented. Subjects discussed were: influence of the weather; laboratory research, and influence of temperature on curing; ability of newly poured concrete to resist frost action; choice of materials and methods for heating and insulating purposes; and how winter concreting is practiced in the field. Experimental work in some 14 countries is included in the survey.

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50909. *FISKETS GANG.* Bergen, Norway, 1910– *in progress.* ***Title tr.:*** The course of fishing.

Weekly bulletin of the Norwegian fisheries directorate, with current news on the catch of commercially important fish and on local fishing grounds. Current year's export of about 75 kinds of fish are tabulated for some 20 ports; new regulations and foreign fishing news, etc. are given. The research papers frequently included are abstracted in this Bibliography *infra,* or under authors' names.

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50910. *FISKETS GANG.* Fiskeforsøk med nylon- og perlontorskegarn sammenliknet med garn av vanlig materiale, 3. mars - 13. april 1954. (Fiskets gang, June 10, 1954. årg. 40, nr. 23, p. 290.) Text in Norwegian. ***Title tr.:*** Fishing investigations with nylon and perlon cod nets in comparison with nets of customary materials, Mar. 3–April 13, 1954.

On the Sørøy fishing grounds off western Finnmark in northern Norway, net sections of nylon and perlon yarns were tested. Daily catches of these and sections of customary materials are tabulated: nylon sections had highest catch. Perlon dyed red served better than white.

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50911. *FISKETS GANG.* Fiskeforsøk med torskegarn av nylon og perlon samfengt, sammenliknet med garn av vanlig materiale. (Fiskets gang, July 29, 1954. årg. 40, nr. 30, p. 369, table.) Text in Norwegian. ***Title tr.:*** Fishing investigations with cod nets of nylon and perlon compared to nets of customary materials.

In net tests on the Båtsfjord fishing grounds off northernmost Norway, the combined daily catch in nylon and perlon nets was higher than that of ordinary nets. Both are tabulated. The white perlon threads were found to wear when knotted.

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50912. *FISKETS GANG.* Fiskeforsøk med torskegarn av nylon sammenliknet med garn av vanlig tråd. (Fiskets gang, Aug. 5, 1954. årg. 40, nr. 31, p. 384,

table.) Text in Norwegian. ***Title tr.:*** Fishing investigations with cod nets of nylon compared to nets of customary thread.

From tests on the fishing grounds in Varangerfjord, northern Norway, the nylon net catches were found higher; but nylon has not been used long enough to test durability: it has a greater tendency to tear, and repair is more expensive than for hemp nets. ***Copy seen:*** DLC.

50913. ***FISKETS GANG.*** Nytt i organiseringen av uer-industrien; et verdifullt tiltak av Murmansk-fiskerne. (Fiskets gang, July 1, 1954. årg. 40, nr. 26, p. 329.) Text in Norwegian. ***Title tr.:*** News in the organization of the haddock industry; a worthwhile enterprise of the Murmansk fishermen. Based on article in *Pravda*, May 21, 1954.

A new haddock field, the Kopytov of 400–500 mi.,^{2} was discovered in the Barents Sea in 1954 by two Murmansk fishing captains. To lose no time, the fishing boats transfer the catch: the fish are deposited in floating bags marked with buoys, collected then by a transport vessel and cleaned, etc. Difficulties encountered in the enterprise are discussed. Haddock migration routes are little known. ***Copy seen:*** DLC.

50914. ***FISKETS GANG.*** Selfangst- og håkjerringfiske i 1953. (Fiskets gang, Jan. 28, 1954. årg. 40, nr. 4, p. 51–52, 2 graphs, 2 tables.) Text in Norwegian. ***Title tr.:*** Sealing and Greenland shark fishing in 1953.

Activities of the Norwegian sealers in northern waters are summarized. Number of ships, gross and net tonnage, personnel, trips, and gross catch decreased in 1953, after post-war increases to 1952. Greenland seal (from Newfoundland, Greenland straits and the West, North and East Ice) constituted 82% of the yearly catch, which ranges from March to May. Catch of various products, number and duration of trips, tonnage disposition and declared value are tabulated for individual fields. Troms province led in number of sealing ships. ***Copy seen:*** DLC.

50915. ***FISKETS GANG.*** Småtrålerne. (Fiskets gang, July 1, 1954. årg. 40, nr. 26, p. 327–28, 3 tables.) Text in Norwegian. ***Title tr.:*** The small trawlers.

Investigations were made in 1952 and 1953 of economic factors affecting trawlers under 300 tons gross. Costs and earnings are tabulated for three size classes for spring and fall trawling seasons of eight-nine weeks each. Spring trawling appears more profitable than fall. Both vary from year to year and within size classes. Weekly and total seasonal wages, seasonal outlays, and earnings on trawler investments are compared. ***Copy seen:*** DLC.

50916. ***FISKETS GANG.*** Stortrålernes lønnsomhet 1952–53. (Fiskets gang, Oct. 7, 1954. årg. 40, nr. 40, p. 485–87, 3 tables.) Text in Norwegian. ***Title tr.:*** The large trawlers' earnings 1952–53.

Full-time operation is considered for ten Norwegian trawlers in 1952 and twelve in 1953. Amounts of salted and fresh fish varied with years and individual vessels. The 1952 catch was from east and west of Nordkap along the Norwegian coast, the Barents Sea, West Greenland, and Bjørnøya waters with best results from early tours to West Greenland. The same fields were used in 1953, but both catch and prices were lower than in 1952. Data are given on costs, number and duration of trips; also on crew and corporation earnings, etc.; comparisons are made for years 1949–1953. ***Copy seen:*** DLC.

50917. FITZGERALD, GERALD, 1898– . New tools for mapping in arctic Alaska. (Canadian surveyor, July 1957. v. 13, no. 8, p. 484–90, illus., map.)

Reviews the Brooks Range Project: mapping of the area (120,000 sq. mi.) north of 66° N. approx. 141°–163° W., rough terrain, mountains to 10,000 ft., inaccessible, population less than 1/100 sq. mi. "New techniques, hitherto untried in a job of this magnitude, were involved" throughout the project. U.S. Geological Survey operations 1955–56 for production of standard topographic maps at scale 1:250,000 with (mainly) 200 ft. contour intervals are described. The aerial photography was carried out (by Mark Hurd Aerial Surveys of Minneapolis) from 30,000 ft. altitude; 10,300 mi. of transverse low-oblique, and 1,300 mi. of convergent. low-oblique photographs were obtained (the two methods are illustrated), also, in 1956, photographs were obtained of approx. 1,200 mi. south of the original project area. Films were processed at Fairbanks upon completion of each day's work. The phototrig transverse method was applied in the field operations, which were carried out with extensive use of aircraft and helicopters.

Concurrently with the transverse lines, the three field parties ran altimeter lines by the leap-frog method; 352 marked phototrig transverse stations and 433 altimeter elevations were established. Bridging and compilation methods used in assembling the material are described; the maps are scheduled for completion by 1960. ***Copy seen:*** DLC.

50918. FITZSIMMONS, THOMAS, *Editor.* RSFSR, Russian Soviet Federated Socialist Republic. Contributors: Clifford R. Barnett, and others. New Haven, Human Relations Area Files, 1957. 2 v. (xii, 681 p.) illus., 11 maps, tables. (Country survey series.) 150 refs.

Handbook on the history, population, administration, economic and social conditions, industry, transportation, etc., of the dominant Soviet Republic which comprises all the northern areas of the U.S.S.R. The chapter on *Ethnic groups and languages* (p. 85–116) contains information on the distribution, racial affinities, vital statistics, and economy of minority groups, including: Lapps, Zyryans, Samoyeds, Ostyaks and Voguls, Yakuts and Dolgans, Tungus (Eveny and Evenki), Yukaghirs, Chukchis, Koryaks, Kamchadals, Aleuts, Golds, and Gilyaks. Shamanism is mentioned (p. 575–76) as still practiced by some of the herding and fishing tribal groups. Forced labor and concentration camps are dealt with (p. 206–221); they are located mainly along the White and Barents Seas, in the Vorkuta coal region, the Nenets and Khanty-Mansi National Districts, and in the industrial areas of north and northeast Siberia. Population density, distribution of minority groups, administrative divisions, agricultural growing seasons and crop production, natural resources and major industrial regions, transportation system (rail, water, air, highways) are mapped. A geographical and topical index and a glossary of Soviet terminology and abbreviations are appended.
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50919. FIZHENKO, V. V. Shchelochnye granity Belykh tundr. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 117–26, illus., tables, diagrs., fold. map.) Text in Russian. ***Title tr.:*** Alkaline granites of the Belyye tundras.

Describes the massif and related basic rocks of Panskiye Vysoty, about 100 km.^{2} in area, east of the Tsaga River and west of Churozero Lake (approx. 67°30′ N. 36° E.). Occurrence of alkaline granites, reported by A. A. Polkanov in 1925, has been studied since by various scientists whose work is reviewed. Petrographic descriptions of the alkaline granites of Belyye tundras, (67°25′–42′ N. 35°25′–36°25′ E.), and gabbro-norites of Panskiye Vysoty are presented in turn and their texture features, component minerals, mode of aggregation, and other characteristics are briefly outlined. Geologic development is treated in common. Special attention is given to the interpenetrating contrast between alkaline granites and basic gabbro-norites. The mode of transformation in the rocks is discussed although metasomatic processes were not observed. ***Copy seen:*** DLC.

50920. *FIZKUL'TURA I SPORT.* Zdorov'e, bodrost', dolgoletie. (Fizkul'tura i sport, Dec. 1958. god 28, no. 12, p. 14–16, illus.) Text in Russian. ***Title tr.:*** Health, high spirits, longevity.

A photo reportage on ice-water bathing and snow rubbing, as a sport indulged by young and old all over the U.S.S.R. The beneficial health aspects of this form of hardening especially for functional disorders of the nervous system, respiratory and circulatory diseases, etc., are stressed. ***Copy seen:*** DLC.

50921. FJELLSTRÖM, PHEBE. Två silversamlingar från Lappland. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1958, p. 59–72, illus.) 5 refs. Text in Swedish. ***Title tr.:*** Two silver collections from Lapland.

Contains notes on a collection assembled by Einar Wallquist, Arjeplog (about 90 items), and another acquired by Erland Ström, Jokkmokk (about 182 items) and donated to Norrbotten Museum in 1955. The Lapps used to invest their assets in silver objects bought from Swedish and Norwegian silversmiths. Some of these (drinking-cups, spoons, ornaments for belts and collars, etc.) are described. The decoration on the silver objects was based on Lappish handicraft designs. ***Copy seen:*** SPRI.

50922. FJØRTOFT, RAGNAR. The problem of the maintenance of the low-level anticyclonic circulation in the Arctic. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 87–92, maps.)

The dynamics of the normal surface pressure in the Arctic during November

in relation to the 700–1000 mb. thickness and the fields of vertical motion and horizontal divergence are discussed. The results suggest that the anticyclonic circulation which predominates in low levels during the arctic winter is maintained essentially by the normal flow and temperature patterns which cause the air masses to be deflected in such a way to give a net warning by advection in the regions surrounding the arctic anticyclone, thus causing the air in the middle to descend and spread at the ground.

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50923. FLAGSTAD, C. O., *and* **A. GRØNBJERG.** Det elektriske maskineri om bord i isbryderen "Elbjørn." (Elektroteknikeren, 1955. årg. 51, nr. 8, p. 141–48, 15 illus.). Text in Danish. ***Title tr.:*** The electric machinery on board the ice-breaker *Elbjørn.*

The *Elbjørn,* built in 1953, is equipped with three 8-cylinder 1200 hp diesel engines, each of them coupled to an 800 kw, 440 v direct current generator. The ship has two propellers, one fore and one aft, each driven by a direct current motor, applied as a double-motor. The motor on the fore-propeller is a compound motor. Construction details are given. By means of a transmission arrangement, the machinery can be operated directly from the bridge. A short description is also given of the electrically operated rudder and tug-winch.

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FLEISCHER, CLARA J., *see* Abramson, D. I., *and others.* Relationship . . . tissue temperature and oxygen uptake . . . resting. *1958.* No.49107.

FLEISCHMAN, MALCOLM, *see* Haddy, F. J., *and others.* Effect of change in air temperature . . . *1957.* No. 51475.

50924. FLEMING, J. H., *and* **L. L. SNYDER.** On *Melospiza melodia* in Ontario. Toronto, Univ. of Toronto Press, 1939. 8 p. map, table. (Toronto. Royal Ontario Museum of Zoology. Occasional papers, no. 4.) 5 refs.

Contains a study of variation of the song sparrow in Ontario, with discussion of its status, morphometry of geographic races and distributional data. Three races of *M. melodia* are recognized: *juddi, melodia* and *euphonia,* of which the first one breeds in western, northern, and northwestern Ontario, reaching to Hannah Bay on James Bay.

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50925. FLEMING, PETER R., *and* **FRANK H. MUIR.** Electrocardiographic changes in induced hypothermia in man. (British heart journal, Jan. 1957. v. 19, no. 1, p. 59–66, illus., table.) 28 refs.

An analysis of electrocardiograms of 29 patients made hypothermic for heart surgery. "The consistent features were a progressive bradycardia associated with evidence of delayed conduction and repolarization as manifested by prolongation of the P–R, QRS, and S–T intervals." Atrial and ventricular fibrillation, and the injury potential were also studied. ***Copy seen:*** DNLM.

50926. FLEMING, RICHARD HOWELL, 1909– , *and others.* NORPAC 1955; MV. *Brown Bear,* August 1 to September 19, 1955. Preliminary data report. Seattle, Wash., Feb. 1956. 105 p. fold. map, tables. (Washington, State, University. Dept. of Oceanography. Special report no. 22.) 11 refs. *Other authors:* R. G. Paquette, C. S. Yentsch, and H. F. Frolander.

Contains certain physical, chemical, zooplankton and plant pigment data collected during *Brown Bear* Cruise 110, the Univ. of Washington participation in NORPAC, an international survey of the North Pacific. Ship's track and stations occupied are indicated (map). Remarks on equipment, methods of analysis, supplementary data, and personnel are followed by the narrative of the cruise, Aug. 1 to Sept. 19, 1955; wildlife log; explanation of tables; tabular data and comments. ***Copy seen:*** DN–HO.

50927. FLEROV, KONSTANTIN KONSTANTINOVICH. Osnovnye cherty formirovaniia fauny mlekopitaiushchikh chetvertichnogo perioda v Severnom polusharii. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Trudy, 1955. t. 12, p. 121–28, illus.) 4 refs. Text in Russian. ***Title tr.:*** Basic features of formation of Quaternary mammalian fauna in the Northern Hemisphere. Paper presented to the Conference on the Quaternary, Moscow, Jan. 13–16, 1953.

Main stages of development of mammals in the Miocene, Pliocene, Pleistocene, and present periods in the tropic, temperate and arctic regions are treated. Special attention is given to the evolution

of the Cervulinae, Cervinae and Odocoileinae. The successive developmental stages are outlined. The end of the Pliocene was characterized by the extinction of several mammals, changes of areas, and the disappearance of warmth-loving forms. At the beginning of the middle Pleistocene there was a wide distribution of contemporary arctic and subarctic mammals, among them, the mammoth, white bear, muskox, polar fox, rhinoceros; the end of this epoch was characterized by the extinction of many mammals and by the survival and adaptation of present forms. Further investigations of mammals are indicated.

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50928. FLEROV, KONSTANTIN KONSTANTINOVICH. Severnyĭ olen' iz paleolita Sibiri. (Gosudarstvennaĭa akademiĭa istorii material'noĭ kul'tury. Izvestiĭa, 1935. vyp. 118, Paleolit SSSR. p. 271–73, illus., table.) Text in Russian ***Title tr.:*** Paleolithic reindeer from Siberia.

Describes the well preserved skull of a new (?) species, *Rangifer constantini* Flerow, excavated by M. M. Gerasimov in 1928 near Mal'ta, at the confluence of the Angara and Belaya Rivers. The skull differs from that of modern Eurasian and American reindeer varieties, yet shows affinities to *R. caboti* Allen (northern Labrador) and *R. angustirostris* Flerow (Baykal region). A comparative anatomical table for *R. constantini*, *R. angustirostris* and *R. arcticus* is given.

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50929. FLETCHER, ROBERT D. Arctic weather-forecasting problems of the Air Weather Service. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 118–23.)

Inadequacy of data is the basic problem, due mainly to logistic difficulties (cited) in this area. Three of the important forecasting problems for aviation are outlined: middle-cloud forecasting, i.e. cloudiness between 10,000 and 20,000 ft.; local terminal prediction of ceilings, visibilities, and strong surface winds (examples in Alaska cited), and prediction of upper winds. Recent studies on the last are cited and Kochanski's and D. E. Martin's results are summarized.

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50930. FLETCHER, WILLIAM S., *and* **W. B. PATTERSON.** The growth of human tumors in hamsters after freezing, anoxia and hibernation. (Surgical forum 1958. v. 8, p. 182–85, illus., table.) 4 refs.

Five of six human tumors transplantable in cortisone-treated golden hamsters survived freezing at −80° C. Four of five tumor types grew at a reduced rate in hibernating animals (body temperature 5±2° C.) and normally thereafter. ***Copy seen:*** DNLM.

FLICK, D. F., *see* Treadwell, C. R., *and others.* Nutrition studies in the cold, 1 . . . *1957.* No. 55506.

FLICK, D. F., *see* Treadwell, C. R., *and others.* Nutrition studies in the cold, 2 . . . *1958.* No. 55507.

FLINT, GEORGE MARSH, 1918– , *see* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

50931. FLINT, RICHARD FOSTER, 1902– . Moving picture of the last ice age. (Natural history, Apr. 1957. v. 66, no. 4, p. 188–89, 6 text maps, diagr.)

Account of the last invasion of the United States by glacier ice on the basis of dating by Carbon 14; and a time chart showing the "path of the glacier's edge as timed by the radiocarbon calendar." ***Copy seen:*** DLC.

50932. FLOHN, HERMANN, *and* **G. SEIDEL.** Recent studies on the arctic troposphere and its teleconnections. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 62–70, maps, graphs.) 7 refs.

The studies are based on mean 500–1000 mb. thickness charts for the area 75°–90° N. during each winter from 1949–50 to 1955–56, and on the area covered by an "arctic air mass" with a thickness of less than 5000 gpm. The average tropospheric temperature of the Central Arctic shows strong irregular time variations between Nov. and March which cannot be explained by seasonal changes of radiation balance. A regular balance between this temperature and the strength of the mid-latitude westerlies, as hypothesized earlier, was not found. A relationship was found, however, between the so-called area of arctic air over Siberia, and the average zonal wind component at the 500-mb level over Europe, with a delay of about one week. ***Copy seen:*** DLC.

50933. FLOHN, HERMANN. Zur Frage der Einteilung der Klimazonen. (Erd-

kunde, Aug. 1957. Bd. 11, Heft 3, p. 161–75, 3 maps, tables.) 50 refs. Text in German. Summary in English. ***Title tr.:*** The problem of a classification of climatic zones.

A factual (descriptive) classification of climates should be supplemented by genetic classification, restricted however to the major climatic zones. The genetic classification of B. P. Alisov (No. 27751) based on air masses and their fronts is compared with the author's, based on wind and precipitation fields; the two are found in general agreement. According to Alisov's map and Flohn's explanation, the polar climates fall into subpolar and polar zones. The former, limited by the position of the polar front, is found only between 70° N. 10° W. and 67° N. 75° E. The arctic and (especially) antarctic zones are mainly characterized by yearly radiation balance and permanent ice cover. The regime of winds, appearance of temperature inversion, maritime and continental climate in the Arctic are discussed. ***Copy seen:*** DLC.

FLORENSOV, N. A., *see* Puchkov, S. V., *and others.* Novoe sil'noe zemletrîasenie . . . *1958.* No. 54165.

50934. FLORIN, RUDOLF. On Jurassic taxads and conifers from northwestern Europe and eastern Greenland. (Acta horti bergiani, 1958. bd. 17, no. 10, p. 257–402, 6 illus., 56 plates.) 121 refs.

Includes descriptions of the stratigraphy of the plant-bearing series of Scoresby Sund, East Greenland, belonging to the Cape Stewart formations (fresh-water Lower Lias and Rhaetic), and the beds adjacent. The Scoresby Sund floras contain remains of many conifers or conifer-like plants (p. 345–49), of which three are discussed: *Storgaardia spectabilis, Elatocladus amblus* and *E. punctatus.* The rest of the paper deals with Jurassic flora of European localities.

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50935. FLOVIK, KARL. Chromosome numbers and polyploidy within the flora of Spitsbergen. (Hereditas, 1940. bd. 26, häfte 3–4, p. 430–40.) 22 refs.

In the 68 higher plants studied, 14 are diploids and 54 (approx. 80%) polyploids. This agrees with others' finding that a high percentage of polyploids is common in a region of adverse climatic conditions. Several instances of intraspecific chromosome races were met. In most cases the high chromosomal race has the most northern range of distribution, but there are also examples of the reverse.

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50936. FLOVIK, KARL. Cytological studies of arctic grasses. (Hereditas, 1938. bd. 24, häfte 3, p. 265–376, 104 illus., plate.) 179 refs.

Of 26 species and varieties studied, chiefly from Spitsbergen, all have secondary constrictions in all or most of the chromosomes of the somatic complement; the original basic chromosome number in the fam. Gramineae is of 5 units: an hypothesis of an original basic number of 12 units advanced by Avdulov is criticized. Only one grass, viz. *Puccinellia vahliana,* is diploid. In the genus *Dupontia,* the basic chromosome number was found to be 11. The tetraploid *Phippsia concinna* var. *algidiformis* must be regarded as a hybrid between *P. algida* and *P. concinna.* Conclusion is drawn that the viviparous grasses examined should be regarded as allopolyploids. Of the normal, non-viviparous *Poae,* the species *P. alpigena, P. glauca* and *P. arctica* have apomictic seed-formation. ***Copy seen:*** DLC

FLYNN, PATRICIA M., *see* Sullivan, B. J., *and* P. M. Flynn. Influence . . . inositol . . . vascular response to cold injury. *1957.* No. 55223.

50937. FÖRENINGEN SKOGSARBETENS OCH KUNGL. DOMÄNSTYRELSENS ARBETSSTUDIEAVDELING. Transportproblem inom det norrländska skogsbruket; föredrag hållna vid SDA's motorkurser i Strängnes 1948–1949. (*Its:* Meddelande nr. 39–42, 1950, p. 1–77, illus., tables.) Refs. Text in Swedish. Summaries in English. Reprinted from Svenska skogsvårdsföreningen. Tidskrift, 1949, årg. 47, p. 295–329; and 1950, årg. 48, p. 86–89, 167–87. ***Title tr.:*** Transportation problems in Norrland forestry; lectures given at SDA's motor vehicle course at Strängnes 1948–1949.

Contains text of lectures, abstracted in this Bibliography under the authors' names, viz. (titles tr.):

SUNDBERG, U. The terminal problem in motor transportation of lumber.

LEIJONHUFVUD, A. E. Forestry motor vehicles versus regulations in force at present.

LEIJONHUFVUD, A. C. Experiences with tractors in Norrland forestry.

LAAGE-HELLMAN, B. Viewpoints

on the use of motor vehicles in Norrland forestry. ***Copy seen:*** DA.

50938. FOERSTER, E. "General San Martin." (Schiff und Hafen, Nov. 1954. Jahrg. 6, Heft 11, p. 717–18, illus.) Text in German.

Describes (with statement of dimensions, illus. of hull cross-section and of engine room) a new ice-breaking research vessel delivered to the Argentine government in Oct. 1954. The diesel-electric, 3640 Br. t. vessel is equipped with oceanographic and meteorological laboratories and is designed to operate under severe ice conditions in the Antarctic.

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50939. FØYN, BJØRN, 1898– , *and* J. HUUS, *Editors.* Norges dyreliv. Oslo, J. W. Cappelen, 1947–1950. 4 v.: 506, 564, 382, 630 p. illus., col. plates, maps. v. 3–4 edited by Bjørn Føyn, Gudrun Ruud, and Hagbart Røise. Text in Norwegian. ***Title tr.:*** Animal life of Norway.

Basic work on Norwegian fauna, little changed in the last few thousand years. Mammals; birds; reptiles, amphibians, fish; and invertebrates are treated in successive volumes, each containing descriptive accounts of the life forms, extensively illustrated, a systematic appendix with keys to identification, and a register of scientific also common Norwegian names. The descriptive accounts, about a hundred in all, are essays by specialists dealing with the life cycle, habits, reproduction, etc., of the animal or group, its role in nature and its significance for man. Most of the fauna treated have representatives in the far North, and sea mammals, such as seal and whale, are included as important in the Norwegian economy. Among others of arctic interest are chapters on the reindeer, muskox, small rodents in v. 1; and in v. 2, those on eiders, ducks, geese, swan, grebes, cormorants, fulmar, gulls and auks, and papers on bird cliffs, flyways and on birds of Svalbard. The principal fishes of arctic seas, cod, herring, haddock, etc., as well as cold deep, fjord, and fresh-water forms and visitors are surveyed in v. 3. Vol. 4 covers a wide range of invertebrates, spiders, insects, mites, worms, a few crustaceans, etc., also bottom, drifting and fresh-water forms, and fossils. ***Copy seen:*** DLC.

50940. FØYN, ERNST, *and* **B. S. JOHANNSEN:** Om skismøring. (Tidsskrift for kjemi, bergvesen og metallurgi, Apr. 1944. årg. 4, nr. 4, p. 30–32, graphs, tables.) Text in Norwegian. ***Title tr.:*** Ski waxing.

Presents results of laboratory and field tests of various types of wax. Development of friction heat at the ski's gliding surface was found to cause changes in the surface conditions. An optimum state existed with friction at a minimum, when a water layer of maximum depth had developed beneath the skies. Serviceability of a wax, with varied snow conditions, depends upon its water-repellant qualities and relative hardness: elasticity: heat conductivity.

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50941. FOG-POULSEN, MOGENS, 1915– . Maeslingeepidemier i Grønland. (Grønland, June 1958. nr. 6, p. 210–23, illus., table, diagrs.) Text in Danish. ***Title tr.:*** Measles epidemics in Greenland.

The first known cases of measles occurred in 1945, the first epidemic in 1951, followed by other major epidemics in 1954 and 1955. The disease in Greenland has the same character as in Denmark, but complications (pneumonia, ear inflammation, etc.) have been more frequent and serious. Data are given on the duration of the epidemics, number of cases, most common complications and mortality. About 60% of the population has now had measles. Preventive measures and therapy are described.

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FOHN-HANSEN, LYDIA OLAVA, 1891– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

50942. FOKIN, V. A. Ispytaniîa novogo l'doburil'nogo agregata s gidravlicheskoĭ podacheĭ. (Rybnoe khozîaĭstvo, Dec. 1957. god 33, no. 12, p. 23–25, illus.) Text in Russian. ***Title tr.:*** Experiments with the new ice-drilling equipment with hydraulic feed.

Description of ice-drilling ensembles used in fisheries under very thick ice (over 1.5 m.). These are mounted on tractors. A new 1956 model (LBG) is described in detail, including way of operation, productivity, etc.

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FOLK G. EDWARD, Jr., *see* Farrand, R. L., *and* G. E. Folk. Responses of hamsters . . . cold . . . *1957.* No. 50842.

FOLK, G. EDWARD, Jr., *see* Riedesel, M. F., *and* G. E. Folk. Serum magnesium . . . cold-exposed mammals. *1957.* No. 54307.

FOLSE, ROLAND, *see* Jude, J. R., *and others.* Hypothermic myocardial oxygenation. *1957.* No. 52114.

FOLSE, ROLAND, *see* Jude, J. R., *and others.* Hypothermic myocardial oxygenation. *1957.* No. 52115.

50943. FOMIN, V. M., *and others.* O razvitii issledovatel'skikh rabot na mineral'nye i termal'nye vody v SSSR. (Razvedka i okhrana nedr, Aug. 1958. god 24, no. 8, p. 38–42.) Text in Russian. *Other authors:* B. A. Beder, I. I. Kobozev, F. A. Makarenko, *and* N. A. Rulev. ***Title tr.:*** Development of investigative work on mineral and thermal waters in the U.S.S.R.

Research and development are reviewed; use of thermal waters is discussed for health resorts and domestic-heating purposes. The resources are summarized according to regions and some data given. In Kamchatka the Pauzhetskiye hot springs are mentioned, with 3000 $m.^3$ daily discharge and temperature of 100° C.; in the Kolyma region, the resort Talaya has waters of 90° C. with a daily discharge of 500 $m.^3$; in Chukotka also are waters of that temperature.

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FONTAINE, WILLIAM ELLSWORTH, *see* Eskin, S. G., *and others.* Strength . . . ice in contact with various . . . surfaces. *1957.* No. 50791.

FONYÓDY, SARALTA, *see* Hársing, L., *and others.* The effect of hypothermia on ischaemic changes . . . kidney. *1956.* No. 51606.

50944. FORBES, C. L., *and others.* Palaeontological evidence for the age of the Carboniferous and Permian rocks of central Vestspitsbergen. (Geological magazine, Nov.–Dec. 1958. v. 95, no. 6, p. 465–90, tables, map.) 62 refs. *Other authors:* W. B. Harland *and* N. F. Hughes.

Carboniferous and Permian fossils collected from Bünsow Land, North Dickson Land, and Ny Friesland areas bordering Billefjorden between 1938 and 1957 are listed "according to formation and the age of each is assessed from these determinations. Resting unconformably on folded Devonian or metamorphosed Hecla Hoek, the succession begins with plant-bearing continental facies and passes upwards into a marine succession with fusuline, coral and brachiopod faunas in limestones and dolomites associated with evaporites and cherts. Correlation with rocks elsewhere in Svalbard, which has been effected largely by lithological facies, is reassessed on paleontological evidence; this consists of a sequence of plants from approximately Tournaisian to Namurian; of fusulines from the Fusulina zone to the Pseudoschwagerina zone, with the Carboniferous Permian boundary falling in the middle of the Wordiekammen limestones; and of brachiopods above this. The youngest fossils may be Upper Permian. The succession has few breaks and with further study will contribute to the correlation of Russian, West European, Greenland and American rocks."—Authors' abstract.

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FORMAN, Z., *see* Holub, A., *and others.* Development of chemical thermoregulation in piglets. *1957.* No. 51798.

50945. FORSBERG, SVEN. Några erfarenheter från skötseln av fjällskogarna inom Jämtlands län. (Sweden. Skogsstyrelsen. Från skogsvårdsstyrelsernas arbetsfält, 1950. nr. 1, p. 1–8, illus.) Text in Swedish. ***Title tr.:*** Experiences from management of mountain forests in Jämtland county.

Discusses these protective forests which cover mountain slopes, intervales, and adjacent high altitude areas influenced by mountain climate. Such forests in Jämtland and Härjedalen (growing at 600–900 m.) have been left untouched until recent years, to provide protection against receding of the mountains. Trees and soil regenerated, restricted cutting became desirable. Natural regeneration of pine is adequate in some localities, but some form of artificial regeneration is necessary for spruce.

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50946. FORSHELL, WILHELM PLYM. Norrlands skogar under 75 år. (Skogen, *Stockholm,* Mar. 21, 1958. årg. 45, nr. 6, p. 164.) Text in Swedish. ***Title tr.:*** Norrland forests during 75 years.

The Society for Forest Cultivation in Norrland was founded in 1883 and the State Forest Research Institute in 1902, but exploitation continued and productive forests reached an all-time low in the 1930's. A cultivation research program instituted by the state and some private forest owners at that time, together with

mechanization, are largely responsible for the recent increase in forest productivity. ***Copy seen:*** DA.

50947. FORSLUND, BJÖRN. Betong, ett norrländskt industriproblem. (Tidning för byggnadskonst, Nov. 1952. årg. 44, nr. 21, p. 831–33.) Text in Swedish. ***Title tr.:*** Concrete, an industrial problem in Norrland.

Contains brief notes on communication problems and industrial potentials in northern Sweden. The development of the concrete factory K/B Betong in Överluleå is taken as an example of what can be achieved through effective organization and extensive rationalization. Specializing in road-rollers and drainage pipes, the factory is able to cover the demand for them in Norr- and Västerbotten. ***Copy seen:*** DLC.

50948. FORSSLUND, KARL HERMAN, 1900– . Catalogus Insectorum Sueciae, XV. Hymenoptera — Fam. Formicidea. (Opuscula entomologica, 1957. bd. 22, häfte 1, p. 70–78, text map, table.) Text in German. ***Title tr.:*** Insect catalog of Sweden, XV. Hymenoptera: Fam. Formicidae.

Contains a systematic list of 60 species, with tabulated data on their distribution in 30 geographic regions of Sweden (including five districts of Lapland) and in some adjoining countries, followed by remarks on a few species.

Copy seen: DSI.

50949. FORSSLUND, KARL HERMAN, 1900– . Notizen über Oribatei (Acari), I. (Arkiv för zoologi, June 15, 1957. Ser. 2, bd. 10, häfte 6, no. 18, p. 583–93, 14 illus.) 22 refs. Text in German. ***Title tr.:*** Notes on Oribatei (Acari), I.

Contains an annotated list of seven species and one new variety of mites, with synonyms, descriptive and critical notes and data on distribution. Four of the species occur in West Greenland, Jan Mayen, Spitsbergen, northern Canada and Alaska. ***Copy seen:*** DSI.

50950. FORSSLUND, KARL HERMAN, 1900– . Notizen über Oribatei (Acari), II. (Entomologisk tidskrift, 1958. årg. 79, häfte 1–2, p. 75–86, 17 illus.) 18 refs. Text in German. ***Title tr.:*** Notes on Oribatei (Acari), II.

Describes three new wood mites and redescribes three old, recognized and related species. *Nanhermannia sellnicki* n. sp. is recorded in Swedish Lapland. ***Copy seen:*** DA.

50951. FORSSMAN, HELGE. Jernvägssnöslunga för Skåne. (Teknisk tidskrift, 1944. årg. 74, häfte 15, p. 431–34, illus.) Text in Swedish. ***Title tr.:*** A railroad rotary snow plow for Skåne.

A specially constructed, steam-driven railroad rotary snow plow is described: it is powered by 700 hp, wheel rotates at 182 rpm., and the total service weight is 118 tons. ***Copy seen:*** DLC.

50952. FORTIER, CLAUDE, 1921– , *and others.* The effect of pituitary stalk section on the adrenocortical response to stress in the rabbit. (Journal of physiology, Apr. 1957. v. 136, no. 2, p. 344–63, illus., table) 51 refs. *Other authors:* G. W. Harris *and* I. R. McDonald.

"Stalk section followed by little or no regeneration of the portal vessels reduced or abolished the lymphopenic response to restraint and exposure to cold," but had little effect on response to other forms of stress applied. A dual form of environmental effect upon ACTH secretion, is assumed. ***Copy seen:*** DNLM.

FORTIER, GUY, *see* Dugal, L. P., *and* G. Fortier. Effect of cold . . . ascorbic acid . . . monkey *Macacus rhesus. 1957.* No. 50646.

50953. FORTIER, YVES OSCAR, 1914– , *and* L. W. MORLEY. Geological unity of the arctic islands. (Royal Society of Canada. Transactions, June 1956. v. 50, ser. III, p. 3–12, 3 text maps.) 6 refs.

Introduces hypothesis on the origin of the Canadian Arctic Islands and suggests regional division of the archipelago and its relation to the geologic framework of the continent. Present surface of islands is believed to be the product of erosion, at first taking place on continuous land surface, without interruption by arms of the sea. Subsequent, successive uplift, downwarp, faulting, glaciation, submergence and emergence is postulated. This hypothesis agrees with the geological concept of a continental land mass, and presents a preliminary interrelation of the main physical features of the islands. Substantiating or dispelling this hypothesis as it relates to the sea floor among the islands is work of the hydrographer. ***Copy seen:*** DLC.

50954. FORTIER, YVES OSCAR, 1914– , *and others.* Geologiia i perspektivy neftenosnosti Kanadskogo arkticheskogo arkhipelaga. (Problemy Severa, 1958, vyp. 1, p. 271–90, maps.) 51 refs. Text in Russian. *Other authors:* A. H. McNair, *and* R. Thorsteinsson. ***Title tr.:*** Geology and petroleum possibilities in Canadian Arctic Islands.

Abridged Russian translation of No. 34735 with brief introduction by translator and editor, V. E. Khain.

Copy seen: DLC.

50955. FORTIER, YVES OSCAR, 1914– . Old and new ways in arctic geology. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 86–91, illus., maps.)

Describes geological explorations in the Canadian arctic archipelago, from Frobisher's in 1576 to the Geological Survey's in summer 1958. These studies, old and new, indicate that the archipelago is part of the North American continent and that its insularity is very recent. Geological regions have been classified and mapped: the Canadian Shield, Arctic Lowlands and Plateaux, Innuitian Region, and Arctic Coastal Plain. Characteristics of these geological divisions are used as a basis for consideration of mineral resource potential. Occurrences of graphite, iron ore, sulphides, low grade coal and gypsum are mentioned, and speculation made on possible discoveries of copper on Victoria Island and oil and gas in the Innuitian and Arctic Lowlands and Plateaux regions.

Copy seen: DGS.

FORTIER, YVES OSCAR, 1914– , *see also* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

50956. FOSBERG, FRANCIS RAYMOND, 1908– . *Cornus sericea* L. (*C. stolonifera* Michx.). (Torrey Botanical Club. Bulletin, Nov. 1942. v. 69, no. 8, p. 583–89.)

Contains a critical treatment of forms centering around the red osier called *C. stolonifera*, which is considered a synonym of the earlier name *C. sericea*. A key to forms is followed by descriptions and synonymy of five forms and two subspecies. Among them are *C. s.* f. *stolonifera* n. comb. found in Keewatin, Mackenzie, (66°15′ N.) and in coastal Alaska, also *C. s.* f. *interior* n. comb. from Wood Buffalo Park, Mackenzie basin, Yukon valley and Matanuska, Alaska. ***Copy seen:*** DLC.

50957. FOSTER, BRISTOL J. Small mammal populations at Churchill, Manitoba. (Ontario field biologist, May 1957. no. 11, p. 18–19.) 2 refs.

Fluctuations of voles, lemmings, shrews from year to year after low populations in 1951 are traced; also of those of their predators, hawks, owls, etc. A cyclic (three or four year) pattern is difficult to discern: this region is at the junction of two major life zones, forest and tundra.

Copy seen: MH–Z.

50958. FOSTER, BRISTOL J. Snow and blue geese nesting in the southern Arctic. (Ontario field biologist, May 1957. no. 11, p. 22.)

Notes breeding grounds of the lesser snow goose in the western Hudson Bay area: north of Chesterfield Inlet, and (both species) near Churchill.

Copy seen: MH–Z.

FOSTER, BRISTOL J., *see also* Smith, D. A., *and* J. B. Foster. Notes . . . small mammals of Churchill . . . *1957.* No. 54990.

FOSTER, G. L., *see* Bartlett, R. G., *and others.* Core to surface thermal gradients . . . rat . . . *1958.* No. 49562.

50959. FOUNTAIN, ELBERT B. Mechanisms and management of cold injury. (Surgery, Nov. 1957. v. 75, no. 5, p. 716–17.)

Summary of a paper dealing with the differences between freezing and nonfreezing cold-injuries; susceptibility of different tissues to cold-injury and their responses to it; symptoms and gross pathology; prevention; therapy.

Copy seen: DNLM.

50960. FOURNELLE, HAROLD JOHN, 1909– , *and others.* A bacteriological and parasitological survey of enteric infections in the Alaskan Eskimo area. (American journal of public health, Nov. 1958. v. 48, no. 11, p. 1489–97, tables.) 13 refs. *Other authors:* I. L. Wallace, *and* V. Rader.

Report on survey of 2378 individuals of the lower Kuskokwim River area made between Aug. 1955 and Sept. 1956. Diarrhea was found to be primarily due to *Shigella flexneri* 2 a and 3. Prevalence occurred in July and August and in the age group 0–9. Three isolations of *Salmonella typhosa*, two of *Escherichia*

on the use of motor vehicles in Norrland forestry. ***Copy seen:*** DA.

50938. FOERSTER, E. "General San Martin." (Schiff und Hafen, Nov. 1954. Jahrg. 6, Heft 11, p. 717–18, illus.) Text in German.

Describes (with statement of dimensions, illus. of hull cross-section and of engine room) a new ice-breaking research vessel delivered to the Argentine government in Oct. 1954. The diesel-electric, 3640 Br. t. vessel is equipped with oceanographic and meteorological laboratories and is designed to operate under severe ice conditions in the Antarctic.

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50939. FØYN, BJØRN, 1898– , *and* J. HUUS, *Editors.* Norges dyreliv. Oslo, J. W. Cappelen, 1947–1950. 4 v.: 506, 564, 382, 630 p. illus., col. plates, maps. v. 3–4 edited by Bjørn Føyn, Gudrun Ruud, and Hagbart Røise. Text in Norwegian. ***Title tr.:*** Animal life of Norway.

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A specially constructed, steam-driven railroad rotary snow plow is described: it is powered by 700 hp, wheel rotates at 182 rpm., and the total service weight is 118 tons. ***Copy seen:*** DLC.

50952. FORTIER, CLAUDE, 1921– , *and others.* The effect of pituitary stalk section on the adrenocortical response to stress in the rabbit. (Journal of physiology, Apr. 1957. v. 136, no. 2, p. 344–63, illus., table) 51 refs. *Other authors:* G. W. Harris *and* I. R. McDonald.

"Stalk section followed by little or no regeneration of the portal vessels reduced or abolished the lymphopenic response to restraint and exposure to cold," but had little effect on response to other forms of stress applied. A dual form of environmental effect upon ACTH secretion, is assumed. ***Copy seen:*** DNLM.

FORTIER, GUY, *see* Dugal, L. P., *and* G. Fortier. Effect of cold . . . ascorbic acid . . . monkey *Macacus rhesus. 1957.* No. 50646.

50953. FORTIER, YVES OSCAR, 1914– , *and* **L. W. MORLEY.** Geological unity of the arctic islands. (Royal Society of Canada. Transactions, June 1956. v. 50, ser. III, p. 3–12, 3 text maps.) 6 refs.

Introduces hypothesis on the origin of the Canadian Arctic Islands and suggests regional division of the archipelago and its relation to the geologic framework of the continent. Present surface of islands is believed to be the product of erosion, at first taking place on continuous land surface, without interruption by arms of the sea. Subsequent, successive uplift, downwarp, faulting, glaciation, submergence and emergence is postulated. This hypothesis agrees with the geological concept of a continental land mass, and presents a preliminary interrelation of the main physical features of the islands. Substantiating or dispelling this hypothesis as it relates to the sea floor among the islands is work of the hydrographer. ***Copy seen:*** DLC.

50954. FORTIER, YVES OSCAR, 1914– , *and others.* Geologiîa i perspektivy neftenosnosti Kanadskogo arkticheskogo arkhipelaga. (Problemy Severa, 1958, vyp. 1, p. 271–90, maps.) 51 refs. Text in Russian. *Other authors:* A. H. McNair, *and* R. Thorsteinsson. ***Title tr.:*** Geology and petroleum possibilities in Canadian Arctic Islands.

Abridged Russian translation of No. 34735 with brief introduction by translator and editor, V. E. Khain.

Copy seen: DLC.

50955. FORTIER, YVES OSCAR, 1914– . Old and new ways in arctic geology. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 86–91, illus., maps.)

Describes geological explorations in the Canadian arctic archipelago, from Frobisher's in 1576 to the Geological Survey's in summer 1958. These studies, old and new, indicate that the archipelago is part of the North American continent and that its insularity is very recent. Geological regions have been classified and mapped: the Canadian Shield, Arctic Lowlands and Plateaux, Innuitian Region, and Arctic Coastal Plain. Characteristics of these geological divisions are used as a basis for consideration of mineral resource potential. Occurrences of graphite, iron ore, sulphides, low grade coal and gypsum are mentioned, and speculation made on possible discoveries of copper on Victoria Island and oil and gas in the Innuitian and Arctic Lowlands and Plateaux regions.

Copy seen: DGS.

FORTIER, YVES OSCAR, 1914– , *see also* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

50956. FOSBERG, FRANCIS RAYMOND, 1908– . *Cornus sericea* L. (*C. stolonifera* Michx.). (Torrey Botanical Club. Bulletin, Nov. 1942. v. 69, no. 8, p. 583–89.)

Contains a critical treatment of forms centering around the red osier called *C. stolonifera,* which is considered a synonym of the earlier name *C. sericea.* A key to forms is followed by descriptions and synonymy of five forms and two subspecies. Among them are *C. s.* f. *stolonifera* n. comb. found in Keewatin, Mackenzie, (66°15′ N.) and in coastal Alaska, also *C. s.* f. *interior* n. comb. from Wood Buffalo Park, Mackenzie basin, Yukon valley and Matanuska, Alaska. ***Copy seen:*** DLC.

50957. FOSTER, BRISTOL J. Small mammal populations at Churchill, Manitoba. (Ontario field biologist, May 1957. no. 11, p. 18–19.) 2 refs.

Fluctuations of voles, lemmings, shrews from year to year after low populations in 1951 are traced; also of those of their predators, hawks, owls, etc. A cyclic (three or four year) pattern is difficult to discern: this region is at the junction of two major life zones, forest and tundra.

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50958. FOSTER, BRISTOL J. Snow and blue geese nesting in the southern Arctic. (Ontario field biologist, May 1957. no. 11, p. 22.)

Notes breeding grounds of the lesser snow goose in the western Hudson Bay area: north of Chesterfield Inlet, and (both species) near Churchill.

Copy seen: MH–Z.

FOSTER, BRISTOL J., *see also* Smith, D. A., *and* J. B. Foster. Notes . . . small mammals of Churchill . . . *1957.* No. 54990.

FOSTER, G. L., *see* Bartlett, R. G., *and others.* Core to surface thermal gradients . . . rat . . . *1958.* No. 49562.

50959. FOUNTAIN, ELBERT B. Mechanisms and management of cold injury. (Surgery, Nov. 1957. v. 75, no. 5, p. 716–17.)

Summary of a paper dealing with the differences between freezing and nonfreezing cold-injuries; susceptibility of different tissues to cold-injury and their responses to it; symptoms and gross pathology; prevention; therapy.

Copy seen: DNLM.

50960. FOURNELLE, HAROLD JOHN, 1909– , *and others.* A bacteriological and parasitological survey of enteric infections in the Alaskan Eskimo area. (American journal of public health, Nov. 1958. v. 48, no. 11, p. 1489–97, tables.) 13 refs. *Other authors:* I. L. Wallace, *and* V. Rader.

Report on survey of 2378 individuals of the lower Kuskokwim River area made between Aug. 1955 and Sept. 1956. Diarrhea was found to be primarily due to *Shigella flexneri* 2 a and 3. Prevalence occurred in July and August and in the age group 0–9. Three isolations of *Salmonella typhosa,* two of *Escherichia*

coli and one of a bacterial pathogen, were made. Of parasites *Endamoeba coli* and *Diphyllobothrium* sp. were most common in man, the latter most frequent in dogs.

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50961. FOURNELLE, HAROLD JOHN, 1909– , *and others*. Experimental ground water pollution at Anchorage, Alaska. (U.S. Public Health Service. Public health reports, Mar. 1957. v. 72, no. 3, p. 203–209, illus., tables.) 10 refs. *Other authors:* E. K. Day *and* W. B. Page.

Report on experiments with a dye, chromogenic bacteria and an enterococcus introduced into the ground water at a spot some two miles south of Anchorage. The dye was traced 100 ft. from the point of dosing and was detected 34 months later. The enterococcus was also found suitable as indicator of travel through the ground water but not the bacterial chromogens. The value of the method is analyzed and discussed.

Copy seen: DLC.

FOX, R. H., *see* Edholm, O. G., *and others*. Cold injury. *1957*. No. 50688.

FOX, S., *see* Morris, T. R., *and* S. Fox. Artificial light and sexual maturity . . . fowl. *1958*. No. 53405.

FOX, S., *see* Morris, T. R., *and* S. Fox. Light and sexual maturity . . . fowl. *1958*. No. 53406.

50962. FOX, WILLIAM JOSEPH, 1872– . The Crabroninae of boreal America. (American Entomological Society. Transactions, 1895. v. 22, p. 129–226, illus.)

Monographic treatment of this subfamily which includes the genera *Entomognathus, Anacrabro* and *Crabro;* includes a systematic, annotated list of 105 species, about 30 described as new; *Crabro obscurus* and *C. septentrionalis* are from the Hudson Bay region.

Copy seen: DA.

50963. FRAERMAN, RUVIM ISAEVICH, *and* P. D. ZAĬKIN. Elmsfeuer auf der Rah; die ungewöhnlichen Reisen und Abenteuer des Kapitänleutnants Golownin. Berlin, Verlag Neues Leben, 1955. 567 p. illus. Text in German. ***Title tr.:*** St. Elmo's fire at the yardarm; the extraordinary voyages and adventures of Captain-Lieutenant Golovnin.

German translation by Bruno Pasch of No. 34753 with new illus. by Karl Fischer. ***Copy seen:*** DLC.

50964. FRAERMAN, RUVIM ISAEVICH, *and* P. D. ZAĬKIN. Zhizn' i neobyknovennye priklîucheniîa kapitan-leĭtenanta Golovnina, puteshestvennika i morekhodtsa. Moskva, Voennoe izd-vo, 1957. 544 p. Text in Russian. ***Title tr.:*** The life and extraordinary adventures of Captain-Lieutenant Golovnin, traveler and seafarer.

New (third?) edition of No. 34753, omitting all illus. ***Copy seen:*** DLC.

50965. FRANCH, JOSÉ ALCINA. El neolítico americano y su problematica. (International Congress of Americanists, 31st, *São Paolo*, 1954. Proceedings, 1955. v. 2, p. 871–82.) 15 refs. Text in Spanish. ***Title tr.:*** The American neolithic and its problems.

Discusses the neolothic settlement of the New World and postulates three possible migration routes: Bering Strait, South Pacific and Atlantic, defending the probability of the latter.

Copy seen: DSI.

50966. FRANCIS, G. H. En engelsk rejse i Sydgrønland. (Grønland, June 1958. nr. 6, p. 230–40, illus.) Text in Danish. ***Title tr.:*** An English journey in South Greenland.

Contains account of a four-man expedition (leader Geoffrey Sutton) in summer 1957, to make botanical and geological investigations. The first base was at Kûgssuak on Tasermiut Fjord (60°15′ N. 44°37′ W.); local collecting trips were made and two mountains (approx. 1,500 m.) were climbed. The party also spent some days on the island of Sermersok, at Nanortalik, and in the innermost part of Kangerdluarsuk Fjord.

Copy seen: DLC.

FRANCO, RODOLFO J., *see* Villamil, A., *and others*. Electrocardiographic changes in artificial hibernation. *1957*. No. 55816.

50967. FRANK, HUGH A., *and* M. H. CARR. Adaptive changes in hypothermia with special reference to electrolyte alterations; an experimental study. (Western journal of surgery, obstetrics and gynecology, Mar.–Apr. 1958. v. 66, no. 2, p. 105–114, illus., tables.) 41 refs.

A study of dogs made hypothermic by immersion and Nembutal. Though serum potassium fell with body temperature, no direct relationship was detected between its levels (or the levels of other blood electrolytes, pH, or respiratory

quotient) and the incidence of fibrillation. Pretreatment with K, Mg. or insulin did not prevent fibrillation, but the latter could be controlled by rapid injection of potassium. No ECG changes presaging fibrillation were detected.

Copy seen: DNLM.

50968. FRANKCOM, C. E. N. British ocean weather ships, 10th anniversary. (Meteorological magazine, Oct. 1957. v. 86, no. 1024, p. 304–306, 4 illus.) 3 refs.

Notes British participation in the North Atlantic Station Agreement, signed Sept. 1946, and work of vessels *Weather Observer*, *Weather Recorder*, *Weather Watcher* and *Weather Explorer*, all completing ten years' service Aug. 1957–Feb. 1958. These ships have occupied stations I and J, and since Jan. 1955 in rotation with French and Netherlands vessels, stations A, I, J, and K. Surface and upper air observations (to 50,000 ft.)are regularly carried out by the seven meteorologists on each ship. Navigational aids to aircraft, air/sea rescue facilities, and oceanographical work are also maintained. The present vessels, corvettes of World War II, will be replaced by frigates. ***Copy seen:*** DWB.

FRANTZ, DAVID N., Jr., *see* Walden, R. G., *and others*. Buoy telemeters ocean temperature data. *1957*. No. 55918.

50969. FRANZKE, A. R. The midnight sun: photograph. (Pacific discovery, May-June 1958. v. 11, no. 3, p. 16–17.)

The midnight sun was photographed at four minute intervals from 10:15 P.M. to 3:25 A.M. on May 12–13, 1957, at Point Barrow, Alaska. The lens setting used was 1/200" at f. 32., and the print was by Marshall Schalk.

Copy seen: DLC.

FRANZKE, A. R., *see also* Hessler, V. P., *and* A. R. Franzke. Earth-potential electrodes . . . *1958*. No. 51708.

FRASER, A. STEWART, *see* Raitt, W. L., *and* A. S. Fraser. A new East Greenland community. *1958*. No. 54208.

FRASER, GEORGE DE WITT, 1920– , *see* Snyder, G. L., *and* G. D. Fraser. Intrusive layered lava pods . . . *1958*. No. 55010.

50970. FRASER, J. KEITH. Activities of the Geographical Branch in northern Canada, 1947–1957. (Arctic, 1957, v. 10, no. 4, p. 246–50, map.) Refs.

Outlines functions of this Branch of the Canadian Dept. of Mines and Technical Surveys. Its studies and field surveys of arctic and subarctic areas are cited together with resultant publications, most of them on physical geography.

Copy seen: CaMAI.

50971. FRASER, J. KEITH. Birds observed in the central Canadian Arctic, 1953, 1955, 1956. (Canadian field naturalist, Oct.–Dec. 1957. v. 71, no. 4, p. 192–99.)

Contains observations on bird life made on 26 species on Boothia Isthmus, May 28–Sept. 14, 1953; on 25 species on southeastern Victoria Island, May 27–Aug. 28, 1955; and on 32 species on southern King William Island and northwestern Adelaide Peninsula, June 24–Sept. 14, 1956. A list of 20 place names with their coordinates is appended. The bird observations were made incidentally in the course of a geographical survey carried out for the Geographical Branch, Dept. of Mines and Technical Surveys, Ottawa. ***Copy seen:*** DA.

50972. FRASER, J. KEITH. Tracing Ross across Boothia. (Canadian geographer, 1957. no. 10, p. 40–59, 8 illus., 5 text maps.) 11 refs.

Summarizes events of John and J. C. Ross's expedition in the *Victory*, 1829–1833, noting the mapping of southern Boothia Peninsula (70° N. 95° W.) and the north coast of King William Island during nine sledge journeys (cf. No. 14866). Later explorations of Boothia have added little to the Ross's data till 1953, when the author and C. Laverdière (Canadian Geographical Branch) made a spring-summer trip by dog sled, foot and canoe across the isthmus and through lakes north of Spence Bay. Eskimo settlements and movements and geographical features were studied. From this survey, airphoto. map, etc., Ross's nine routes are traced and features named by him are identified and described as seen in 1953. Names (23) adopted by the Canadian Board on Geographical Names, on the basis of 1953 survey are added.

Copy seen: DGS.

FRATCHER, G. E., *see* Scheil, M. A., *and others*. Steel for Canadian pipelines. *1957*. No. 54600.

50973. FREBOLD, HANS, 1899– . Fauna, age and correlation of the Jurassic rocks of Prince Patrick Island. Ottawa.

Queen's Printer, 1957. 69 p., 18 plates, text maps, tables (1 fold.) (Canada. Geological Survey. Bulletin 41.) 43 refs.

Study of Jurassic fossils collected by E. T. Tozer in 1954: several species of ammonites and pelecypods are described in detail and illustrated; outcrops, from which fossils were collected are correlated. There are various Lower and Middle Jurassic beds on this island containing interesting and, in part, hitherto unknown faunas. Comparison is made with Jurassic paleontology of other localities in the Arctic and the maximum extent of Jurassic seas estimated. Data available show that several Jurassic transgressions, interrupted by times of regressions, followed one another and that these transgressions apparently varied in extent from place to place.

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50974. FREBOLD, HANS, 1899– . The Jurassic Fernie group in the Canadian Rocky Mountains and foothills. Ottawa. Queen's Printer, 1957. xi, 197 p. text maps, tables, photos. (Canada. Geological Survey. Memoir 287.) refs. p. 79–103.

Includes brief references to arctic and subarctic Canada: map, p. viii, Jurassic localities, regions of marine deposition, etc. ***Copy seen:*** DGS.

50975. FREBOLD, HANS, 1899– . The Jurassic system in northern Canada. (Royal Society of Canada. Transactions, June 1958. Ser. 3, v. 52, sect. 4, p. 27–37, map, table.) 13 refs.

Outlines on the basis of recent fossil collections, the stratigraphy, paleogeography and faunal compositon of Jurassic occurrences in the southern Yukon, arctic coast and Canadian Arctic Islands, especially Prince Patrick, Axel Heiberg and Ellesmere. The sequence of events differed considerably in these various regions. Maximum extent of the Jurassic seas is considered and, tentatively, mapped. Faunistic and stratigraphic correlations are made with other areas. Similarities indicate that the eastern Canadian Arctic Islands belong to the same faunal province as East Greenland and the Barents Shelf, and that the same events occurred in all three regions.

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FREDEEN, F.J.H., *see* Shewell, G. E., *and* F. J. H. Fredeen. Two new black flies . . . *1958*. No. 54782.

FREDENUCCI, RICHARD, *see* Malmejac, J., *and others*. Diabète rénal en "hypothermie provoquée." *1958*. No. 53082.

FREDENUCCI, RICHARD, *see* Malmejac, J., *and others*. Sur l'activité du coeur . . . *1957*. No. 53086.

FREDENUCCI, RICHARD, *see* Malmejac, J., *and others*. Variations quantitatives de la sécrétion urinaire . . . *1958*. No. 53088.

FREDERICKSON, EVAN L., *see* West, T. C., *and* E. L. Frederickson. Intracellular recording . . . heart . . . hypothermia. *1958*. No. 55994.

50976. FREDERIKSEN, SVEND, 1906– . Greenland. New York, 1957. 3 p. (*In* Catholic encyclopedia, Supp. 2, section 6.) Refs.

Summary account of population, economic activities and exports, education, organization and work of the state church, etc. Changes during recent decades in family life, culture, and administration are stressed.

This article supplements that by Pius Wittius, pub. in Catholic encyclopedia, v. 6, p. 777–79 (1909) and that in Supp. 1, p. 352 (1922). ***Copy seen:*** DLC.

50977. FREEMAN, A. J. Toughness and gas transfer characteristics of plastic films at low temperature. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 100–112, 7 tables, 3 graphs.) 5 refs.

Methods of measuring cold brittleness temperatures, and tear and puncture resistance are outlined briefly, and the results of low-temperature toughness measurements on polyethylene films and other plastic films are given. Permeability tests of plastic films are also described. The outstanding low-temperature toughness and low-moisture absorption qualities of polyethylene are noted. Its permeability decreases rapidly with a decrease in temperature. An ideal combination appears to be one which combines the low-temperature characteristics of polyethylene with the strength characteristics of cellophane.

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50978. FREEMAN, THOMAS NESBITT, 1911– . The Northern Insect

Survey, 1953–6. (Arctic circular, 1957. v. 10, no. 1, p. 10–13.) Ref.

Since 1947, 62 survey parties have carried out field work from Greenland to Alaska. Investigations in twelve localities in the Yukon, Mackenzie, Ungava, Labrador, Ellesmere, etc., during 1953–56 are outlined and findings indicated. Collections are still required from North Greenland, Manitoba, northwest of Churchill, Mackenzie Mts. and the arctic-alpine environments in the Cordilleran system. ***Copy seen:*** DLC.

FREIBERGER, ARNOLD, *see* Lacks, H., *and others*. Ice adhesion apparatus . . . *1957*. No. 52617.

50979. FREINKEL, N., *and* **D. LEWIS.** The effect of lowered environmental temperature on the peripheral metabolism of labelled thyroxine in the sheep. (Journal of physiology, Feb. 1957. v. 135, no. 2, p. 288–300, illus., tables.) 30 refs.

A study of peripheral degradation of ^{131}I-thyroxine administered to sheep grazing in the open during the winter. Half-times for turnover of the extra-thyroidal thyroxine averaged 25 hrs. in shorn sheep and 38 hrs. in the unshorn animals. The increased rate of thyroxine degradation in the shorn sheep was accompanied by functional and histological evidence of thyroid hyperactivity; there was no significant difference in the levels of circulating protein-bound iodine, between the shorn and unshorn sheep.
Copy seen: DNLM.

50980. FRENCH, HOWARD V. Aerial ice observing and reporting. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 69–75, illus., text map, graph, table.) 4 refs.

Describes function of aerial ice reconnaissance in support of resupply sealift operations for bases and weather stations in the North American Arctic. The most important observable ice features are discussed: roughness, puddling, open water features, ice boundaries, age, and especially density of ice cover, concentration by size. Limitations and some changes in current observing and reporting methods are considered.
Copy seen: DH-NO.

FRENCH, LYLE A., *see* Halberg, F., *and others*. 24-hour rhythms . . . temperature . . . eosinophils . . . hemidecortication . . . *1958*. No. 51510.

50981. FREUCHEN, PETER, 1886–1957. Den Arktiske stations jubilaeum. (Grønland, July 1957. nr. 7, p. 280.) Text in Danish. ***Title tr.:*** The anniversary of the Arctic Station.

Describes how Knud Rasmussen helped towards founding the station at Disko by persuading A. Holck to donate money not to himself as originally suggested, but to Morten Porsild, who developed the station. ***Copy seen:*** DLC.

50982. FREY, D. G., *and* **J. B. STAHL.** Measurements of primary production on Southampton Island in the Canadian Arctic. (Limnology and oceanography, Apr. 1958. v. 3, no. 2, p. 215–21, illus., tables.) 17 refs.

Data are given on two different lakes studied Aug. 10–26, 1957, and comparisons made with two Alaskan lakes of high altitude. Production was found to be largely determined by morphometry of the lakes, the shallower one on Southampton having a higher intensity of production. The latter is apparently low in the Arctic when compared with conditions in moderate climate.
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50983. FRIANT, MADELEINE. Un stade de l'évolution cérébrale du rorqual, *Balaenoptera musculus* L. (Hvalrådets skrifter. Scientific results of marine biological research, 1958. no. 42, p. 3–15, illus. tables.) 18 refs. Text in French. Summary in English. ***Title tr.:*** A stage of cerebral evolution of the rorqual *Balaenoptera musculus* L.

A study of the anatomy of the brain from a very young embryo of this whale. This brain was found to possess the essential characters of the telencephalon of the *Mysticeti:* low hemispheres at beginning of evolution, a well developed rhinencephalon, and the main fundamental sulci indicated on the *neopallium*.
Copy seen: DI.

50984. FRICK, KENNETH E. Nomenclatural changes and type designations of some New World Agromyzidae; Diptera. (Entomological Society of America. Annals, Mar. 1957. v. 50, no. 2, p. 198–205.) 12 refs. *Pub. also as:* Scientific paper no. 1502, Washington Agricultural Experiment Stations, Pullman. Project no. 1260.

Includes (p. 202) *Phytobia* (*Icteromyza*) *pollinosa* n. comb., lectotype—Sitka, Alaska, July 16, 1907, W. T. Shaw.
Copy seen: DLC.

FRIDLAND, V. M., *see* Ivanova, E. N., *and others.* Pochvenno-geograficheskoe raĭonirovanie. *1958.* No. 52014.

50985. FRIDLÎÂND, S. Bol'shie peremeny v malen'kom gorode. (Sovetskiĭ morîak, Mar. 1956. god 16, no. 5, p. 8, illus., 2 plates.) Text in Russian. ***Title tr.:*** Big changes in a small town.

Sketch and photographs of the big new metallurgical plant at Cherepovets, based on iron ore from Kola Peninsula and coal from Vorkuta. The town has grown from 20,000 to 100,000 inhabitants in less than two years.

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50986. FRIDLÎÂND, S. Kol'tso Vorkuty. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 6–7, illus., col. plate, map.) Text in Russian. ***Title tr.:*** Vorkuta ring.

Journalist's sketch of the town of Vorkuta and its coal mining: discovery of the deposits by a Komi hunter, V. ÎA. Popov, in 1919, beginning of production in 1934, the 32 pits which ring the town, other coal deposits in the vicinity at Khalmer-Yuss, Paemboy and Silovsk; the miners, their work and earnings; housing shortage, etc. Map (approx. 1 in.: 40 km.) shows location of the main pits, neighboring deposits and roads. ***Copy seen:*** DLC.

50987. FRIÐRIKSSON, ÁRNI. The Icelandic north coast herring in 1955. (International Council for the Study of the Sea. Annales biologiques, 1955., *pub.* 1957. v. 12, p. 158–62, illus., tables, maps.)

Contains information on total yields in 1950–55; fishing areas; size distribution; age composition; tribes, their spawning periods, average age, relative strength, and changes in it; number of vertebrae in relation to maturity; maturity factor; tagging activities, etc.

Copy seen: DI.

50988. FRIÐRIKSSON, ÁRNI. The Icelandic north coast herring in 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 173–76, illus., tables, maps.)

Contains information on condition and areas of this fishery in 1956, size distribution, age composition, dominant year-classes, tribes and their relative strength, composition of catches by tribes, vertebral number by tribes and age, food and fat-condition of herring, tagging returns, etc. ***Copy seen:*** DI.

50989. FRIÐRIKSSON, ÁRNI. Saithe, Iceland stock: remarks on the young saithe off the north coast of Iceland in 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 156–57, illus., tables.)

Notes on size distribution of catches from the middle of the north coast; age composition; size/age relationship; earlier catches (since 1951). ***Copy seen:*** DI.

50990. FRIÐRIKSSON, ÁRNI. The tribes in the north coast herring of Iceland with special reference to the period 1948–1955. (International Council for the Exploration of the Sea. Rapports et procès-verbaux 1958. v. 143, pt. 2, p. 36–44, illus., tables.) 18 refs.

Contains information on earlier investigations on the problem of herring tribes; herring tribes (as ascertained by vertebral number) off Iceland during 1937–1942; conditions in 1948–1955; the tribes of the north coast herring, its age by tribes; vertebral analysis for 1948–55; comparisons from 1919 to 1948–1955.

Copy seen: DLC.

50991. FRIED, MORTON H., 1923– . The classification of corporate unilineal descent groups. (Royal Anthropological Institute of Great Britain and Ireland. Journal, Jan.–June 1957. v. 87, pt. 1, p. 1–29, table, graphs.) 52 refs.

Includes (p. 8–10) a discussion of the social organization and clan structure of the northern Tungus based on Shirokogorov, No. 15930. ***Copy seen:*** DLC.

FRIEDEN, J., *see* Kuhn, L. A., *and others.* The effect . . . cold on resistance to hemorrhage . . . dogs. *1957.* No. 52543.

50992. FRIEDRICH, ADOLF, 1914–1956. Das Bewusstsein eines Naturvolkes von Haushalt und Ursprung des Lebens. (Paideuma, Aug. 1955. Bd. 6, Heft 2, p. 47–54.) 10 refs. Text in German. ***Title tr.:*** A primitive people's awareness of the maintenance and origin of life.

An analysis of the soul concept of the Podkamennaya Tunguska Evenki (Tungus) based on the findings of the Soviet ethnographer A. F. Anisimov, q.v. The Evenki differentiate between two soul-triads: the clan soul, comprising the ancestral soul, also that of people now

living and that of the future generations; the other, the personal soul, consists of a shadow- or mirror soul, a body soul and a fate soul. The power exercised by the shaman or his (her) animal double on these souls is discussed.

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50993. FRIES, THEODOR MAGNUS, 1832–1913. Lichenographia scandinavica sive dispositio lichenum in Dania, Suecia, Norvegia, Fennia, Lapponia rossica hactenus collectorum; pars 1–2. Uppsaliae, typis descrip. ed. Berling, 1871–74. iv, 639 p. Text in Latin. ***Title tr.:*** Lichenographia scandinavica, or an arrangement of lichens collected in Denmark, Sweden, Norway, Finland and Russian Lapland; pts. 1–2.

Taxonomic treatment, with Latin diagnoses, descriptions, variations, synonyms, distribution and observations, with some species described as new. Several of the species are native to northern regions of Scandinavia and Russian Lapland.

Copy seen: MH–F.

50994. FRIES, THEODOR MAGNUS, 1832–1913. On the lichens collected during the English Polar Expedition of 1875–76. (Linnean Society of London. Journal, Botany, 1880. v. 17, no. 102, p. 346–70.)

Lists 102 lichens collected by H. W. Feilden, and by H. C. Hart, on northeast Ellesmere and in northern Greenland during the Nares expedition.

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50995. FRISTRUP, BØRGE. Isen og gletscherne skal nu studeres over hele jorden. Er vi atter på vej mod et koldere klima? (Naturens verden, Jan. 1957. årg. 41, p. 1–5, illus.) Text in Danish. ***Title tr.:*** Ice and glaciers are to be studied over the whole earth. Are we heading toward a colder climate again?

Outlines studies planned for the IGY. Changes in the extent and volume of glaciers will be investigated in relation to fluctuations of climate in lieu of meteorological records, and as basis for evaluating future climatic conditions. Position of the ice front, snow accumulation and loss, relative importance of temperature, rainfall, and radiation in the melting process are to be studied, also the influence of various geographic and meteorological factors such as topography, wind direction, and sunshine, on the occurrence of different glacier types. The value is noted of investigating boreholes, annual layers of glacier ice, included layers of identifiable volcanic ash, and the distribution of impurities in relation to industrialization. Glaciers beyond the inland ice of Greenland are to be studied in Inglefield Fjord and Upernavik Island, in Graedefjord (south Greenland), on Angmagssalik and Clavering Islands, also at a station on the north coast.

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50996. FRISTRUP, BØRGE. Thule distriktet. (Kulturgeografi, Apr. 1958. årg. 10, no. 57, p. 25–38, illus., maps.) Text in Danish. Summary in English. ***Title tr.:*** The Thule District.

Describes the culture of the Polar Eskimos, inhabiting the North Greenland from Holms Ø in Melville Bugt to Humboldt Gletscher north of Inglefield Land. Outsiders' influences upon this nomadic hunting people and modifications in their living patterns are traced from the first settlement of the district about 1000 years ago. In 1953, the people at their main settlement, Thule, were transferred to a new location because of the construction of an American air base at the old site.

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FRISTRUP, BØRGE, *see also* Holland, M. F. W. An expedition . . . 1956. *1958.* No. 51771.

50997. FRITSCH, LEE E., *and* **I. O. BUSS.** Food of the American merganser in Unakwik Inlet, Alaska. (Condor, Nov.-Dec. 1958. v. 60, no. 6, p. 410–11, table.)

Study of the food habits of *Mergus merganser americanus*, found abundant and breeding around this inlet in the northern part of Prince William Sound, in July and early August, 1957. From the 40 adults and 15 juvenals shot for study, the food items (33) found are tabulated according to frequency: 394 otoliths (ear stones of fish) occurred in 44 of the 55 mergansers. The size and general appearance of skeletal parts in the identified fish materials in 32 birds, suggested cottoids.

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50998. FRITZ, MADELEINE ALBERTA, 1896– , *and others.* Stratigraphy and paleontology of the Williams Island formation. (Geological Association of Canada. Proceedings, Dec. 1957. v. 9, p. 21–47, illus., 4 plates, sketch map.) 40 refs. *Other authors:* R. R. H. Lemon, *and* A. W. Norris.

First systematic description of type section of the Williams Island formation (Middle Devonian, next above the Sextant formation and Abitibi River limestone; cf. No. 3478), located 2 mi. north of Long Rapids on the Abitibi River (approx. 50°15′ N. 81°40′ W.). Field work was carried on by the junior authors, 1950–1953; stratigraphic and paleontological research by all three. Well-preserved coral fauna found at the base of the type section are described in detail and illustrated on the plates. Consideration of the corals and stratigraphic evidence lead to conclusions that Williams Island formation is Hamilton in age (Middle Devonian). ***Copy seen:*** DGS.

FRITZ, MADELEINE ALBERTA, 1896– , *see also* Cranswick, J. S., *and* M. A. Fritz. Coral fauna . . . *1958.* No. 50372.

50999. FRITZ, SIGMUND. On the "arctic whiteout." (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 182–86, diagrs.) 7 refs.

Basic requirements for the occurrence of this phenomenon are noted, and a mathematical model is established to define it. The results indicate that a surface albedo of 0.6 is a value below which whiteout cannot occur. The theoretical conclusions cannot be conclusively tested until more observational data are available. ***Copy seen:*** DLC.

51000. FRITZ, SIGMUND. The "polar whiteout." (Weather, Nov. 1957. v. 12, no. 11, p. 345–48, graph.) 8 refs.

Discusses ground and sky conditions leading to the whiteout: it can occur only when surface reflectivity, R, is greater than 0.6, but the actual lower limit of reflectivity, greater than R = 0.6, at which the whiteout would *not* occur, is uncertain. Devices such as the so-called "snooperscopes" are suggested to make objects visible. W. T. Roach adds a note on infra-red radiation in whiteout conditions, to which Fritz replies (p. 348–49).

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51001. FRITZ, SIGMUND. Solar radiation measurements in the Arctic Ocean. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 159–66, diagrs.) 6 refs.

Measurements of sun and sky radiation on a horizontal surface made on the ice island T–3 during 1953 are summarized and compared with similar data obtained in the Antarctic and in middle latitudes. Energy received on overcast days in midsummer was similar to that measured in the Antarctic. The fraction of the extraterrestrial energy transmitted to the ground is greater in the Arctic than at Washington, D.C. This may be explained by the higher surface albedo in the Arctic or differences in cloud properties. Energy utilized in melting snow and ice is estimated, and possible explanations for the loss of the remaining energy are advanced. ***Copy seen:*** DLC.

51002. FROESE, GERD. Effect of breathing O_2 at one atmosphere on the response to cold in human subjects. (Journal of applied physiology, July 1958, v. 13, no. 1, p. 66–74, illus., table.) 12 refs.

"The average decrease in O_2 consumption when breathing O_2 was 19.7 cc./min./m^2., which represented 30% of the mean increase in O_2 consumption in the cold and was significantly different from zero ($P<0.001$)." Breathing O_2 also resulted in lower heart rate, lower volume increase due to cold, lower respiratory frequency and EMG. ***Copy seen:*** DLC.

51003. FROESE, GERD, *and* **A. C. BURTON.** Effect of breathing O_2 on O_2 consumption during exposure to cold. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 42.)

The increase in O_2-consumption of man in response to cold environment was reduced by one-third when breathing O_2. At room temperature no significant difference between breathing air or O_2 was observed. ***Copy seen:*** DLC.

51004. FROESE, GERD, *and* **A. C. BURTON.** Heat losses from the human head. (Journal of applied physiology, Mar. 1957. v. 10, no. 2, p. 235–41, illus., tables.) 5 refs.

A study of nonevaporative heat loss of the unprotected head, with the aid of a gradient calorimeter. The subjects were clothed and exposed to temperatures between 32° and −21° C. Heat loss was linearly related to external temperature and is expressed by a regression equation presented. According to it at −4° C. "the heat loss from the head may amount to half the total resting heat production of the man." The importance of insulation of the head in cold is accordingly pointed out. ***Copy seen:*** DLC.

FROESE, GERD, *see also* Burton, A. C., *and* G. Froese. The heat losses . . . human head . . . cold . . . *1957*. No. 50018.

51005. FROHNE, WILLIAM C. Habitat and males of Alaskan snipe fly pests, *Symphoromyia:* Rhagionidae. (Mosquito news, June 1957. v. 17, no. 2, p. 94–96.) 4 refs.

Record of larval males of *Symphoromyia atripes* Bigot and *S. kincaidi* Aldrich from the upper Cook Inlet region. Their habitat, its characteristics and vegetation are described, and the alpine breeding areas pointed out. ***Copy seen:*** DLC.

51006. FROHNE, WILLIAM C. Reconnaissance of mountain mosquitoes in the McKinley Park region, Alaska. (Mosquito news, Mar. 1957. v. 17, no. 1, p. 17–22, tables.) 9 refs.

Account of investigation of mosquito larvae, with information on the Park,its location, area, climate and mosquitoes (15 types); vertical distribution of latter, larval habitats (with key), larval associations, seasonal distribution, etc.
Copy seen: DLC.

FROLANDER, H. F., *see* Fleming, R. H., *and others*. NORPAC 1955 . . . Preliminary data report. *1956*. No. 50926.

51007. FROLOV, A. I. Novyĭ raĭon nagula sel'di v Okhotskom more. (Rybnoe khozîaĭstvo, Mar. 1957. god 33, no. 3, p. 51–55, illus., maps, table.) Text in Russian. ***Title tr.:*** A new feeding area of herring in the Sea of Okhotsk.

Account of investigation made in 1955 in the southwestern area of this sea. Old spawners were found on the Hokkaido and Sakhalin coasts in the spring, feeding. Their subsequent migration and conditions determining it were followed, revealing an easterly to northeasterly direction. The study also elucidated the relationship of the various herring schools of the southwestern Okhotsk Sea.
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51008. FROLOV, F. A. Sluchai napadeniîa rosomakh na losîa. (Okhota i okhotnich'e khozîaĭstvo, Sept. 1957. god 3, no. 9, p. 82.) Text in Russian. ***Title tr.:*** Wolverines attacking elks.

Reports two instances in 1956 of wolverines killing elks in the Pesha and Oma river basins in the Nentsy National District of Arkhangel'sk Province.
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51009. FROLOV, S. Polîarnyĭ radist. (Radio, Mar. 1957, no. 3, p. 16, port.) Text in Russian. ***Title tr.:*** The polar radio operator.

Biographical sketch of Oleg Arkhipovich Kuksin, radio operator in the Arctic and Antarctic since 1932: on the ice-breaker *Litke* in 1932–34, at the Rudolf Island polar station in 1937 and 1939, etc. His service in the arctic air and high latitude expeditions is noted. ***Copy seen:*** DLC.

51010. FROLOV, SLAVA, *and* **I. SUMAKOVA.** Arkhangel'sk - Amderma - Dikson. (Pioner, July 1957. god 34, p. 40, illus., map.) Text in Russian.

Describes a group of youngsters' excursion aboard the *Sestroretsk;* their route across the White, Barents and Kara Seas is shown on map. ***Copy seen:*** DLC.

51011. FROLOV, VÎACHESLAV VASIL'EVICH. Issledovaniîa sovetskoĭ Arktiki na sovremennom ėtape. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 5–17, map.) Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Recent investigations in the Soviet Arctic.

"Investigations during 1918–1957 are outlined with emphasis on the research of the Arctic Institute. Monographs by scientists of the Institute have been published since World War II on geography, ice science, and engineering and navigation problems on the basis of data obtained from drift stations, aerial surveys, and laboratory studies. The development of methods for forecasting ice conditions as well as studies on the mechanical properties of the ice cover of the Arctic Ocean and the effects of river outflow have improved service to navigation. New methods of testing icebreaker models and the construction of an experimental testing basin permitted the collection of much engineering data on the atomic and other icebreakers. A propeller for ice-breakers developed from model tests has been installed on the *Stalin* and the *Krasin*, increasing their efficiency 8–10% and decreasing propeller weights 20–30%."—SIPRE. ***Copy seen:*** DLC.

51012. FROLOV, VÎACHESLAV VASIL'EVICH, *and* **V. M. PASETSKIĬ.** TSentr issledovaniĭ Severnogo Ledovitogo okeana. (Priroda, Aug. 1958. god 47, no. 8, p. 56–62, illus., maps.) Text in

Russian. ***Title tr.:*** Research center of the Arctic Ocean.

General outline of Soviet arctic exploration since 1918; activities of the Arctic Institute, Leningrad (of which senior author is head); the *Sedov* 1937–40, and further expeditions and discoveries; expeditions by air; publications; ice and weather services; current activities (drift stations, automatic weather stations, ice observations by ship and aircraft, etc.); plans for long range weather and ice forecasts; geophysical and heliographic work in the future; theoretical studies.

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FROLOV, VÎACHESLAV VASIL'EVICH, *see also* Dolgin, I. M., *and* V. V. Frolov. Dvadtsat' pîat' let . . . *1957*. No. 50592.

51013. FROLOVA, E. N. Paraziticheskie infuzorii gruppy Astomata iz oligokhet Vostochnogo Murmana. (Zoologicheskiĭ zhurnal, Sept. 1957. t. 36, vyp. 9, p. 1281–91, illus.) 15 refs. Text in Russian. Summary in English. ***Title tr.:*** Parasitic infusoria of the Astomata group from oligochaetes of the eastern Murman.

Four species of Astomata are described from the material assembled at the biological station in summer 1948. The most common appeared to be *Radiophrya prolifera* which shows great variability depending on and determined by the host and its bionomics. A new form, *Radiophrya grandis* sp. n. parasitizing on *Clitellio arenarius* is also described.

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FROMAN, CHARLES A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

51014. FROMMEL, E. Du rôle du diencéphale et des centres du vague au cours des "stress" traumatiques, de la brûlure, de l'hypothermie et de l'hyperthermie; morphine, chlorpromazine, ACTH et cholinergie. (Presse médicale, Oct. 5, 1957. t. 65, no. 71, p. 1585–86, tables.) 8 refs. Text in French. ***Title tr.:*** Role of the diencephalon and of the vagal centers on the course of traumatic stress burns, hypothermia and hyperthermia; morphine, chlorpromazine, ACTH and cholinergy.

Report on experiments which showed that these forms of stress involve a hypersensibility to acetylecholine; in the general forms of stress (hypo- and hyperthermia) morphine and chlorpromazine sensitize the animals to acetylcholine. The latter effect is discussed in terms of action of the diencephalon.

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51015. FRONGIA, N., *and others.* Quadri istologici ed istochimici (fosfatasi alcalina ed acida) nell' encefalo di cani deceduti in corso di ipotermia profonda controllata. (Archivio italiano di anatomia e istologia patologica, 1957. v. 31, no. 1, p. 3–29, illus.) 17 refs. Text in Italian. Summary in English. *Other authors:* A. Piccaluga *and* L. Bonomi. ***Title tr.:*** Histological and histochemical pictures (alkaline and acid phosphatase) in the brain of dogs dead during deep, controlled hypothermia.

Authors describe and illustrate the following changes presumed to be effected by vascular insufficiencies: congestion, edema, cellular degeneration, hemorrhages, perivascular infiltration of lymphocytes and monocytes, and changes in acid phosphatase. ***Copy seen:*** DNLM.

51016. FROST, FINN, Forsøk med sneskjermplantninger på Saltfjellet. (Tidsskrift for skogbruk, June 1951. årg. 59, hefte 6, p. 176–85, illus.) Text in Norwegian. ***Title tr.:*** Experimentation with snow shelter belt plantings on Saltfjellet.

Conifer planting along the railway across Saltfjellet (66.5° N.) in northern Norway has been resumed due to high maintenance cost of wooden fencing where drifting snow is troublesome. Earlier plantings failed; but the increased summer temperatures during fifty years favor growth now; even shrubby trees would provide shelter. Native Scotch pine and birch, also hardy imports, mostly from Alaska, are to be tried.

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51017. FROST, ROBERT E. A reconnaissance for a southern Greenland ice-cap access for military purposes. Wilmette, Ill., Apr. 1957. 19 p., illus., 5 maps. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–56, v. 2. SIPRE technical report 46.) Refs.

Reports a field survey by a nine-man party July 17–Aug. 1, 1956, on several potential areas: Narsarssuak Air Base (BW–1), Sondrestrom Air Base (BW–8), Ivigtut, and Frederikshåb-Kvane. Criteria are described; the sites are analyzed in turn. For year-round access, Narsarssuak, Ivigtut Fjord, Frederikshåb-

Kvane are rated in that order; seasonal access is possible from the Sondrestrom area. ***Copy seen:*** CaMAI.

51018. FRY, F. E. J. Temperature compensation. (Annual review of physiology, 1958. v. 20, p. 207–224.) 205 refs.

A review of the field to July 1957, dealing with thermal adjustment and regulation in general: "acclimation" (=thermal adjustment), acclimatization, and adaptation; mechanisms of thermal adjustment; regulation: behavioral, physiological and compensatory. Condition of both high and low environmental temperature are considered.

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FRY, WAYNE LYLE, 1922– , *see* Bannan, M. W., *and* W. L. Fry. Three Cretaceous woods . . . *1957*. No. 49521.

51019. FRYE, F. J., *and others.* Report on Greenland operation, 1954. Fort Belvoir, Va., 1957. 24 p. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954. v. 1.) ERDL Report.

Presents an account of the Engineer Research and Development Laboratories' participation, during the period Apr.–Oct. 1954, in 13 projects: road construction, transfer of cargo, reconnaissance for pipeline onto the icecap, pathfinding techniques, trail marking, detection and bridging of crevasses, construction of a road across the ramp zone, sources of electric power, water supply, waste disposal, support of Transportation Corps with equipment, parts, and tests. Recommendation is made for planning nine months to a year in advance; conclusions obtained from test results and studies are listed. ***Copy seen:*** CaMAI.

FUCHS, IRMGARD M., *see* American Geographical Society. Geographic study of mountain glaciation. *1958*. No. 49276.

51020. FUGZAN, M. D. Iubileĭnaia nauchnaia sessiia Kol'skogo filiala im. S. M. Kirova AN SSSR. (Akademiia nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiia, 1958. no. 2, p. 181–83.) Text in Russian. ***Title tr.:*** Jubilee scientific session of the S. M. Kirov Kola Branch of the Academy of Sciences of the U.S.S.R.

Reports the session held at Kirovsk Oct. 28, 1957, commemorating the October Revolution. Papers delivered by Chairman A. V. Sidorenko and other scientists survey the discovery and development of the mineral resources of Kola Peninsula, also the considerable general cultural improvement. The role of the Academy of Sciences and of its Kola Branch in exploration of the Peninsula is stressed. ***Copy seen:*** DLC.

FUGZAN, M. D., *see also* Akademiia nauk SSSR. Ob organizatsii novykh institutov . . . *1958*. No. 49156.

51021. FUHRMAN, FREDERICK A. Experimental frostbite; effect of brief freezing and burning on tissue loss following standard frostbite in the rat. (Journal of applied physiology, Jan. 1957. v. 10, no. 1, p. 139–42, tables.) 12 refs.

Account of investigation on the effects of brief freezing or burning upon the effects of freezing provoked 48 hrs. later. Preceding freezing decreased tissue loss in the same leg from subsequent frostbite, but not in the contralateral leg. The same effect was observed in adrenalectomized animals. Brief burning had a similar effect on subsequent frost injury. ***Copy seen:*** DNLM.

51022. FUHRMAN, FREDERICK A. Experimental frostbite; oxygen consumption and anaerobic glycolysis of rat tissues after freezing and cooling in vitro (Journal of applied physiology, Mar 1957. v. 10, no. 2, p. 224–30, tables.) 30 refs.

Account of experiments with tissue slices and homogenates of skin, skeletal muscle, nerve, brain, and liver. In general, impairment of metabolism increased with decrease in temperature and with prolongation of the frozen state. However, the metabolism of skin was considerably more resistant to freezing than that of the other tissues. The bearing of these observations on the problem of frostbite is discussed. ***Copy seen:*** DLC.

51023. FUHRMAN, FREDERICK A., *and* **G. J. FUHRMAN.** Metabolism of skin following frostbite. (Journal of applied physiology, July 1957. v. 11, no. 1, p. 45–50, illus., tables.) 27 refs.

Account of investigation on skin of rats. The longer feet were frozen at −25° C. the greater was the tissue loss and the lower the Qo_2 and $Q_{O^2}^{N^2}$. The sum of freezing-thawing and post-thawing injury to skin respiration was 90 percent and damage present at thawing was even larger. Rapid rewarming reduces tissue loss by reducing freezing-thawing damage;

this represents a specific effect and not merely a shortening of the frozen state.
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51024. FUHRMAN, FREDERICK A., *and* G. J. FUHRMAN. The treatment of experimental frostbite by rapid thawing; a review and new experimental data. (Medicine, Dec. 1957. v. 36, no. 4, p. 465–87, illus., tables.) 91 refs.

An historical review of the use of cold and heat in the treatment of frostbite, including rapid thawing of frozen extremities. The most effective of the latter method is considered to be immersion in water of 42±2° C. till the affected part attained normal temperature. Immersion soon after thawing is also of some benefit. Rapid rewarming is most effective after brief frostbite. It shortens the duration of the frozen state and tissue damage by high electrolyte concentration. ***Copy seen:*** DLC.

FUHRMAN, GERALDINE J., *see* Fuhrman, F. A., *and* G. J. Fuhrman. Metabolism of skin . . . frostbite. *1957.* No. 51023.

FUHRMAN, GERALDINE J., *see* Fuhrman, F. A., *and* G. J. Fuhrman. The treatment of experimental frostbite by rapid thawing . . . *1957.* No. 51024.

FUJINO, MASAHIKO, *see* Ishihara, Y., *and others.* Structure of sperm- and sei-whale insulins . . . *1958.* No. 51971.

FUKS, L. A., *see* Berdichevskaîa, T. M., *and others.* Temperaturnyĭ éffekt . . . mezonnoĭ intensivnosti . . . 1958. No. 49666.

51025. FUKUHARA, FRANCIS M., *and* G. K. TANONAKA. A Japanese high-seas salmon fishery in the North Pacific since 1952. (Commercial fisheries review. U.S. Fish and Wildlife Service. Apr. 1958. v. 20, no. 4, p. 1–16, illus., tables, maps.) Ref.

Informative review of Japanese salmon fisheries in the Aleutian waters, Bering Sea and Sea of Okhotsk: fishing areas and fleet operations; catch data tabulated according to years and months, species and location; and types of vessels and gear used, etc. Finally each species of salmon is analyzed as to peak catches and fluctuation of catches in general. The study covers the period 1952–1957 inclusive. ***Copy seen:*** DI.

FUKUHARA, FRANCIS M., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

51026. FUKUTOMI, TAKAHARU. A theory on the steady drift of sea ice due to wind on the frozen sea. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 223–36, 2 text maps, diagr., 7 graphs, 4 tables.) 14 refs.

The results of brief measurements in the Sea of Okhotsk on the motion of sea ice relative to the surface water as caused by wind are presented, and a model of steady ice drift in a sea with any percentage of ice and a steady wind-driven oceanic current is discussed theoretically. The principal difference between the proposed theory and those of other investigators is that the drift of ice on the sea with any ice area ratio and the effects of wind pressure or water resistance on the lateral boundary or on hummocked ice are considered here. Practical applications of the theory to the results of Nansen's observations on ice drift in the Arctic Ocean and to the monthly variations of drift-ice distribution on the Sea of Okhotsk are discussed.—From SIPRE. ***Copy seen:*** DN–HO.

FULLINGTON, FRANK, *see* Carlson, L. D., *and others.* Immersion . . . tissue insulation. *1958.* No. 50132.

FULWIDER, C. W., *see* Linell, K. A., *and others.* Approach roáds . . . *1957.* No. 52850.

51027. FUMAGALLI, B., *and others.* Comportamento del cuore isolato di coniglio in ipotermia; studio elettrocardiografico. (Società italiana di Biologia sperimentale. Bolletino, July 1957. v. 33, no. 7, p. 1192–98, illus., table) Text in Italian. *Other authors:* S. Noli, G. C. Maggi, *and* P. Della Porta. ***Title tr.:*** Behavior of the isolated rabbit heart during hypothermia; electrocardiographic study.

An analysis and discussion of ECG changes in the isolated heart at temperatures down to 13° C. Cardiac frequency, duration of atrial complexes, duration of atrioventricular conduction, of initial ventricular complexes and of the electric systole are registered and described; rhythm disturbances and morphological changes in the ECG are also noted.
Copy seen: DNLM.

FURNESTIN, J., *see* International Commission NW Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

51028. FURUNES, JON. Sortforsøk med poteter i Nordland fylke 1940-53. (Forskning og forsøk i landbruket, 1956. bd. 7, hefte 7, p. 485–528, 19 tables) 8 refs. State Experiment Station Vågones, report no. 26. Text in Norwegian. Summary in English. ***Title tr.:*** Variety trial with potatoes in Nordland province 1940–1953.

Reports on experiments with potato varieties near Bodø in northern Norway. Soil, fertilization, weather, techniques, disease, and production are considered. Eight varieties are recommended for different conditions: location, yield, disease resistance, storage, table quality and fodder. ***Copy seen:*** DA.

51029. FURUSKOG, JALMAR, 1887–1951. Vårt land; Sveriges geografi i populär framställning. Stockholm, Bonnier, 1944. ix, 406 p. illus., plates (part col., part double) ports., maps (part fold.), diagrs. Text in Swedish. ***Title tr.:*** Our country; a popular description of Sweden's geography.

Presents a popular, comprehensive, geographic description of Sweden: its natural features and characteristics, the climate, vegetation, soil, etc. Fishery, forestry, the iron industry, handicrafts, electricity, trade, communications, and housing are discussed, conditions in the various regions summarized and illustrated. The arctic region is treated as relevant, Lapland specifically (p. 344–48) as to climate, lakes, iron mining, the nomadic life of the Lapps.

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FYLES, J. G., *see* Lee, H. A., *and others.* Keewatin ice divide. *1957.* No. 52731.

51030. FYNBO, JENS. Grønlands nye postordning. (Grønland, July 1958. nr. 7, p. 253–64, illus.) Text in Danish. ***Title tr.:*** Greenland's new postal organization.

Describes changes when the new regulations come into effect, June 1, 1958: 62 special offices to take in mail, introduction of postal charges, mail delivery in the larger towns. The postal service in Greenland remains independent of that in the rest of Denmark.

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51031. FYNBO, JENS. Grønlands postvaesen. (Grønland, May 1957. nr. 5, p. 161–71, illus.) Text in Danish. ***Title tr.:*** Postal service in Greenland.

Historical survey from 1873; stamps have been issued from 1906; a separate postal service for Greenland was created in 1938; since 1950 it has been organized under The Royal Greenland Trading Company. In 1946, it handled some 55,000 letters and 7,000 parcels; in 1956: 541,000 letters and 77,000 parcels. Air mail service was introduced in 1954. Details and illustrations of the various series of stamps issued are given.

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51032. GAARDER, KARIN RINGDAL, *and* **J. MARKALI.** On the coccolithophorid *Crystallolithus hyalinus* n. gen., n. sp. (Nytt magasin for botanikk, 1957. v. 5, p. 1–5, illus.) 11 refs.

Contains descriptions of *Crystallolithus* n. gen. and *C. hyalinus* from the northern Norwegian Sea (3,500 cells per liter) and from the west coast of Norway (3,000 cells per liter). The coccoliths appear to be formed solely of calcite rhombohedrons. A description is given of the cell as seen in the light microscope.

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51033. GABRIELSE, H. Geological reconnaissance in the northern Richardson Mountains, Yukon and Northwest Territories. Ottawa, Queen's Printer, 1957. 11 p. fold. map. (Canada. Geological Survey. Paper 56–6.) 9 refs.

Report on area approx. 67°–68°30′ N., 135°–138° W., based in part on field work in 1955 with a topographical survey party, whose members collected a few fossils and numerous specimens. Climate, vegetation and wildlife are outlined; chief physical features, principal drainage, and slight evidence of glaciation are described. General account of stratigraphy noting fossils and rock specimens collected is followed by brief remarks on structure and economic geology. Richardson Mts. consist of folded, non-volcanic, sedimentary rocks ranging in age from Precambrian(?) to Late Cretaceous. Air photos were used in plotting the sketch map, scale 1:380,160. ***Copy seen:*** DGS.

51034. GAD, FINN, 1911- . Kleinschmidts pael. (Grønland, Nov. 1957. nr. 11, p. 410–14, illus.) Text in Danish. ***Title tr.:*** Kleinschmidt's pole.

Notes on a small monument at Godt-

håb in West Greenland, originally put up by the linguist and teacher Samuel Petrus Kleinschmidt about a hundred years ago to guide him along the road into the town. ***Copy seen:*** DLC.

51035. GAD, FINN, 1911– . Laereruddannelsen i Grønland. (Grønland, Sept. 1957. nr. 9, p. 356–60.) Text in Danish. ***Title tr.:*** The training of teachers in Greenland.

Outlines principles and organization at the training college for teachers and catechists at Godthåb. A two-year course (on a plan adopted in 1956) is given students with a secondary school education, and is followed by a year's practice teaching at a provincial school in Denmark. In the subjects taught (details given), the emphasis is on teaching methods and on training for general cultural work. A short historical survey is included of this college, founded at Godthåb in 1847. ***Copy seen:*** DLC.

51036. GAD, FINN, 1911– . The language situation in Greenland. (Danish Foreign Office journal, Mar. 1957. no. 22, p. 15–18, 6 illus.)

Eskimo language study has centered in West Greenland from the time of Hans Egede, 1721; and the West Greenland dialect has prevailed, alone, as long as its range suited the local life. But 20th century conditions, changes in political status, and the strategic position of Greenland, especially since the 1930's, have demonstrated the limitations of the Eskimo and the need for the Danish language. Introduced activities as fishing, sheep-farming and an industrial culture generally have concepts not expressible in the dialect. The first four bilingual schools have been set up under the 1950 Greenland Education Act, and the largest journal, *Atuagagdliutit*, also several small weeklies are published in both Danish and Eskimo. ***Copy seen:*** DLC.

51037. GAD, FINN, 1911– . Tohundredåret for Hans Egedes død. (Grønland, Dec. 1958. nr. 12, p. 462–69, illus., ports.) Text in Danish. ***Title tr.:*** The two hundredth anniversary of Hans Egede's death.

Offers an appreciation of Hans Egede's missionary work in Greenland, stressing its importance. It is inevitable that some mistakes were made as the Christian religion was basically foreign to the Greenlandic way of life.

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51038. GADEL'SHIN, K. A. Rabota s komi uchashchimisîa po russkoĭ fonetike. (*In:* Akademiîa pedagogicheskikh nauk RSFSR. Institut natsional'nykh shkol. Iz opyta prepodavaniîa . . . 1957. p. 55–66, tables.) Text in Russian. ***Title tr.:*** The work with Zyryans studying Russian phonetics.

Zyryan phonetics and vowel stress are analyzed and compared with the Russian phonetic system. Advice is given for the teaching of different age-groups. ***Copy seen:*** DLC.

51039. GAERTNER, HANS RUDOLF von. Vorkommen von Serpelriffen nördlich des Polarkreises an der norwegischen Küste. (Geologische Rundschau, 1958. Bd. 47, Heft 1, p. 72–73, plate.) Text in German. ***Title tr.:*** Occurrence of worm tube reef on the Norwegian coast north of the Arctic Circle.

Presents brief report on worm tubes in lime reefs east and south of Hinnøy (68° 35′ N. 15°50′ E.) in the Vesterålen islands. The reefs are found 3–4 m. below sea level and on a terrace 12 m. above sea level. They consist of worm tube and shell lime. Lime sedimentation is said, therefore, to appear farther north than generally expected, probably because of the influence of the Gulf Stream.

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GAGE, THOMAS, d. 1656, *see* Beals, R. L. Father Acosta . . . first peopling . . . New World. *1957.* No. 49592.

51040. GAGNON, PAUL M. Étude sur le conditionnement de l'action de la corticotrophine et de la thyrotrophine. (Laval médical, Nov. 1957. v. 24, no. 2, p. 192–268, illus, tables.) 153 refs. Text in French. ***Title tr.:*** Study in conditioning the action of corticotropin and thyrotropin.

Review of the literature and of the problem, introduces discussion of author's work on rats and guinea pigs, cold exposure and administration of ascorbic acid serving as conditioning factors. Phenomena observed in response to cold were as follows: cold exposure of hypophysectomized rats treated with ACTH, increased adrenal response to the latter. Adrenal response to ACTH increased by ascorbic acid administration is not further increased by cold-exposure. Cold exposure or vitamin C administration raises the thyroid response to thyrotropin in hypophysectomized rats, but the combination of both does not increase this

response. Cold exposure slightly activated the thyroid in scorbutic guinea pigs; this action is prevented by administration of vitamin C. ***Copy seen:*** DNLM.

51041. GAĬGEROV, S. S. Atmosfernye profsessy v tsentral'noĭ Arktike. (Priroda, Dec. 1957. no. 12, p. 27–34, illus.) Ref. Text in Russian. English translation by E. R. Hope issued as Canada. Defence Research Board. Directorate of Scientific Information Service. Translations, T282R, Mar. 1958. 13 p. Copy at CaMAI. ***Title tr.:*** Atmospheric processes in the Central Arctic.

Contains a popular account of aerological observation procedures during 1955–56 at the drifting station North Pole–4, using radiosondes and radiotheodolites, and preliminary analyses of some of the collected data on temperature, wind, etc., in the lower stratosphere. Conditions for development of cyclones, also prevailing pressures, extent of cloudiness, etc., during cyclones and anticyclones, their frequency, direction of movement (mostly northerly during this period) are discussed. Fluctuations in the height of the tropopause were found to be greatly influenced by cyclonic activity; the tropopause exhibited a marked temperature inversion during the summer (May-Aug.). An example of a vertical section of the atmosphere is illustrated, also one of temperature distribution with height. Dependence of temperature-stratification on the absorption of solar radiation by atmospheric-ozone is discussed. ***Copy seen:*** DLC.

51042. GAĬGEROV, S. S. K rezul'tatam aėrologicheskikh nablīudeniĭ na dreĭfuīushcheĭ stantsii "Severnyĭ polīus–4" v 1955/56 g. (Meteorologiīa i gidrologiīa, Oct. 1957, no. 10, p. 3–9, tables, graph.) 7 refs. Text in Russian. English translation available. ***Title tr.:*** On the results of aerological observations at the drifting station North Pole–4 during the year 1955/56.

Reports on 12 months' continuous observations by radiotheodolite in the Arctic Basin, and presents some preliminary results of *in situ* analyses of the data. Little seasonal fluctuation in the height of the tropopause is shown in data at North Pole-2, -3 and -4, maximum heights occurring in the winter season; corresponding temperatures are tabulated, and their dependence on the height of the sun is discussed. Minimum temperature, −81.2° C., was observed at 20 km. height on Jan. 4, 1956; an example of temperature variation with height is graphed. The strongest winds were observed in the upper troposphere, velocity decreased rapidly with height. Other, more complex questions of the general regime of temperatures, winds, etc., above the Central Arctic, to be studied during the IGY, are outlined. ***Copy seen:*** DLC.

GAILUS, DOROTHY, *see* Bishop, Y., *and others.* Index . . . publications . . . Fisheries Research Board of Canada, 1901–1954. *1957.* No. 49742.

51043. GAJDA, ROMAN T. Cryoconite phenomena on the Greenland Ice Cap in the Thule area. (Canadian geographer, 1958. no. 12, p. 35–44, illus., maps, tables.) 31 refs.

Discusses observations, 1949, in the ablation zone of the icecap in northwest Greenland (76°34′ N. 68°15′ W.). Quantitative data on the morphological characteristics of cryoconite holes is presented, and relationships between their sizes, width and depth are examined. Of 90 holes measured, the majority were from 2 to 15 cm. wide and 10 to 20 cm. deep, 80% were circular, and all had vertical straight walls. Depth of holes increased with distance from the ice margin because increased direct ablation near the margin overcomes the effects of the cryoconite ablation. These holes were not as deep as some measured 6° to the south by Drygalski 58 years earlier, possibly due to the long-range cycle of warming in the Arctic. Cryoconite stripes and surface coating are described, also observations of the effect of particle size and layer thickness on melting. Practical applications of the role of cryoconite in melting processes are considered, and possibilities of artificial dusting of snow and ice surfaces to speed up thawing.
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51044. GAJEWSKI, WACŁAW. A cytogenetic study of genus *Geum* L. Warszawa, Państwowe wydawn. naukowe, 1957. 415 p. 151 illus., 4 tables. 37 text maps. (Polskie towarzystwo botaniczne. Monographiae botanicae, v. 4.) 132 refs.

Contains a taxonomic, cytological and genetic study of the genus *Geum*, well known by the crossing facility of its various species and its relations to kindred genera. Taxonomy within the group, and species in the tribe Geeae and their geographical distribution are dealt with. At least seven northern species cover a

large area including northern Scandinavia, arctic Asia (*G. glaciale*), Alaska and northern Canada. ***Copy seen:*** MH–A.

51045. GAKKEL', ÎÂKOV ÎÂKOVLEVICH. Leningrad i osvoenie Severnogo morskogo puti. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiâ, May–June 1957. t. 89, vyp. 3, p. 181–92, map.) 3 refs. Text in Russian. ***Title tr.:*** Leningrad and the Northern Sea Route.

Due to its geographic position, its political and administrative importance, scientific prominence and not least its shipbuilding industry, Leningrad, the former Petersburg, has led in Russian arctic exploration during the 250 years since its foundation. All the main arctic expeditions from the Great Northern in 1725–43, to those of Makarov on the *Ermak*, and Sedov's were mounted in Petersburg. The *Taĭmyr* and *Vaĭgach*, vessels of the hydrographic expedition which discovered Severnaya Zemlya, were built in its shipyards. Since the Revolution, the Arctic Institute in Leningrad has sent out several hundred expeditions. The Institute of Geology of the Arctic and the unique Arctic Museum are located there. The Arctic Department of the Leningrad Higher School of Naval Engineers and Leningrad Arctic School train personnel for exploration and for service on the Northern Sea Route. The voyage of the *Utrennîâ Zarîâ* from Yeniseysk to Petersburg in 1877, and a 1933 expedition to Novaya Zemlya via the White Sea-Baltic Canal on a small motorboat the *Aĭsberg*, which sailed from the Arctic Institute itself on the Fontanka River in Leningrad, are mentioned among others. ***Copy seen:*** DLC.

51046. GAKKEL', ÎÂKOV ÎÂKOVLEVICH. Materikovyĭ sklon kak geograficheskaîâ zona Severnogo Ledovitogo okeana. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiâ, Nov.-Dec. 1957. t.89, no. 6, p. 493–507, illus., maps.) 28 refs. Text in Russian. ***Title tr.:*** The continental slope as a geographical zone of the Arctic Basin.

Describes the features of the sloping rim of Arctic Basin between the northern edge of the shallow arctic shelf seas and southern limit of the central abyssal area. The geomorphic structure of the bottom of this slope affects the currents, tides, ice drift, ice pressures, formation of open-water pools and polyn'yas; this influence is discussed also in relation to heat exchange, evaporation, fog formation, aeration of water masses and air circulation (frequency of cyclones). The area of this slope may be regarded as a separate zone or "landscape" with its own hydrological, climatic and biological conditions; more favorable for development of life than other parts of the arctic seas, with greater abundance of microorganisms, fishes, sea mammals, birds and polar bears, this ring is justly called the "life ring" of the Arctic Basin. The narwhal (*Monodon monoceros* L.) is mentioned as typical of its fauna. Bathymetric, oceanographic, glaciological aerological and biological work of recent expeditions (including Eastern High Latitude Expedition on the ice-breaker *Severnyĭ Polîûs* in 1946, High Latitude Expedition on the *Litke* in 1955, and Greenland Sea Expedition on the ice-breaker *Ob'* in 1956) is noted.

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51047. GAKKEL', ÎÂKOV ÎÂKOVLEVICH. Nakhodka buîâ s p/kh "Chelîûskin." (Problemy Arktiki, 1958, vyp. 3, p. 111.) 2 refs. Text in Russian. ***Title tr.:*** Finding of buoy from steamer *Chelîûskin*.

Buoy no. 656, one of 23 on the deck of the *Chelîûskin* when she sank on Feb. 13, 1934, was found on Aug. 10, 1953 on Brucha Spit on northeast Vrangel Island. Some other things from the *Chelîûskin* had been found previously on Vrangel, and another buoy, no. 633, was picked up in 1935 on the continental coast, 32 miles southeast of Cape Shmidta.

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51048. GAKKEL', ÎÂKOV ÎÂKOVLEVICH. Nauchnaîâ rabota v Arktike: vysokoshirotnaîâ okeanograficheskaîâ èkspeditsiîâ v severnuîû chast' Grenlandskogo moriâ. (Morskoĭ flot, Mar. 1957. god 17, no. 3, p. 25–27.) Text in Russian. ***Title tr.:*** Scientific work in the Arctic: the High Latitude Oceanographic Expedition to the northern part of the Greenland Sea.

Broad studies were made during the summer of 1956 on the diesel-electric ship *Ob'*, in the region of Nansens Rise in view of effects of Arctic and Atlantic current exchange on the Northern Sea Route: the investigations of Russian, Swedish and Norwegian scientists in oceanography, microbiology, geology, meteorology, geophysics, etc., are described. En route to the Greenland Sea, the party carried out supplemental observations (by helicopter) on the icecap on Nord-

austlandet, also work on currents, ice-drifts, abyssal sediments and bottom relief. The Greenland Sea was investigated up to 82°51′ N. with bottom relief soundings and water sampling. The results are briefly outlined with comparison of data from (stations at 30-mile intervals) cold waters off East Greenland and the warm current off Spitsbergen. ***Copy seen:*** DLC.

51049. GAKKEL', ÎÂKOV ÎÂKOVLEVICH. Nauka i osvoenie Arktiki; k sorokaletiiû sovetskikh issledovaniĭ. Leningrad, Izd-vo "Morskoĭ transport," 1957. 133 p. illus., ports., maps. Text in Russian. ***Title tr.:*** Science and the conquest of the Arctic; forty years of Soviet exploration.

In two parts, the first (p. 11–76) reviews results of work, mainly in the post-war period: the High Latitude expeditions, drifting and coastal stations (p. 30–40); meteorological (Central Arctic), oceanographic and glaciological studies, weather and ice forecasting for navigation (p. 40–51), biological, mineral resource, geomagnetic and ionospheric investigations (p. 51–64); cartographic and hydrographic work, geographic discoveries (p. 67–76). In pt. 2 (p. 77–132), some new problems are discussed: the submarine Lomonosov Range (p. 79–95); continental shelf (p. 96–104); terrestrial energetics (p. 105–124); paleogeography (p. 125–28); IGY (p. 129–32). Resource development is stressed as the central problem. The chief organizations and expeditions engaged in research and development are noted, as are successes in prospecting for coal, nonferrous ores and other minerals; new methods of exploration are discussed. Scientists and others who have contributed significantly to this work, particularly in recent years, are cited. Discovery of a volcano in the Lomonosov Range at 88°.3 N. 65°.3 W., emitting sulfuric gas on Nov. 24, 1954 is claimed for the drifting station North-Pole-3 (p. 89–92). The second magnetic pole postulated by Prof. B. P. Veĭnberg is disclaimed on the basis of recent investigations. Distribution of geotectonic, geomagnetic and geochemical forces in northern regions and the existence of "critical" meridians (105° E. and 75° W.) and parallels (62° N.) are discussed; the similarity of "energetistic centers" at their intersections in Siberia (Anabar Plateau) and in Canada is noted. The diamond discoveries in Yakutia have scientific significance; possibility of diamonds also in Canada is suggested (p. 114–18). Numerous text maps include Soviet landings in Arctic Basin (p. 31), scheme of distribution of diurnal maxima of geomagnetic disturbances (p. 61) and bathymetry of the Basin, 1954 and 1955 (p. 107–108).
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51050. GAKKEL', ÎÂKOV ÎÂKOVLEVICH. Priznaki sovremennogo podvodnogo vulkanizma na khrebte Lomonosova. (Priroda, Apr. 1958. god 47, no. 4, p. 87–90, map.) 5 refs. Text in Russian. English translation by E. R. Hope, *pub.* June 1958 by Canadian Defence Research Board, Directorate of Scientific Information Service, no. T296R. 5 p. (copy at CaMAI). ***Title tr.:*** Signs of recent submarine volcanism in the Lomonosov Range.

Descriptions of tremors, noises and sulfuric odors observed Nov. 21–24, on the drifting ice station, North Pole–3, when above the highest sector of the Lomonosov Range (88°16′ N. 65°36′ W.) Bathymetry indicates the presence there of an isolated submarine mountain (volcano?) and it is speculated that the phenomena observed were caused by its eruption or by release of big gas bubbles. Volcanism in other arctic and in antarctic areas, as well as the nature of the adjacent marine sediments are marshalled in support of the volcanic nature of the quakes. ***Copy seen:*** DLC.

51051. GAKKEL', ÎÂKOV ÎÂKOVLEVICH. Razrushenie ostrova Semenovskogo. (Problemy Arktiki, 1958, sbornik statei, vyp. 4, p. 95–98, table.) 6 refs. Text in Russian. ***Title tr.:*** The disintegration of Semenovskiy Island.

This island (74°25′ N. 133° E.), southwesternmost of the New Siberian Islands, discovered by M. Lâkhov in 1815, was visited and described by P. F. Anzhu in 1823; since then it has gradually disintegrated and the last traces of it were seen in 1950. Data of its changing size are summarized in a table. Its destruction is attributed to the combined influence of temperate river water (Lena) and solar radiation having melted away the permafrost layer. The similar fate of Sv. Demida and Vasil'yevskiy Islands also, probably, of Andreyeva and Sannikova Lands, is mentioned. A note is added (p. 98) by B. A. Krutskikh and N. P. Bulgakov on a bank in Laptev Sea sighted

in 1954 from aircraft in the locality where Semenovskiy Island had been.

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51052. GALAKHOV, A. V. Konferent͡siia po perspektivam ispol'zovaniia mineral'nogo syr'ia i razvitiia gorno-metallurgicheskoĭ promyshlennosti Murmanskogo ėkonomicheskogo administrativnogo raĭona. (Akademiia nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiia, 1958. no. 3, p. 182–83.) Text in Russian. ***Title tr.:*** Conference on prospects of the utilization of mineral resources and the development of mining and metallurgy in the Murmansk Economic Administrative Province.

Account of a conference held Feb. 18–20, 1958 in Murmansk, and attended by 36 representatives of 28 scientific institutions and 45 industrial undertakings, expeditions and economic organizations. Problems were discussed of estimating the amount of mineral resources of Kola Peninsula (including its eastern part), of full utilization of apatite, nepheline and rare mineral ores, and of development of transportation, construction and electrification. Papers delivered at the plenary meetings and the sections, are briefly summarized. ***Copy seen:*** DLC

51053. GALAKHOV, A. V. Lovchorritsoderzhashchie zhily vostochnoĭ chasti gory Ėveslogchorr v Khibinakh. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova, 1958. p. 165–80, tables, text map.) 2 refs. Text in Russian. ***Title tr.:*** Lovchorrite-bearing veins in the eastern part of the Eveslogchorr mountain in Khibiny.

Reports investigations on tributaries of the Vuonnemyok River in 1949. Petrographic characteristics of the area are given. Mineralogic properties of lovchorrite-bearing veins are treated in detail; chemical and spectral analyses of the mineral are presented. Finds of lovchorrite richer in thorium are a possibility.

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GALAKHOV, A. V., *see also* Sidorenko, A. V., *and* A. V. Galakhov. Dolednikovye kontinental'nye otlozheniia v Khibinakh . . . *1957*. No. 54874.

51054. GALAKHOV, P. N. Osnovnye vrediteli ovoshchnykh kul'tur na aziatskom Kraĭnem Severe SSSR. (Agrobiologiia, Mar.-Apr. 1958, no. 2 (110), p. 149–50.) Text in Russian. ***Title tr.:*** Principal vegetable pests in the Asiatic far North of the U.S.S.R.

Lists seven insects which destroy 70–90% of the cabbage, onion and other vegetable crops in the lower Ob, Yenisey, Lena and Kolyma basins. They are: *Chortophila floralis* Falln., *Plutella maculipennis* Curt., *Aclypea opaca* L., *Pegomyia hyosciami* Panz., *Chortophila antiqua* Meig., *Eurydema dominulus* subsp. *dahurica* Motsch. and *Entomoscellis adonidis* Pall. The periods of appearance are noted; dusting with 12% hexachloran is recommended as the best method of control. ***Copy seen:*** DLC.

51055. GALBRAITH, JOHN S. The Hudson's Bay Company as an imperial factor, 1821–1869. Berkeley, University of California Press, 1957. 500 p. maps incl. 1 fold.

Exposition of the political implications involved in the growth, consolidation and decline of the Hudson's Bay Company's fur trade, illustrating the contribution of business men to the shaping of British foreign policy and Empire expansion. The Company's claims to vast territories in North America were challenged, at times involving the British government in diplomatic negotiations. The Company strongly influenced negotiation of the Anglo-Russian treaty of 1825, which set the boundary between Southeast Alaska and Canada. Relations with the Russian American Company are described; also the neutrality agreement between the British and Russian governments during the Crimean War, safeguarding the interests of these two fur-trading monopolies on the North Pacific coast. Extensive bibliographic references are included.

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51056. GAL'BURT, A. Avtostartery. (Avtomobil'nyĭ transport, Aug. 1957. god 35, no. 8, p. 31–32, illus., diagr.) Text in Russian. ***Title tr.:*** Self-starters.

Two portable cold-engine starters designed and constructed by I. Kovalevskiĭ and G. Nemt͡sev for the transport organization are described with illus. and diagramatic presentation of details and pipe connections. The starters are operated by A.C. motors with three phase electric current, supplied from the main line.

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51057. GALCHENKO, INNOKENTIĬ IVANOVICH. My idem na sever; zapiski geologa. (Na severe dal'nem, 1955, vyp. 2, p. 22–65.) Text in Russian. ***Title***

tr.: We head north; sketches by a geologist.

In 1934–35, the author participated in the Upper Kolyma Geological Expedition of Dal'stroĭ, led by V. A. TSaregradskiĭ; and the next year he led a party making explorations of the Ulakhan Chistyy plateau (approx. 64°–65° N. 145°–148° E.) on the upper reaches of Rossokha, Omulevka (tributaries of the Kolyma) and the Nera (tributary to the Indigirka). The events of the trip are sketched: travel on horseback in the wild mountain taiga; transport of equipment by horse and reindeer sled; help rendered by the local Tungus and Yakuts; encounter with bears, elk, wild sheep; discovery of rich (gold?) placers at various (unidentified) creeks, etc. The party reached Nagayeva Bay on the Okhotsk Sea coast late in the fall. ***Copy seen:*** DLC.

51058. GALIŪK, V. A. Novye dannye o geologii i mineralogii Ėmel'dzhakskogo flogopitovogo mestorozhdeniîa, IŪzhnaîa IAkutiîa. (Moskva. Moskovskiĭ geologo-razvedochnyĭ institut. Trudy, 1957. t. 31, p. 102–129, illus., tables) 7 refs. Text in Russian. ***Title tr.:*** New data on the geology and mineralogy of the Emel'dzhak phlogopite layers, southern Yakutia.

Presents main results of three years' investigation (sponsored by the "Sibgeolsliūda" and "Aldansliūda" trusts) of phlogopite layers found prior to 1941, 70 km. southeast of the town of Tommot. Stratigraphy and structure of the region, formation, and mineral composition of phlogopite bodies, their occurrence in veins, problems of bedrock metamorphism are outlined, and the genesis of phlogopite and associated minerals is discussed. Special attention is given to its properties; the phlogopite bodies of Emel'dzhak are rich in aluminum and iron.

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51059. GALIŪK, V. A. Prenit iz Ėmel'dzhakskogo flogopitovogo mestorozhdeniîa, IŪzhnaîa IAkutiîa. (Moskva. Moskovskiĭ geologo-razvedochnyĭ institut. Trudy, 1956. t. 29, p. 73–76, illus.) 5 refs. Text in Russian. ***Title tr.:*** Prehnite from Emel'dzhak phlogopite layers, southern Yakutia.

Description of this mineral found in Archean pyroxene-amphibole gneisses and diopside rocks near the Dzeltula, tributary to the Aldan. The genesis of these rocks, and the microscopic, optic and chemical properties of the mineral are outlined. Thermal processes and crystal changes of prehnite are discussed, its association with wollastonite, grossularite, zeolite and other minerals in phlogopite layers in the Aldan region is reviewed.

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51060. GALKINA, L. A. O vliîanii stavnykh nevodov na vosproizvodstvo okhotskoĭ sel'di. (Rybnoe khoziâĭstvo, Jan. 1958. god 34, no. 1, p. 23–25.) Text in Russian. ***Title tr.:*** The effect of set nets on the reproduction of the Okhotsk herring.

In search of the causes of decline in herring catches in the northwestern part of this sea, the author found that the fish caught in these nets and those nearby deposit their eggs on the nets. The amount of spawn on the nets is considerable, and it is ultimately killed. This is believed to be the cause of local decline in catches. Means to avoid it are suggested.

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GALLANT, T. C., *see* Lewis, H. E., *and others.* Science . . . sledging ration. *1958.* No. 52802.

51061. GALLETTI, PIERRE M., *and others.* Influence of blood temperature on the pulmonary circulation. (Circulation research, May 1958. v. 6, no. 3, p. 275–82, illus.) 24 refs. *Other authors:* P. F. Salisbury *and* A. Rieben.

Report on experiments with innervated, ventilated and nourished dog lungs perfused *in situ*, with control of blood flow, pressure, pH and temperature. Variations of the pulmonary (but not of the systemic) blood temperature produced significant changes in pulmonary vascular resistance, attributable to pulmonary vasomotion.

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51062. GALLIE, ALAN E. Sherritt Gordon nickel copper mines. (Mining engineering, Mar. 1957. v. 9, no. 3, p. 330–33, 5 illus., text map, table.)

Plant manager reviews the Sherritt Gordon Co. development at Lynn Lake, Manitoba. Equipment, methods of prospecting, mining, supply, crushing and concentrating are described. Power supply, ventilation, etc. are discussed. Cost/ton is tabulated. ***Copy seen:*** DGS.

GALLOWAY, R. W., *see* Evers, W., *and* R. W. Galloway. The . . . measurement of glacier motion. *1957.* No. 50807.

51063. GAL'PERIN, ÎŬ. I. Nablûdeniîa izlucheniîa vodoroda v polîarnykh siîaniîakh. (Astronomicheskiĭ zhurnal, Jan.-Feb. 1957. t. 34, no. 1, p. 131–34, diagrs., tables.) 9 refs. Text in Russian. Summary in English. ***Title tr.:*** Observations of hydrogen emission in auroras.

"Data are given on 17 spectograms with H_α, taken during observations at the magnetic zenith and the magnetic horizon. Profiles of H_α have been determined from the three best spectrograms taken at the zenith. These give a maximum value of the velocity of approach of order of 2,000 km/sec. The velocity corresponding to maximum density, equals 350 ± km." The observations were carried out Dec. 1955–Apr. 1956 at the Institute of Atmospheric Physics, Northern Station at Loparskaya on Kola Peninsula, 68°38′ N. 33°15′ E.

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51064. GAL'PERIN, ÎŬ. I. O profiliîakh vodorodnykh liniĭ v spektre polîarnykh siîaniĭ. (Astronomicheskiĭ zhurnal. May-June 1958. t. 35, vyp. 3, p. 382–89, figs.) 23 refs. Text in Russian. Summary in English. ***Title tr.:*** Hydrogen line profiles in the spectra of auroras.

Data analyzed include those recently obtained at the Loparskaya Station on Kola Peninsula. The H_α profiles give evidence of the penetration of a considerable number of protons with velocities of the order of 1000–2000 km./sec. It is supposed that such particles cause the luminescence of aurorae at high altitudes.—From author's summary.

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51065. GAL'PERIN, ÎŬRIĬ MANUILOVICH. Polîarnye zori; zapiski zhurnalista. Moskva, Gos. izd-vo geogr. lit-ry, 1956. 126 p. illus., ports. Text in Russian. ***Title tr.:*** Polar dawns; a journalist's notebook.

Description of author's winter trip to the drifting station North Pole–4, Dec. 1954–Jan. 1955: the departure from Moscow and flight to Tiksi with stops at Arkhangel'sk, Mys Kamennyy on Obskaya Guba, Khatanga and the wintering camp Taymylyr; over the Arctic Basin with the flyer Mazuruk and arrival at North Pole–4 on Dec. 24. Living conditions and work of the aerologists, hydrologists and magnetists, radio contact with the mainland, and some members of the 27-man team are described; New Year's celebrations, departure for Moscow on Jan. 24, 1955, also story of the return of the first teams from drifting stations North Pole–3 and North Pole–4 to Moscow on Apr. 22, 1954, are recounted. ***Copy seen:*** DLC.

GAL'PERIN, ÎŬRIĬ MANUILOVICH, *see also* Tolstikov, E. I. Na l'dakh . . . *1957*. No. 55478.

51066. GALUSHKO, ÎA. A. Poverkhnosti vyravnivaniîa v trapovoĭ zone Sredne-Sibirskogo ploskogor'îa. (Akademiîa nauk SSSR. Izvestiîa, ser. geograficheskaîa, Jan.–Feb. 1958, no. 1, p. 84–90, table, map.) 17 refs. Text in Russian. ***Title tr.:*** The erosion surfaces in the trap zone of the central Siberian plateau.

Reports a study in 1942–44 and 1949–53 of the area 56°–72° N. between the Yenisey in the west and 114°30′ E. Relief development is outlined and four erosion surfaces at 1,000–1,500 m., 800–1,000 m., 600–700 m., and 300–500 m. are distinguished, described and mapped. View of S. V. Obruchev and others who have distinguished only three surfaces is attributed to insufficient study and lack of good topographic maps.

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51067. GALWAY, DESMA H. The North American species of *Smilacina*. (American midland naturalist, May 1945. v. 33, no. 3, p. 644–66, 2 text maps, table.) 32 refs.

Contains a taxonomic study of herbaceous genus *Smilacina*. The following species and varieties are retained: *S. racemosa* (Alaska), *S. r.* var. *amplexicaulis*, *S. stellata* (Upper Matanuska, Alaska), *S. s.* var. *crassa*, and *S. trifolia* (Labrador). A key to North American species, synonyms, descriptions, critical notes and data on habitat and distribution (lists of localities) are provided. Notes on the history of study, economic importance (ornamental use) evolution and relationships are added.

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51068. GAM, MIKAEL, 1901– . Skoleradio i Grønland. (Grønland, Feb. 1958. nr. 2, p. 76–80, illus.) Text in Danish. ***Title tr.:*** School broadcasting in Greenland.

Suggests that school broadcasting be organized for a more active role in Greenland than in Denmark. In the smaller schools with teachers of less training, much of the teaching could be directed by radio. ***Copy seen:*** DLC.

51069. GAM, MIKAEL, 1901– . Uddannelsen af ungdommen i Grønland. (Grønland, Mar. 1958, nr. 3, p. 114–20, illus.) ***Title tr.:*** The training of young people in Greenland.

Discusses the problems of apprentice training, not yet properly organized. A commission to study the question may be appointed. ***Copy seen:*** DLC.

51070. GAMBLE, H. J., *and others.* Effect of temperature on the degeneration of nerve fibres. (Nature, Mar. 9, 1957. v. 179, no. 4558, p. 427.) 3 refs. *Other authors:* F. Goldby *and* G. M. R. Smith.

Account of experiments on lateral popliteal nerve of the lizard *Lacerta viridis.* The nerve was cut and the animals kept at about 13°, 20° and 35° C. In the first group no changes in the myelin sheaths of fibers were observed for three weeks although by that time half of the axons showed irregular caliber, vacuolization and in some cases fragmentation. Similar changes were found in the 20° C. group after three days. ***Copy seen:*** DLC.

51071. GAMBLE, H. J. Temperature effects in mammalian nerve regeneration. (Nature, July 19, 1957. v. 180, no. 4577, p. 146–47, illus.) 6 refs.

Account of observations on ventral tail nerves of rats crushed and left to regenerate in cold (2° to 2.5° C.) or warm environment. In nerves of cold-exposed animals, no evidence of regenerating fibers could be found even 35 days after injury; in the other group nerve regeneration proceeded rapidly.

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51072. GAMBLE, S. G. Mapping of the Ungava Peninsula. (Photogrammetric engineering, June 1958. v. 24, no. 3, p. 410–14, map.)

In mapping of this mineral-rich area of Northern Quebec, the Topographic Survey of Canada assesses new survey and photogrammetrical techniques (cf. No. 50917) in a large practical test. The environment is described with emphasis on mapping conditions. Initial planning and surveys, 1955–1957, are outlined. Application of electronic instruments included Shoran for geodetic control, radar altimeters for vertical control and horizontal scale, tellurometers (adapted in 1957) for secondary survey control and for establishing scale on selected flights.—From author's abstract. Fourteen standard topographic series maps at scale 1 : 250,000 with 100 ft. contours are to be produced for the area from 58° N. to Hudson Strait and from 71° W. to the east shore of Hudson Bay; also more detailed (1 : 50,000 with 50 ft. contours) mapping of 9,000 sq. mi. of the mineralized zone Wakeham Bay-Mosquito Bay. Aerial photography (from 20,000 ft.) and radar altimeter profiles were taken simultaneously. The survey is scheduled for completion by 1958. ***Copy seen:*** DLC.

51073. GAMBURG, DAVID ÎUDOVICH, *and* **I. I. RÎABTŜEV.** Gazifikaŝsiîa frezernogo torfa. (Torfîanaîa promyshlennost', 1958. god 35, no. 2, p. 3–9, illus., tables.) 10 refs. Text in Russian. ***Title tr.:*** Gasification of milled peat.

Gasification methods for industrial purposes are reviewed. Three types are described in detail with tables of physical and chemical data. ***Copy seen:*** DLC.

GAMMERMAN, ADEL' FEDOROVNA, 1888– , *see* Utkin, L. A., *and others.* Bibliografiîa . . . *1957.* No. 55692.

51074. GAMS, HELMUT. Arctide et Antarctide comme berceaux des flores microthermiques. (Brussels. Jardin Botanique de l'État, Sept. 30, 1957. v. 27, fasc. 3, p. 547–56.) 84 refs. Text in French. ***Title tr.:*** The Arctic and Antarctic as sources of microthermic floras.

Contains a discussion of theories on the origins of the polar and alpine floras; the distribution of lichens in polar and subpolar areas; bipolar and pole-to-pole distribution over the high mountains; origin and distribution of Pteridophytes and Gymnospermes; origin of the higher plants. ***Copy seen:*** DGS.

51075. GAMS, HELMUT. Beiträge zur Kenntnis der arktisch-alpinen Saginen. (Phyton, Dec. 16, 1953. v. 5, no. 1–2, p. 107–117, illus., text map.) 70 refs. Text in German. ***Title tr.:*** Contributions to the knowledge of arctic-alpine Saginas.

Contains a critical revision of the taxonomic status of herbaceous genus *Sagina.* A new section *Saginoides* is proposed and described; it should be placed between sections *Spergella* and *Saginella.* Data on taxonomy, ecology and distribution of its members are presented; *S. intermedia* and *S. caespitosa,*

both alpine-arctic circumpolar species (text map), are included.

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51076. GANDAHL, R. Tjälgränsmätare. (Svenska vägföreningen. Tidskrift, Mar. 1956. årg. 43, häfte 2, p. 63, illus.) Ref. in text. Text in Swedish. ***Title tr.:*** Frost indicator.

Describes an instrument to measure upper and lower limits of frozen soil, designed at the Swedish Road Institute. It consists of a 2-m.-long plastic tube of 14 mm. diam. Inside the tube is a rubber hose, the space between hose and inner walls of the tube is filled with distilled water colored blue. When the tube is inserted in the ground, the water freezes to the height of the frozen soil, and the blue disappears; the depth is read when the tube is withdrawn from the ground. ***Copy seen:*** DLC.

51077. GANESHIN, G. S. Kekury na poberezh'e Okhotskogo i ĬAponskogo moreĭ. (Priroda, Aug. 1957. no. 8, p. 83–86, 5 illus.) Text in Russian. ***Title tr.:*** Chimney-cliffs of the coast of the Okhotsk and Japanese Seas.

Contains description, discussion and illustrations of these cliffs, considered result of the abrasive action of the sea. Such chimney-cliffs are numerous on the western coast of the Okhotsk Sea, especially in the region of the Shantarskiye Islands. The influence of the irregular shoreline and geological structure of the coastal rocks upon the development of such cliffs is noted and discussed. ***Copy seen:*** DLC.

51078. GANJU, S. N., *and* **M. F. LOCKETT.** The effect of thyroid hormone on the resistance to cold, and on the oxygen consumption of adrenalectomized and thyroidectomized mice. (Journal of physi ology, Sept. 30, 1957. v. 138, no. 2, p. 44P–45P.)

Summary of varied and numerous experiments indicating *inter alia* that thyroidectomized-adrenalectomized, salt-maintained mice show shorter survival time in the cold than controls and than similar, only adrenalectomized mice. O_2-consumption is reduced by 25% one week after adrenalectomy or thyroidectomy. ***Copy seen:*** DNLM.

51079. GANT͡SKAĬA, O. A., *and* **N. ĬA. MERPERT.** Issledovaniĭa sovetskikh arkheologov i ėtnografov. (Akademiĭa nauk SSSR. Vestnik, June 1958. god 38, no. 6, p. 125–28.) Text in Russian. ***Title tr.:*** Research activities of Soviet archeologists and ethnographers.

Reviews reports of 1957 field work presented at the Apr. 7–12, 1958 session of the Dept. of Historical Sciences of the Institute of the History of Material Culture and the Institute of Ethnography of the Academy of Sciences of U.S.S.R. Mentioned among others are the papers of: B. O. Dolgikh on the development of the economy and culture of the small peoples of the North; M. M. Gerasimov on the stone age sites of Mal'ta which revealed the partitioning of dwellings into men's and women's quarters, and the discovery of two mesolithic culture horizons at Ust' Belaya, on the lower course of the Belaya, a tributary of the Angara River. M. G. Levin reported on the excavation of a burial at Uelen, Chukotka, that revealed a skull with pronounced old-Eskimo traits, the only one as yet found on the Asiatic shore. G. F. Debet͡s reported on his studies (at the Museum of Natural History, New York) of the anthropological types of Eskimo specimens from Ipiutak and Tigara collecteed in 1939–1941 at Point Hope by F. Rainey and H. Larsen; Debet͡s is of the opinion that the Tigara type is identical with that of the present-day Eskimo, while the Ipiutak, though belonging to the greater Mongoloid race, shows various substantial differences (not elaborated upon). ***Copy seen:*** DLC.

51080. GANT͡SKAĬA, O. A., Sessii, posvi͡ashchennye itogam ėkspedit͡sionnykh issledovaniĭ 1957 g. (Sovetskai͡a ėtnografiĭa, 1958, no. 5, p. 128–32.) Refs. Text in Russian. ***Title tr.:*** Sessions, dealing with the results of expeditionary investigations in 1957.

Contains abstracts or titles of papers read at the April 1958 sessions of the Institute of Ethnography, including those on northern areas, viz.:

B. O. Dolgikh: research on the cultural and economic development of northern minorities conducted by the Ob, Taymyr, Evenki, lower Amur-Sakhalin, Anadyr, and Uelen teams of the Northern expedition.

M. M. Gerasimov: 1956–1957 excavations at Mal'ta (cf. No. 51149) and Ust' Belaya on Belaya River, a tributary of the Angara. The latter yielded two mesolithic horizons between a late paleolithic and a Serovo-stage neolithic culture.

M. G. Levin: field work on Chukotka comprised exploratory excavation of

Uelen burials (cf. No. 52795) and study of Chukchi-Eskimo blood groups (cf. No. 52787).

G. F. Debets: results of his studies of the Ipiutak and Tigara anthropological materials at the Museum of Natural History in New York. While Tigara's skeletons are identical with the present-day Eskimo types, Ipiutak men cannot be considered as Eskimo forebears, though both types may derive from a common ancestor.

Field work of the Institute's northern section was reflected in the reports on upper Kolyma Yukaghirs (S. I. Gurvich), present-day culture of the Ul'chi-Tungus (A. V. Smolîak), contemporary settlements and housing of Ostyaks (Z. P. Sokolova), trip to Eloguy Yeniseians (E. A. Alekseenko), expedition to Arkhangel'skaya Oblast' (V. M. Vishnevskaîa), hunting economy of the Podkamennaya Tunguska Yeniseians (D. M. Kogan). ***Copy seen:*** DLC.

51081. GARCIA, J. F., *and others.* Increase in red cell volume in response to long exposure to cold. (Society for Experimental Biology and Medicine. Proceedings, June 1957. v. 95, no. 2, p. 242–43, table.) 10 refs. *Other authors:* R. W. Belknap *and* S. F. Cook.

Rats exposed to $3° \pm 1°$ C. for 30 days showed an increase in total red cell; total circulating hemoglobin was also increased. ***Copy seen:***.DLC.

51082. GARDNER, GÉRARD. Quelques aspects de la mise en valeur du Grand-Nord, I; le développement des transports au Yukon. (Actualité économique, Jan.-Mar. 1957. année 32, no. 4, p. 581–603, maps.) 5 refs. Text in French. ***Title tr.:*** Some aspects of the development of the North, I; the expansion of transportation in the Yukon.

First of a series of papers (no. 2–3 *infra*, no. 4–5, not on arctic areas) on Canadian mineral resource development with emphasis on transportation, hydroelectric power, and government policy as factors in such development. Recent growth of highways and air service in the Yukon is considered: the existing road network; shorter and better routes proposed as alternates to the Alaska Highway, including one with branches to cities in Southeast Alaska; experiments in winter transportation over compacted snow and ice roads at Yellowknife; and the Alaska Freight Line's trucking experiment in winter 1954 from Fairbanks to the arctic coast. The role of aircraft is discussed, noting the Beverley, a plane specially adapted to northern conditions. A corporation established in 1951 has revitalized the White Pass and Yukon Railway, and controls a transportation network which includes road and river passenger and freight service. A customs-free outlet to the Pacific via a territorial corridor through Alaska is discussed.
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51083. GARDNER, GÉRARD. Quelques aspects de la mise en valeur du Grand-Nord, II; développement hydro-électrique et exploitation minière au Yukon (Actualité économique, Jan.–Mar. 1958. année 33, no. 4, p. 606–634, maps, table.) Text in French. ***Title tr.:*** Some aspects of the development of the North, II; hydroelectric development and mineral exploitation in the Yukon.

Discusses problems limiting the use of the region's water-power capacity. The aborted plans for metal-refining projects of Frobisher Ltd. and the Aluminum Co. of America (cf. No. 48860) are noted. Possibilities of building refineries on ocean inlets into Canadian territory, also of extending water-power rights to Alaska in exchange for a corridor from the Yukon to the Pacific are considered. Yukon mineral production, which would benefit from hydro-electric development is appraised by districts: the St. Elias, Cassiar, Pelly, Selwyn and Ogilvie Mts., Coast, Dawson and Klondike Chains, Pelly Plateau, Mayo and Northern Districts. Minerals, locations and dates of important discoveries, accessibility of deposits, companies working or prospecting in the area, prospects and probable value of future discoveries are noted for each district. ***Copy seen:*** DLC.

51084. GARDNER, GÉRARD. Quelques aspects de la mise en valeur du Grand-Nord, III; les ressources minérales des Territoires du Nord-Ouest et leurs problèmes. (Actualité économique, Apr.-June 1958. année 34, p. 89–105, map.) Ref. Text in French. ***Title tr.:*** Some aspects of the development of the North, 3; the mineral resources of the Northwest Territories and problems concerning them.

Appraises mineral development and discusses, in relation to it, transportation facilities, energy sources and government projects: a railway to Great Slave Lake with a branch to Pine Point; a road connecting mining centers of Great Slave and Great Bear Lakes, and one west to the

Yukon. Need for increased air service and for radio and television transmission is noted. Energy is available to the mines by purchase from the Northern Power Commission, or self-generated, using local water power, coal, or natural gas or oil from Norman Wells. Great Slave Lake, Great Bear Lake and Hudson Bay mineral regions are surveyed, and the more important developments described: gold and silver at Yellowknife, Rayrock's uranium, lead-zinc at Pine Point, uranium and radium at Port Radium, Belcher Islands' iron, and nickel-copper at Rankin Inlet. Exploitation of Baffin Island iron ores is considered.

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51085. GARDNER, NATHANIEL LYON, 1864–1937. The genus *Fucus* on the Pacific Coast of North America. (California. University. Publications in botany, 1922. v. 10, no. 1, p. 1–180, plates 1–60.) 45 refs.

Contains an historical review, data on classifications, diagnostic characters, and descriptions of about 50 species (two new) and forms (mostly new) of this genus of algae; at least 25 are recorded in Bering Sea, Aleutian waters and Gulf of Alaska.

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GARDNER, NATHANIEL LYON, 1864–1937, *see* Setchell, W. A., *and* N. L. Gardner. The marine algae . . . Pacific . . . I . . . II. *1919–20.* No. 54711.

GARDNER, NATHANIEL LYON, 1864–1937, *see* Setchell, W. A., *and* N. L. Gardner. The marine algae of the Pacific . . . III. *1925.* No. 54712.

GARDNER, NATHANIEL LYON, 1864–1937, *see* Setchell, W. A., *and* N. L. Gardner. Phycological contributions, I. *1920.* No. 54714.

GARDNER, NATHANIEL LYON, 1864–1937, *see* Setchell, W. A., *and* N. L. Gardner. Phycological contributions II to VI . . . *1922.* No. 54715.

GARDNER, NATHANIEL LYON, 1864–1937, *see* Setchell, W. A., *and* N. L. Gardner. Phycological contributions, VII. *1924.* No. 54716.

GARDNER, NATHANIEL LYON, 1864–1937, *see* Setchell, W. A., *and* N. L. Gardner. A preliminary . . . *Gigartina* . . . *1933.* No. 54717.

GARGOUIL, YVES MICHEL, *see* Kayser, C., *and others.* Recherches sur la repolarisation du myocarde . . . hypothermie. *1956.* No. 52212.

51086. GARIGUE, PHILIPPE. Une enquête sur l'industrialisation de la Province de Québec: Schefferville. (Actualité économique, Oct.-Dec. 1957. année 33, no. 3, p. 419–36.) 12 refs. Text in French. ***Title tr.:*** An investigation of the industrialization of the province of Quebec: Schefferville.

Examines the social integration of population groups in this new town at the Iron Ore Co. of Canada's mining development at Knob Lake. The population, more than three-fifths French Canadian, was studied during summer 1957; individual adaptation, community values, sources of conflicts, etc. are outlined. The majority failed to adapt, leaving within a year. Factors responsible are analyzed: isolation, fatigue, long work hours, cold weather, lack of accustomed goods and services, the Company's economic and political control of the town, etc. Interethnic group tensions existing elsewhere in Quebec were transplanted to Schefferville. The most stable element is the French Canadians; their nationalism, the religious, family and ethnic group ties, also the Company's employee organization are cited as forces of social integration.

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GARLINGTON, A. R., Jr., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

51087. GARNETT, ALICE. Emeritus Professor R. N. Rudmose Brown. (Geography, Apr. 1957. v. 42, pt. 2, no. 196, p. 123.)

Obituary of this British geographer, botanist and explorer (1879–1957), noting his work with the Scottish National Antarctic Expedition 1902–1907; his interest in Svalbard, and participation in Scottish expeditions of 1909, 1912 and 1919.

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51088. GASNIKOV, A. N., *and* **M. A. GASNIKOVA.** Opyt raboty Turukhanskogo sortouchastka. (Sad i ogorod, Apr. 1957. god 95, no. 4, p. 14–17, illus.) Text in Russian. ***Title tr.:*** Results of the work of the Turukhansk Testing Station.

This station was organized in 1940 to aid farming in the northern districts of Krasnoyarskiy Kray. During its 16

years' activity, 153 varieties of plants have been tested, among them 62 strains of potato and 63 varieties of cabbage, carrot, beet, onion, cucumber, etc. Climatic conditions (75–80 days without frost), soil, manuring, fertilizing and cultivation, seed selecting, etc., are described. Yields per hectare amounting to 450 cwt. of cabbage and 177–238 cwt. onions are reported.

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GASNIKOVA, M. A., *see* Gasnikov, A. N., *and* M. A. Gasnikova. Opyt . . . Turukhanskogo sortouchastka. *1957.* No. 51088.

51089. GASSMAN, GEORGE J. Measurements of irregularities and drifts in the arctic ionosphere using airborne techniques. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 2, *pub.* 1957, p. 44–51.) 7 refs.

A summary is given of techniques and some of the results of measurements made in 1954–55 during about 70 flying hours in the area between Fairbanks, Thule, and the North Pole. Theoretical and observed ray paths are compared, and various interpretations are suggested for the observed phenomena. Some records are reproduced showing reflections from a scattering region above the F-layer. Airborne equipment is considered advantageous for investigating both the small- and large-scale structure of the ionosphere but the techniques are not completely developed.

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51090. GASTIL, GORDON. Later Precambrian orogenic belt of the eastern Canadian Shield. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1685) Abstract of a paper presented at the Society meeting in Eugene, Oregon, Mar. 27–29, 1958.

Describes the "orogenic province," including the area east of the Labrador Trough, which roughly parallels the continental outline of northeastern North America. ***Copy seen:*** DGS.

51091. GASTIL, GORDON, *and* **D. M. KNOWLES.** Regional geology of the Wabush Lake area, western Labrador. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1733.)

Abstracts paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957. Contains geologic description of region located in the southeastern elbow of the Labrador Trough and lying on the trend of the "Grenville front." Following deposition of a younger Precambrian rock sequence on older Precambrian terrane, the area was regionally metamorphosed and strongly deformed. Two axes of folding are prominent, one trending north to northwest, and the other northeast parallel to the Trough. An intrusion of gabbroic rocks also occurred. ***Copy seen:*** DGS.

GATES, G. L., *see* Collins, F. R., *and others.* Test wells, Umiat . . . *1958.* No. 50308.

51092. GAUBERT, HENRI. Baptêmes géographiques; la baie de Frobisher. (Géographia, Jan. 1958. no. 76, p. 29–34, illus., maps.) Text in French. ***Title tr.:*** Geographic baptisms; Frobisher Bay.

Discusses England's 15th and 16th century abortive attempts to locate a northern maritime route to the Far East. Martin Frobisher's 1576 expedition on the *Gabriel,* his discovery of Frobisher Bay, which he mistook for the northwest passage, and his two subsequent (1577 and 1578) voyages to Baffin Island in search of gold (that proved to be pyrite) are described. ***Copy seen:*** DGS.

51093. GAUBERT, HENRI. Baptêmes géographiques: le détroit de Davis. (Géographia, May 1958. no. 80, p. 38–42, illus., map.) Text in French. ***Title tr.:*** Geographic baptisms: Davis Strait.

Describes three voyages in search of a northwest passage made by the English under John Davis, 1585–1587, during which they explored Davis and Gilbert Straits and sailed up the west coast of Greenland as far as 72° N.

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51094. GAUBERT, HENRI. J'ai interviewé Paul Émile Victor. (Géographia, Jan. 1957. no. 64, p. 22–27, 6 col. illus.) Text in French. ***Title tr.:*** I interviewed Paul Émile Victor.

Informal remarks by the organizer of Expéditions Polaires Françaises, about his life, his associates on expeditions, and his experiences in Greenland. Publications of the Expéditions (more than 500 papers, 100 maps, 20 films) are surveyed, their scope and emphases indicated. A glaciological expedition to Greenland is planned for 1957–60. ***Copy seen:*** DGS.

51095. GAUBERT, HENRI. La mer de Barents. (Géographia, Sept.–Nov. 1958. no. 84, p. 54–60; no. 85, p. 53–60; no. 86,

p. 53–59, illus., text maps.) Refs. Text in French. ***Title tr.:*** The Barents Sea.

Sketches early attempts to conquer the Northeast Passage, particularly Willem Barendsz's expeditions of 1594, 1595, 1596; his exploration of Barents Sea; his discoveries, hardships, especially in the 1596–97 winter. The second article describes the confinement of Barendsz's *Discovery* in the ice off the east coast of Novaya Zemlya; preparations for the winter of 1596–1597, including construction of the hut; experiences until June 14, 1597, when the ailing Barendsz and surviving crew abandoned ship and sailed in two small boats, toward the northeast. The third article, based largely on the diary of Gerard de Veer, historian of the expedition, published in Amsterdam in 1598, gives account of Barendsz's death, June 20, 1597; struggle in the ice off Vaygach Island; meeting with Russian fishing vessels, and with a rescue expedition; return to Amsterdam, Nov. 1, 1597. Subsequent voyages of Barendsz's captain, Heemskerck, are mentioned; also the finding on Novaya Zemlya in 1871 of the wooden hut occupied by the Barendsz party 274 years before.

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51096. GAUL, JAMES H. Observations on the bronze age in the Yenisei valley, Siberia. (Harvard University. Peabody Museum of American Archaeology and Technology. Papers, 1943. v. 20, p. 149–86, illus., sketch maps.) 100 refs.

Deals with the culture sequences, explored by S. A. Teploukhov, that flourished along the upper Yenisey River from approx. 2000 B.C. to the 18th century A.D.: Afanas'ev, Andronovo, Kara Suk, and several bronze to iron age phases in the Minusinsk basin. The sites are indicated on sketch maps and their inventory (pottery, stone and bronze artifacts) listed and described. The, often divergent, dating suggestions are given and author's preferences explained.

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51097. GAUNITZ, SVEN. *Cheilosia nivalis* Beck in Schweden. (Entomologisk tidskrift, 1957. årg. 78, häfte 1, p. 79–80.) Text in German. ***Title tr.:*** *Cheilosia nivalis* Beck in Sweden.

Contains Th. Becker's original description of a male of this syrphid fly supplemented by the description of a female specimen collected by the author on Ammarfjället (66°06′ N. 15°40′ E.) in July 1956. ***Copy seen:*** DLC.

51098. GAUNITZ, SVEN. Fynd av *Psilota nigra* Zett. (Entomologisk tidskrift, 1957. årg. 78, häfte 1, p. 80) Text in Swedish. ***Title tr.:*** Find of *Psilota nigra* Zett.

Records find of this dipter in Sorsele in Swedish Lapland: other known localities are listed, including Kemi, Muonio, Enontekis, Kilpisjärvi, Inari and Utsjoki in northern Finland, and Pechenga and Ponoy in Russian Lapland.

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51099. GAUROY, PIERRE. L'enfer de Kola sort de la nuit polaire. (Géographia, Nov. 1957. no. 74, p. 41–44, illus., sketch map.) Text in French. ***Title tr.:*** The hell of Kola emerges from the polar night.

Deals with the industrial development of Kola Peninsula following the discovery of mineral deposits in the Khibiny and (nickel) the Pechenga regions. Murmansk, Kirovsk and Monchegorsk are described, some data on population and fish catches given, and the agricultural potentials discussed including use of special fertilizers and cold-resistant seed, hot-house experiments, etc.

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GAUSSEN, HENRI, 1891– , *see* Bagnouls, F., *and* H. Gaussen. Les climats . . . *1957.* No. 49478.

GAUTIER, T. N., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

GAVAN, T. L., *see* Kaufman, N., *and others.* The effects of prolonged hypothermia . . . *1958.* No. 52204.

51100. GAVELIN, SVEN, 1909– , *and* **O. KULLING.** Beskrivning till berggrundskarta över Västerbottens län: 1, urbergsområdet inom Västerbottens län; 2, den kaledoniska fjällkedjans berggrund inom Västerbottens län. Stockholm, 1955. 296 p. illus., maps (1 fold. in pocket), tables (2 fold.), diagrs. (Sweden. Geologiska undersökning. Ser. Ca, Avhandlingar och uppsatser, nr. 37.) Text in Swedish. Summary in English, p. 88–99, 287–96. ***Title tr.:*** Description to a map of the pre-Quaternary rocks of Västerbotten county: 1, the pre-Caledonian rocks . . .; 2, the Caledonian mountain range bedrock . . .

The pre-Quaternary rocks of Västerbotten are divided areally into three groups: the Precambrian rocks east of the Caledonian mountain range; the eastern marginal zone of the Västerbotten mountains; and the Västerbotten mountains proper. Northward these three groups extend into the Arctic. Description of the map is presented in two parts: the first (p. 1–99) by Sven Gavelin, covers the eastern Precambrian area; the second (p. 101–296) by Oscar Kulling, deals with the marginal and mountain areas. In the eastern area, earlier Svecofennian rocks are stratigraphically overlain by gneisses of the phyllite series and Jörn granites and the Revsund granite, which cover nearly eighty percent of the area. Unconformably over these lie the Vargfors series of sediments and volcanics and other rock of the Karelian system. The eastern marginal zone is composed of the lower Caledonian nappes and underlying autochthonous rocks. The Västerbotten mountains consist of the upper Caledonian overthrust sheets. Characteristics of the great variety of rocks are described and local interpretations are explained.

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51101. GAVELIN, SVEN, 1909– . Synpunkter på urbergsstratigrafin inom gränsområdena mellan Västerbottens och Norrbottens län. (Geologiska föreningen i Stockholm. Förhandlingar, Mar.-Apr. 1958. bd. 80, häfte 2, no. 493, p. 198–208.) 17 refs. Text in Swedish. Summary in English. ***Title tr.:*** Viewpoints on Precambrian stratigraphy in the border regions between Västerbotten and Norrbotten provinces.

Divergencies in interpretation of Precambrian stratigraphy in northern Sweden (cf. No. 51100, 52206) are discussed. Age relationships between Revsund granite and the Vargfors sediments, established in certain local areas, fail in correlations over the region. Remapping and completion of investigations in certain areas, absolute age determinations of granite within conglomerates, and special study of the granite-gneiss complex south of Skellefteå are recommended. ***Copy seen:*** DGS.

51102. GAVEMAN, ALEKSANDR VASIL'EVICH, 1903– . O lesakh Kamchatki. (Geografiia v shkole, Mar.-Apr. 1958. god 21, no. 2, p. 59–60, illus.) Text in Russian. ***Title tr.:*** Forests of Kamchatka.

Notes of a trip from Petropavlovsk to the forests on slopes of Koryakskaya Sopka: the trees (birch, larch and spruce, dwarf pine, mountain ash, honey suckle, and bird cherry), the grass cover; difficulties of travel in virgin forest due to tangle of dwarf trees, underbrush, etc.

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51103. GAVEMAN, ALEKSANDR VASIL'EVICH, 1903– . Okhota na Kamchatke. (Okhotnich'i prostory, 1958. kniga 9, p. 445–49.) Text in Russian. ***Title tr.:*** Hunting in Kamchatka.

Sketches a hunting trip on the slopes of Koryakskaya Sopka (53°20′ N. 158° 40′ E.), and in the Paratunka hot springs region. The vegetation and occurrence of bears on volcano slopes, wintering of ducks in open pools of hot springs, and the excellent hunting conditions are noted. ***Copy seen:*** DLC.

51104. GAVEMAN, ALEKSANDR VASIL'EVICH, 1903– . Okhota na losia. (Okhota i okhotnich'e khoziaĭstvo, Mar. 1958. god 4, no. 3, p. 47, illus.) Text in Russian. ***Title tr.:*** Hunting the elk.

Recounts experience of elk hunting with a Yakut hunter, who used an elk-call to attract the males. This happened "several years ago," in the Aldan River basin in Yakutia, where the author was working on a survey. ***Copy seen:*** DLC.

GAVRILESCU, KETTY E., *see* Reed, P.I., *and* K. E. Gavrilescu. The value . . . laboratory tests in hypothermia. *1958.* No. 54258.

GAVRILOVIĆ, ŽIVOJIN, *see* Giaja, J., *and others.* L'état posthypothermique. *1957.* No. 51172.

51105. GAYDOS, HENRY F. The effect on complex manual performance of cooling the body while maintaining the hands at normal temperatures. Natick, Mass., Apr. 1958. 4, 7 p. illus., table. (U.S. Army. Quartermaster Research and Engineering Command. Environmental Protection Research Division. Technical report EP–84.) 8 refs.

Account of tests on 12 volunteers which indicate that temperature of the hands, especially of the fingers, is essential for efficient performance of complex tasks. Cooling the body does not affect manual proficiency as long as the hands are normally warm.

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51106. GAYDOS, HENRY F. Effect on complex manual performance of cooling the body while maintaining the hands at normal temperatures. (Journal of applied physiology, May 1958. v. 12, no. 3, p. 373–76, illus.) 8 refs.

Report on experiments with two groups of subjects having the whole body cooled with and without exception of hands. A significant drop in performance was observed when skin termperature of the hands dropped to 50–55° F. but not when the temperature was 80° F. or higher. ***Copy seen:*** DLC.

51107. GAYDOS, HENRY F., *and* **E. R. DUSEK.** Effects of localized cooling of the hands versus total body cooling on performance of a complex manual task. Natick, Mass., Aug. 1957. 7 p. illus., table. (U.S. Army. Quartermaster Research & Engineering Command. Environmental Protection Research Division. Technical report EP–65.) 3 refs.

Account of experiments with 16 white men having hands and wrists cooled, or being *in toto* exposed to cold. Results indicate that performance was impaired only when hand skin temperature dropped; the effect of cold environment on the clothed body had no significant influence on performance of the hand.
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51108. GAYDOS, HENRY F., *and* **E. R. DUSEK.** Effects of localized hand cooling versus total body cooling on manual performance. (Journal of applied physiology, May 1958. v. 12, no. 3, p. 377–80, illus.) 3 refs.

Account of studies on subjects with the whole body, or the hands only, cooled. No difference in performance was observed between the two conditions. However, performance was impaired when finger-skin temperature dropped.
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51109. GEDROĬTS, N. A., *and* **A. I. GUSEV.** Gorŭchie iskopaemye Sovetskoĭ Arktiki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bŭlleten', 1957. vyp. 5, p. 21–32.) Text in Russian. ***Title tr.:*** Sources of energy in the Soviet Arctic.

The estimated coal reserves of northern Asia and the Russian arctic islands comprise 4,722,914 millions of tons, which is 62.6% of all U.S.S.R. reserves. Possible shale-oil reserves are estimated as 100 milliard tons. Qualitative characteristics of the coal are given according to geologic periods in which it developed and according to basins. Reserves for each basin are tabulated. The area (estimated at 1.5 million km.^{2}) of possible oil deposits in northern Siberia is outlined. The northern part of the West Siberian lowland, the Taymyr flexure and the Lena depression are considered the most promising general regions.
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51110. GEDROĬTS, N. A. O poiskakh nefti v Ust'-Eniseĭskoĭ vpadine; po povodu stat'i I. P. Luginͭsa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bŭlleten', 1958. vyp. 8, p. 44–48.) Text in Russian. ***Title tr.:*** On a search for oil in the Ust'-Yenisey depression; occasioned by I. P. Luginet͡s's article.

Discusses No. 52944, agreeing with some recommendations, but defending search for oil in Paleozoic sediments critized by Luginet͡s; both Mesozoic and Paleozoic deposits should be investigated. Deep drilling is stressed for better results. ***Copy seen:*** DGS.

51111. GEFTER, M. IA. Iz istorii proniknoveniia inostrannogo kapitala v gornuiŭ promyshlennost' Urala i Sibiri nakanune pervoĭ mirovoĭ voĭny. (Akademiia nauk SSSR. Institut istorii. Doklady i soobshcheniia, 1954. vyp. 3, p. 137–50.) Refs. Text in Russian. ***Title tr.:*** History of the penetration of foreign capital into the mining industry of the Ural and Siberia on the eve of the first World War.

Includes (p. 139–40) account of the role of a British backer, "Lena-goldfields," in development of the Lena River gold mines known as *Lenzoto* (Lenskoe zolotopromyshlennoe tovarishchestvo - Lena gold-mining company). Information is given on capital gains and prices of shares for 1908–1910. Speculating shareholders precipitated the tragic events of the Lena miners' strike of 1912. ***Copy seen:*** DLC.

51112. GEHENIO, *Sister* **MARIE PIERRE, 1909– ,** *and* **B. J. LUYET.** Hemolysis and freezing velocity. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 52.)

At cooling velocities of the order 100°/sec. where the ambient (bath) temperature fell from −30° to −80° C., post-thawing hemolysis of erythrocytes first dropped, then reached a minimum, and finally rose again to 30 or 40% at the lowest temperatures employed. The increase of hemoly

sis at these low temperatures is not understood. ***Copy seen:*** DLC.

51113. GEIJER, PER ADOLF, 1886– , *and* N. H. MAGNUSSON. The iron ores of Sweden. (*In:* International Geological Congress. 19th, *Algiers*, 1952. t. 2, p. 477–99, tables, 8 maps in atlas vol.) 46 refs.

Swedish iron ores are almost wholly complexly bedded deposits of magnetite and specular hematite in Archean rocks. The arctic mining region comprises several very large ore bodies, such as those at Kiruna and Gällivare. Actively mined and reserve deposits are described in some detail, and the method of calculating reserves in irregular bodies is explained. Practically, reserves are explored only as far as future investment and operational planning require.

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51114. GEIJER, PER ADOLF, 1886– . Några urbergsstratigrafiska frågor i Norrbottens län. (Geologiska föreningen i Stockholm. Förhandlingar, no. 495, Nov.–Dec. 1958. bd. 80, häfte 4, p. 423–32.) 9 refs. Text in Swedish. Summary in English. ***Title tr.:*** Some Precambrian stratigraphic problems in Norrbotten province.

Reviews monograph by Odman, q.v., and discusses some of the interpretations considered questionable: relations between the Kiruna greenstones and Kurravarra conglomerates and the Kiirunavarra-Luossavarra ore-bearing porphyries; and the Vakko series of Precambrian sediments and the granites.

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51115. GEIL, GLENN W., *and* N. L. CARWILE. Tensile properties of copper, nickel, and some copper-nickel alloys at low temperatures. (U.S. National Bureau of Standards. Circular, May 7, 1952, no. 520, p. 67–96, diagrs., graphs, tables.) 14 refs.

"Tension tests were made at −196°, −140°, −78°, −30°, +25°, and +100° C. on high-conductivity copper, cupronickel, 70% nickel–30% copper alloy, and nickel in the annealed condition. True stress-strain curves were determined from numerous simultaneous load and diameter measurements made during the entire course of each test to fracture. Graphs are presented showing the influence of the testing temperature and chemical composition of the alloy on the mechanical properties and work-hardening characteristics. The decrease in the rate of work-hardening with increase in the strain during the tension tests at the various temperatures is discussed. The effect of the solute content of the alloys on the initial strength, ultimate tensile stress, and true strain at max. load and at fracture is briefly discussed."—Author's abstract. ***Copy seen:*** DI.

GEĬMAN, V. V., *see* Porfiridov, N. G. Nadpisi . . . *1958.* No. 54095.

51116. GEĬNRIKH, A. K. On the production of copepods in the Bering Sea. (Pacific Science Congress. 9th, *Bangkok, Thailand*, 1957. Abstracts of papers, p. 175.)

Describes study with reference to cycles of propagation and development of the commonest species, based on 1,010 samples collected by R/V *Vitiaz'* during 1950–1953, in northern and western Bering Sea. ***Copy seen:*** DLC.

51117. GEĬNRIKH, A. K. Rasprostranenie *Calanus tenuicornis* Dana i *Calanus lighti* Bowman v severnoĭ chasti Tikhogo Okeana. (Akademiîa nauk SSSR. Doklady, Oct. 1, 1957. t. 116, no. 4, p. 691–93, illus., text map.) 4 refs. Text in Russian. ***Title tr.:*** The distribution of *Calanus tenuicornis* Dana and *Calanus lighti* Bowman in the northern section of the Pacific Ocean.

Contains average dimensions of these crustaceans and data on their distribution in northwestern Pacific waters based on material collected by the research vessels *Vitiaz'* and *Nerpa* in Oct. 1955. *C. tenuicornis* was met in all three zones of these waters: subarctic, including the Okhotsk Sea where it was most abundant, zone of mixed subarctic and subtropical waters, and subtropical. The maximum concentration was observed at 50–100 m. or at 100–200 m. *C. lighti* was encountered only in the subtropical zone.

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51118. GEĬNRIKH, A. K. Razmnozhenie i razvitie massovykh kopepod v Beringovom more. (Vsesoîûznoe gidrobiologicheskoe obshchestvo. Trudy, 1957. t. 8, p. 143–62, illus., tables, map.) 37 refs. Text in Russian. ***Title tr.:*** Mass propagation and development of copepods in the Bering Sea.

A study of the seasonal growth cycle of five species of copepods, four of them belonging to the genus *Calanus*, important in the diet of fishes and whales. Only the

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Russian, western and northern areas were investigated. No uniform pattern of multiplication was established, one species showing mass development in summer, others in spring or winter.

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GEIST, OTTO WILLIAM, 1888– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

51119. GÉLINAS, LÉOPOLD. Preliminary report on Gabriel Lake area (west half) New Quebec. Quebec, 1958. 10 p. fold. map. (Quebec. Dept. of Mines. Geological Surveys Branch. Preliminary report, no. 373.) Ref.

Maps (1 in.:1 mi.) and outlines the geology of this 160 sq. mi. area (58°00′ −15′ N. 68°45′−69°00′ W.) about 18 mi. west of Fort Chimo. The consolidated rocks, all of Precambrian age, consist of pink and grey gneiss and a variety of schists, with layers of amphibolite, thinner in the gneisses than in the schists, parallel to the schistosity. Several pegmatite dykes cut the complex. All the schists are sedimentary rocks of the Labrador Trough, subjected to a higher grade of metamorphism than in the rest of the Trough. The quartzose and quartz-feldspar gneisses are assumed to be derived from sedimentary rocks of the Trough; the origin of the pink and grey gneisses is less certain. The structure of the area is folded, with a major anticline southwest of Green Lake. Deposits indicate that Pleistocene glaciers crossed the area in a direction approx. N. 10° W. Occurrences of massive limonite, mineralized shear zones and disseminated chalcopyrite, pyrite and pyrrhotite are noted. Lenses of iron formation are poorly exposed and have low magnetic content.

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51120. GÉLINAS, LÉOPOLD. Preliminary report on Thevenet Lake area (east half) New Quebec. Quebec, 1958. 7 p., fold map. (Quebec. Dept. of Mines. Geological Surveys Branch. Preliminary report, no. 363.) 3 refs.

Maps (1 in:1 mi.) and outlines the geology of this 160 sq. mi. area (58°00′–15′ N. 69°00′–15′ W.) approx. 30 mi. west of Fort Chimo. It is underlain by metamorphic rocks of Precambrian age, "granitic" gneiss, schists of sedimentary origin, amphibolites of igneous origin, and pegmatite dikes, resting in a series of northwestward-trending anticlines and synclines. All, including possibly the gneiss, belong or are related to rocks of the Labrador Trough. Contact between the gneiss and the other rocks, the eastern contact of the Labrador Trough, is discussed and various possibilities suggested to explain dissimilarities and divergences on either side. Glacial features and direction of the ice movement are noted. The iron formation is in thin layers, generally low in iron. Sulphides are present in small amounts. ***Copy seen:*** DGS.

51121. GEL'MAN, N. S., *and* G. D. ZENKEVICH. Biokhimiĭa rasteniĭ; bibliograficheskiĭ ukazatel' otechestvennoĭ literatury 1738–1952. Moskva, Izd-vo Akademii nauk SSSR, 1956. 394 p. (Akademiĭa nauk SSSR. Otdelenie biologicheskikh nauk i Fundamental'naĭa biblioteka obshchestvennykh nauk, Otdel biobibliografii uchenykh SSSR.) Approx. 8500 refs. Text in Russian. ***Title tr.:*** Plant biochemistry; bibliography of our country's literature 1738–1952. N. M. Sisakiĭan, chief editor.

Some 8500 references, mostly Russian but some foreign including English, are listed chronologically in four sections; the later two (1880–1916, 1917–1952) are grouped under chemical headings, and listed in chronological order. Scattered references deal with subarctic or arctic plants and trees, especially forest trees; effects of low temperature or climate on chemical processes, growth and development; frost resistance, etc. List of serials cited in abbreviation and an author index, are appended. ***Copy seen:*** DLC.

51122. GELTING, PAUL EMIL ELLIOT, 1905– . *Parmelia subaurifera* Nyl. and *P. fraudans* (Nyl.) Nyl. in Greenland. (Friesia, 1956. bd. 5, hefte 3–5, p. 240–46, illus.) 27 refs.

Contains descriptions and notes on habitat, ecology and geographic distribution of these two lichens, collected in Feb. 1950 near Godhavn, West Greenland. Both, very rare in Greenland, are recorded from northern Fennoscandia, Russian Lapland, and Novaya Zemlya.

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51123. GELTING, PAUL EMIL ELLIOT, 1905– . The *Rhizocarpon* species with peltate areoles occurring in Europe and North America. (Botanisk tidsskrift, 1954. bd. 51, p. 71–92, 6 illus.) 12 refs.

General appearance, structure of thallus and apothecia, and a key to the species are given. Four of these lichens are described: *Rhizocarpon arctogenum* n. sp.

and *R. bolanderi* (from Greenland), *R. leptolepis* (Lapland), and *R. rittokense* (Lapland, Baffin Island, Spitsbergen, and Novaya Zemlya), with data on variation, habitat, ecology and distribution.

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GEMMA, GIOVANNI BATTISTA, *see* Cattaneo, A. D., *and others.* La resistenza cerebrale all'ipossia, 1 . . . ipotermia. *1957.* No. 50153.

51124. GENTILE, M., *and others.* Definizione dell'ECG caratteristico dell'ipotermia profonda provocata. (Archivio di chirurgia del torace, Oct.-Dec. 1956. v. 13, fasc. 4, p. 787–809, illus.) 19 refs. Text in Italian. Summary in English. *Other authors:* G. Allegra *and* L. Tonelli. ***Title tr.:*** Definition of the ECG characteristic of deep, induced hypothermia.

A study of ECG variations of dogs made hypothermic to 19°–18° C. and rewarmed. The following characteristics were observed: a decline of frequency paralleling the drop of temperature; bradycardia; frequent but inconstant variations in voltage, and in amplitude and morphology of P; early lengthening of P-R; slight variation in QRS (lengthwise), increase in voltage and finally changes in morphology; progressive elongation, with changes of level, of S-T and profound, early changes of T, and lengthening of T-P (or T-Q).

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51125. GEOGHEGAN, BASIL, *and others.* A possible climatic effect on nail growth. (Journal of applied physiology, July 1958. v. 13, no. 1, p. 135–38, tables.) 7 refs. *Other authors:* D. F. Roberts *and* M. R. Sampford.

Report on growth rate measurements in temperate and arctic conditions. Differences were noted between individuals, between the left and right hand and between fingers. Nail growth in general was markedly retarded in the Arctic, due, as postulated, to climatic factors affecting circulation.

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51126. *GEOGRAFIÎA V SHKOLE.* Budushchee Obi. (Geografiîa v shkole, May-June 1958. god 21, no. 3, p. 61–62, map.) Text in Russian ***Title tr.:*** The future of the Ob River. Based on article in *Tûmenskaîa pravda,* Oct. 13, 1957.

Notes plans for construction of nine hydroelectric power stations on the Ob, including Nizhne-Obskaya at the Arctic Circle 10 km. from Salekhard; also several stations on the Ob's tributary the Irtysh. Location of the stations is indicated on sketch map.

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51127. *GEOGRAFIÎA V SHKOLE.* Ėkonomicheskie administrativnye raĭony SSSR. (Geografiîa v shkole, Jan.-Feb. 1958. god 21, no. 1, p. 58–59, map.) Text in Russian. ***Title tr.:*** The economic administrative districts of the U.S.S.R.

Lists 103 economic districts (created in 1957), including, in the North: the Murmanskiy, Arkhangel'skiy, Komi, Tyumenskiy, Krasnoyarskiy, Yakutskiy, Magadanskiy and Kamchatskiy Districts; their boundaries are shown on the map. ***Copy seen:*** DLC.

51128. *GEOGRAFIÎA V SHKOLE.* Eshche odin podvodnyĭ khrebet v Arktike. (Geografiîa v shkole, Nov.-Dec. 1958. god 21, no. 6, p. 72.) Ref. Text in Russian. ***Title tr.:*** Another submarine ridge in the Arctic. Based on article in *Literaturnaîa zhizn',* July 4, 1958.

Notes a submarine range 560 km. long between the Lomonosov Range and the central arctic elevation ("tsentral'noe arkticheskoe podnîatie"); it is said to have been discovered by the drifting station North Pole-7. ***Copy seen:*** DLC.

51129. *GEOGRAFIÎA V SHKOLE.* Konferentsiîa po razvitiîu proizvoditel'nykh sil Vostochnoĭ Sibiri. (Geografiîa v shkole, Nov.–Dec. 1958. god 21, no. 6, p. 64–66.) 3 refs. Text in Russian. ***Title tr.:*** Conference on development of the productive resources of Eastern Siberia.

Brief account of the Conference called by Gosplan, Academy of Sciences and other organizations at Irkutsk in Aug. 1958, and attended by over 2,500. Plans were discussed for building a third metallurgical center on both sides of "Lake Baykal meridian". The abundance of coal in Eastern Siberia estimated at nearly 7 trillion tons, over three times that of the United States, and large resources of water power, iron and aluminum ores, timber, etc. present natural conditions for the metallurgical and chemical industries. But the railroad and river transportation require development. ***Copy seen:*** DLC.

51130. ***GEOGRAFIIÂ V SHKOLE.*** Korshunovskoe zheleznorudnoe mestorozhdenie. (Geografiiâ v shkole, July–Aug. 1957. god 20, no. 4, p. 68.) Text in Russian. ***Title tr.:*** Korshunovskoye iron ore deposit.

Among the many iron ore deposits in the Angara basin, the richest is Korshunovskoye, on the left bank of the Korshunikha River, a right tributary of the Ilim. Its ore resources are comparable to those of Magnitnaya and Blagodat' together, with 62% iron in the ore. Based on *Vostochno Sibirskaiâ pravda*, Feb. 26, 1957. ***Copy seen:*** DLC.

51131. ***GEOGRAFIIÂ V SHKOLE.*** Na dreĭfuûshchikh stanc̆iiâkh v Arktike. (Geografiiâ v shkole, July–Aug. 1957. god 20, no. 4, p. 68.) Text in Russian. ***Title tr.:*** On the drifting stations in the Arctic.

In 1957, the drifting station North Pole–4, set up in 1954, was evacuated; North Pole–6, set up in 1956 (on Apr. 19) was relieved by a new team under V. Driafs̆kiĭ; a new station, N̆orth Pole–7 headed by V. A. Vedernikov, was set up on an ice island at 82°04′ N. 164°50′ W. Information based on newspaper *Sovetskaiâ Rossiiâ*, Apr. 24, 1957.

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51132. ***GEOGRAFIIÂ V SHKOLE.*** Pamiâtnik Semenu Dezhnevu. (Geografiiâ v shkole, Jan.-Feb. 1957. god 20, no. 1, p. 62.) Text in Russian. ***Title tr.:*** Memorial to Semen Dezhnev.

Note on a beacon 16 m. high recently erected on Cape Dezhneva in memory of Dezhnev's deeds. Based on newspaper *Sovetskiĭ flot*, Oct. 13, 1956.

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51133. ***GEOGRAFIIÂ V SHKOLE.*** Sil'noe zemletriâsenie v Vostochnoĭ Sibiri. (Geografiiâ v shkole, Mar.–Apr. 1958. god 21, no. 2, p. 64–65.) Text in Russian. ***Title tr.:*** Great earthquake in East Siberia. Based on report of *Vostochno-Sibirskaiâ pravda*, Oct. 13, 1957.

Reports earthquake on Jan. 27, 1957, centered in the Muyskaya Ravin in northern Chita Province; violent shocks reached as far as the Nizhnyaya Tunguska basin. Study of the seismic waves disclosed a most complex propagation. Seismicity of the area is to be studied further by the East Siberian Branch of the Academy of Sciences, and a seismic station is to be set up at Bodaybo.

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51134. ***GEOGRAFIIÂ V SHKOLE.*** Ukazami prezidiuma Verkhovnogo Soveta SSSR v techenie 1957–1958 gg. pereimenovany sleduûshchie goroda. (Geografiiâ v shkole, Nov.–Dec. 1958. god 21, no. 6, p. 68.) Text in Russian. ***Title tr.:*** List of towns renamed in 1957–58 by decrees of Presidium of the Supreme Soviet of the U.S.S.R.

Lists 15 towns named for Soviet leaders, which have reverted to their former or have been given new, nonpolitical names; Molotovsk in Arkhangel'sk Province is renamed Severodvinsk. ***Copy seen:*** DLC.

51135. ***GEOGRAFIIÂ V SHKOLE.*** V raĭone Verkhoâ̆nska. (Geografiiâ v shkole, Sept.-Oct. 1957. god 20, no. 5, p. 56.) Text in Russian. ***Title tr.:*** In the Verkhoyansk District. Based on article in *Sot̆sialisticheskaiâ Îakutiiâ*, June 15, 1957.

Outlines economic and cultural growth in the district chiefly due to development of tin ore deposits: new settlements outnumber Verkhoyansk itself in population, among them Batagay, the administrative center, Ege-Khay, Yanskiy, Deputatskiy, Ilin-Taas, Alys-Khaya, and Burgochan; several of them represent highly mechanized mining operations; a new port Nizhneyansk opened two years ago, steamers on the Yana, electric power stations, collective farms, hospitals, libraries, etc., are mentioned.

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51136. ***GEOGRAFIIÂ V SHKOLE.*** "Vtoroĭ Ural." (Geografiiâ v shkole, Sept.-Oct. 1958. god 21, no. 5, p. 79–80.) Ref. Text in Russian. ***Title tr.:*** "The Second Ural." Based on article in *Izvestiiâ*, May 25, 1958.

Notes discovery of valuable mineral deposits in the structural folding east of the Urals, including coal deposits in the Severnaya Sos'va River basin and natural gas at Berezovo. ***Copy seen:*** DLC.

51137. ***GEOGRAFISK TIDSSKRIFT.*** Nationalmuseets etnografiske samling 1956. (Geografisk tidsskrift 1957. bd. 56, p. 130–39, illus.) Text in Danish. ***Title tr.:*** The ethnographical collection in the National Museum 1956.

Includes information (p. 136) on work carried out by the National Museum, Copenhagen, in Greenland and North America: Jørgen Meldgaard's archeological reconnaissance in the Holsteinsborg District, West Greenland, his investiga-

tions in Labrador, Eskimo acquisitions, etc., are mentioned. ***Copy seen:*** DLC.

51138. ***GÉOGRAPHIA.*** Opération Groenland. (Géographia, Dec. 1957. no. 75, p. 13–20, illus.) Text in French.

Photo-reportage on the Aug. 27, 1956–Aug. 3, 1957, Expédition Française Centre Groenland, headed by Jean Dumont. The four-man team and equipment landed on the inland ice at 71°21′ N. 33°55′ W. by parachute from the French aircraft "Nord 2500". The construction and operation of the subterranean stations, scientific work, etc., and the return by foot to Rohss fjord are described. The aim of this expedition, an advance party for P.-É. Victor's expedition in 1959, was to demonstrate that a small team could be parachuted to an arctic region, survive, work and return unaided. ***Copy seen:*** DGS.

51139. ***GEOGRAPHICAL JOURNAL.*** Expeditions in the field during 1956. (Geographical journal, Mar. 1957. v. 123, pt. 1, p. 116–117.)

Notes: the North Sweden Research Group (University College, London) led by R. P. Kirby and D. B. Owen, working in geology, botany and geomorphology in the extreme north of Sweden between the districts of Katterjaure and Sjangeli; Durham University Expedition to Norway, led by W. A. Elders, with studies in glaciology, geomorphology and geology on N. Lyngen Peninsula; Anglo-Norwegian Frozen Ground Research Expedition, led by P. J. Williams, studying solifluction features in the mountains of central Norway. ***Copy seen:*** DGS.

51140. ***GEOGRAPHICAL JOURNAL.*** [Obituaries]. (Geographical journal, 1957. v. 123.)

Contains obituaries of: *Richard Evelyn Bird,* by R. B. Black, q. v.; *Leo Bagrov* 1881?–1957, authority on early cartography (pt. 4, p. 575–76); *Robert Neal Rudmose Brown* 1879–1957, British geographer and member of four expeditions to Svalbard 1909–1920, (pt. 4, p. 576–77); *Michael F. W. Holland* 1928?–1957, British geographer who died on the inland ice of Greenland during an IGY mission (pt. 4, p. 577–78); *Harald Ulrik Sverdrup* 1888–1957, oceanographer and meteorologist, member of the *Maud* 1918–1925, *Nautilus* 1931, and other expeditions, director of the Norsk Polarinstitutt (pt. 4, p. 578–79). ***Copy seen:*** DGS.

51141. ***GEOGRAPHICAL MAGAZINE.*** Airlines over the Arctic. (Geographical magazine, Mar. 1957. v. 29, no. 11, p. 523–29, 11 illus., text map.)

Reviews development since 1952 of commercial air service between Western Europe and western United States and Japan by Scandinavian Airlines System, Canadian Pacific Airlines (1955), and plans of Trans-World Airlines. Use of these shorter and safer, trans-arctic routes has been made possible by development of long-range aircraft, U.S.-Canadian military air bases in northern Canada and Greenland, arctic weather and radio stations. ***Copy seen:*** DLC.

51142. GEOLOGICAL ASSOCIATION OF CANADA. The glacial map of Canada. Toronto, 1958. 2 sheets, 31½ x 51 in. scale: 1:3,801,600, 1 in.=60 mi. Base map from Dept. of Mines and Technical Surveys, Lambert conformal conical projection, standard parallels at 49° and 77° N., modified polyconic projection north of 80° N.

Shows in color: existing glaciers, ice flow features, glacio-fluvial deposits, maximum extent of areas of marine submergence and of extinct Pleistocene lakes, former maximum extent of glaciation, approx. southern limit of permafrost and other glacial features. Inset map of rock outcrop and drift cover of the Canadian Shield, compiled by Jessie Falconer, scale: 1:9,504,000, 1 in.=150 mi. Sources, also individuals and organizations supplying information are listed, as are members of committee (J. T. Wilson, chairman) responsible for publication. Reviewed by C. W. M. Swithinbank in *Geographical journal,* Sept. 1958, v. 124, pt. 3, p. 386–89.

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51143. GEORGE, J. J., *and others.* An empirical method of forecasting 24-hr. movement and change of intensity of sub-arctic North Atlantic cyclones. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 156: abstract only "the full paper is likely to be published elsewhere.") *Other authors:* P. M. Wolff, *and* W. L. Somervell, Jr.

Technique requires only measurement of the 500-mb. height and temperature gradients above the current sea-level (cyclone) center, and determination of the type of 500-mb. flow in which the sea-level system is embedded. Results are empirical; large errors are more often encountered with storms originating over

North America than those over the North Atlantic or maritime western Europe. Movement and change of intensity are closely related; forecast of the latter gives best results in winter. Predictions of speed and direction of movement have also been tested only for the Oct.-Mar. period.—From authors' abstract. ***Copy seen:*** DLC.

51144. GEORGE, PIERRE, 1909– . Éléments pour une classification sommaire des régimes hydrologiques de l'U.R.S.S. (Annales de géographie, Mar.–Apr. 1957. année 66, no. 354, p. 167–72, tables.) 2 refs. Text in French. ***Title tr.:*** Elements for a summary classification of hydrologic regimes in the U.S.S.R.

Includes figures on the length, extent of basin, mean flow for the Ob, Yenisey, and Lena. Rivers of the U.S.S.R. are noted to have generally gentle gradients, great length, long frozen periods, short rapid rise in spring, etc.

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51145. GEORGI, JOHANNES, 1890– . Nord-Grönland, die Forschungen der Britischen Nordgrönlandexpedition 1952–1954. (Erdkunde, *Bonn*, Feb. 1958. Bd. 12, Heft 1, p. 51–64, 4 maps.) 8 refs. Text in German. Summary in English. ***Title tr.:*** North Greenland: the investigations of the British North Greenland Expedition, 1952–54.

Scientific evaluation of the expedition's work based primarily on No. 54901 and with attention mainly to the seismic measurements and measurement of ice thickness. Work of previous Danish and German expeditions should have been studied more by the English party, some of whose maps are also criticized. Appended is a list of geographic names for East Greenland, as used by the second German North Polar expedition in 1867–70. ***Copy seen:*** DLC.

51146. GEORGI, JOHANNES, 1890– . Temperatur- und Dichtemessungen des Grönländischen Inlandeises. In memoriam Prof. Alfred Wegener 1930 und Dr. Ernst Sorge 1946. (Annales de géophysique, 1956. t. 12, fasc. 1, p. 102–110, graphs.) 12 refs. Rapports scientifiques des Expéditions polaires françaises, N IV 4. Text in German. French and English summaries. ***Title tr.:*** Temperature and density measurements on the Greenland Inland ice.

Compares results of measurements by E. Sorge in 1930–31 (No. 16545) with those by J. C. Heuberger in 1950 (No. 40355), in support of Sorge's climatological explanation for the temperature inversion (decrease) observed below 8 m. Density curves drawn according to "Sorge's law" and extended by Heuberger's measurements agree closely.

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GEORGI, JOHANNES, 1890– , *see also* Malaurie, J. N. Die letzten Könige von Thule . . . *1957*. No. 53074.

GEORGI, JOHANNES, 1890– , *see also* Wegener, K. Temperatur- und Dichtemessungen des Grönländischen Inlandeises. *1956*. No. 55969.

51147. GERASIMOV, I. P. Strukturnye cherty rel'efa SSSR i ikh proiskhozhdenie. (Akademiîa nauk SSSR. Izvestiîa, ser. geograficheskaîa, Sept.-Oct. 1958, no. 5, p. 5–9.) Text in Russian. ***Title tr.:*** Structural features of the relief of the U.S.S.R. and their origin.

The geomorphic method is important for distinguishing and classifying various relief forms. Three groups of morphologic factors are considered: morphotexture, morphostructure and morphosculpture; and a regional division of the relief of the U.S.S.R. is proposed. The Soviet arctic regions are mainly formed by glacial action with the exception of Kamchatka where volcanic activity also played a part. This paper, introducing a new methodical approach for such investigation, represents part of a book in preparation. ***Copy seen:*** DLC.

GERASIMOV, I. P., *see also* Akademiîa nauk SSSR. O sozdanie instituta geografii . . . *1958*. No. 49154.

51148. GERASIMOV, MIKHAIL MIKHAÎLOVICH, 1907– . Obrabotka kosti na paleoliticheskoĭ stoîanke Mal'ta. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Materialy i issledovaniîa po arkheologii SSSR, 1941. no. 2, p. 65–85, 294, illus.) Ref. Text in Russian. Summary in French. ***Title tr.:*** Manufacture of bone artifacts at the paleolithic site of Mal'ta.

Describes the artifacts made of reindeer antlers, mammoth tusks and animal bones (wedges, needles, knives, spear and dart points, tool handles, ornaments and sculptures) discovered between 1928 and 1937 at a stone age camp site at Mal'ta on the Belaya, a right tributary of the Angara River. The manufacture and engraving techniques of the bone artifacts,

use of stone production-tools, etc., are discussed and illustrated. The absence of polished bone articles and whetstones is noted. ***Copy seen:*** DLC.

51149. GERASIMOV, MIKHAIL MIKHAĬLOVICH, 1907– . Paleoliticheskaîa stoîanka Mal'ta; raskopki 1956–1957 gg. (Sovetskaîa ėtnografiîa, 1958, no. 3, p. 28–52, illus., diagrs.) 7 refs. Text in Russian. ***Title tr.:*** The paleolithic site of Mal'ta; excavations of 1956–1957.

Describes archeological excavations conducted at Mal'ta on the upper Angara River. Six pit houses with up to three hearths each, were unearthed: four quadrangular, permanent buildings, the largest 14 x 6 m., and two round, hut-like summer dwellings, the smaller 4.5 m. diameter. The walls of stone slabs and large animal bones supported a roof formed of antlers, the whole covered by animal hides. Though wood (birch and spruce) were available, hearth remains indicate reindeer bones as the main fuel. Most of the bones at the site were reindeer (*Rangifer tarandus*), though mammoth (*Elephus primigenius*), woolly rhinocerous (*Rhinoceros antiquitatis*), oxen (*Bos* sp.) and one bison (*Bison priscus*) were also found. The scarcity of Carnivora bones (18 foxes, four wolverines, wolf, lion) shows that fur hunting had not yet developed. The bone and stone artifacts consist mainly of crudely chipped chopping and scraping tools, cores, blades, awls and dart points, a variety of finely cut ornaments (pendants, bracelets, rings, pins, etc.), and sculptured female figurines and birds (swan, duck, partridge). The emplacement of the objects disclosed a significant pattern: men's attributes (hunting tools, bird sculptures) on the right side of the dwelling or near the right-hand hearth, women's belongings (knives, scrapers, needles, awls, ornaments, female statuettes) on the left. Though various local elements complicate an exact dating, the Mal'ta site is attributed to the Siberian variant of the Aurignacian. Author's 1956–1957 work for the Ethnographic Institute, carrying on that of 1932–1937 (cf. No. 51148), was done as participant in the Angara geologic-paleontologic expedition (Angarskaîa geologo-paleontologicheskaîa ėkspediîsiîa) of the Geologic Institute of the East Siberian Branch of the Academy of Sciences, U.S.S.R. ***Copy seen:*** DLC.

GERASIMOV, MIKHAIL MIKHAĬLOVICH, 1907– , *see also* Gantskaîa, O. A., *and* N. Îa. Merpert. Issledovaniîa sovetskikh arkheologov . . . *1958.* No. 51079.

GERASIMOV, MIKHAIL MIKHAĬLOVICH, 1907– , *see also* Gantskaîa, O. A. Sessii . . . issledovaniĭ 1957 g. *1958.* No. 51080.

GERASIMOV, MIKHAIL MIKHAĬLOVICH, 1907– , *see also Sibirskie ogni.* Vesti iz kamennogo veka. *1958.* No. 54867.

51150. GERASIMOV, V. V. K voprosu o "kalianusnoĭ" sel'di. (Akademiîa nauk SSSR. Murmanskaîa biologicheskaîa stantsiîa. Trudy, 1957. t. 3, p. 111–13, table.) 3 refs. Text in Russian. ***Title tr.:*** The "Calanus" herring.

Young herring on the Murman coast at times gorge themselves exclusively with the crustacean *Calanus finmarchicus* and many are caught with ruptured stomachs. An experimental study suggests that this is apparently due to bacterial and autolytic processes following the death of the fish. ***Copy seen:*** DLC.

51151. GERASIMOV, V. V. Raspredelenie sel'di v 1953–1955 gg. (*In:* Akademiîa nauk SSSR. Murmanskaîa biologicheskaîa stantsiîa. Zakonomernosti skopleniĭ . . . 1958. p. 137–49, illus., tables.) 17 refs. Text in Russian. ***Title tr.:*** Distribution of herring in 1953–1955.

Account based on statistical return of catches from the Murman coastal zone. Distribution of yields per month, size distribution, age classes, size distribution in herring shoals at different seasons and months are described; and catch size is compared with the biomass of *Calanus.* ***Copy seen:*** DLC.

GERASIMOV, V. V., *see also* Mironova, N. V., *and others.* Itogi promysla sel'di . . . *1957.* No. 53323.

51152. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and others.* O sootnoshenii niobiîa i tantala v agpaitovykh porodakh Lovozerskogo shchelochnogo massiva. (Geokhimiîa, 1957. no. 5, p. 417–19, table.) 8 refs. Text in Russian. Summary in English. *Other authors:* M. M. Kakhana, *and* L. M. Rodionova. ***Title tr.:*** The ratio of niobium and tantalum in agpaitic rocks of the Lovozero alkaline massif.

Chemical analyses were made to find the proportions of niobium and tantalum which the two junior authors had been

unable to determine by spectral analyses. Results of the chemical analyses for agpaite rocks and minerals: liparite, murmanite, eudialyte foyaite and their associates are presented and the ratios of niobium, tantalum and niobium/tantalum are tabulated. ***Copy seen:*** DLC.

51153. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and* **V. I. LEBEDEV.** O sootnoshenii stronŝsiĥ i kal'ŝsiĥ v porodakh Lovozerskogo massiva. (Geokhimiĥ, 1958. no. 6, p. 553–57, tables, diagr.) 5 refs. Text in Russian. Summary in English. ***Title tr.:*** On the strontium/calcium ratio in the rocks of the Lovozero massif.

Presents results of strontium and calcium determinations in four complexes of nepheline syenites. The procedure of the analyses, locations of samples taken, names of rocks, and SrO, CaO content are given. The strontium content ranges from 0.008 to 1.75% and calcium from 0.03 to 11%. The relationship between the strontium and calcium content in rocks has not been established. The average strontium content in miascite rocks is higher than in agpaite rocks.

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51154. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and* **I. D. SHEVALEEVSKIĬ.** O sootnoshenii ŝsirkoniĥ i gafniĥ v ŝsirkonievykh mineralakh Lovozerskogo massiva. (Geokhimiĥ, 1957, no. 8, p. 696–98, table.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** On the zirconium/hafnium ratio in zirconium minerals from the Lovozero massif.

Presents results of 36 X-ray spectral analyses of ten zirconium minerals: mineral genesis, location of samples, zirconium and hafnium percentages and zirconium/hafnium ratio. The ratio ranges from 37 to 78, the maximum value typical of lovozerites (72–78), the minimum value of catapleite (46–48) and zirphesite (37–38). ***Copy seen:*** DLC.

51155. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and others.* O ŝsirkonievogafnievom sootnoshenii v porodakh Lovozerskogo massiva. (Geokhimiĥ, 1958, no. 8, p. 743–48, table.) 11 refs. Text in Russian. Summary in English. *Other authors:* A. M. Tuzova, *and* I. D. Shevaleevskiĭ. ***Title tr.:*** On the zirconium/hafnium ratio in the rocks of the Lovozero massif.

Presents results of chemical and X-ray spectral analyses of three mineral complexes. The zirconium and hafnium content varies from 0.071 to 2.31% of ZrO_2 and from 0.015 to 0.057% of HfO_2 while the ZrO_2/HfO_2 ratio varies insignificantly. Agpaite rocks of the second and third complex have more zirconium and hafnium than miascite rocks of the first complex. ***Copy seen:*** DLC.

51156. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and* **N. V. TURANSKAĨA.** Vysokoe soderzhanie lantana i ŝseriĥ v mineralakh agpaitovykh nefelinovykh sienitov Lovozerskogo massiva, Kol'skiĭ poluostrov. (Geokhimiĥ, 1957. no. 4, p. 334–36, table.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** High lanthan and cerium content in minerals of agpaitic nepheline syenites of the Lovozero massif, Kola Peninsula.

Quantitative correlation of rare earth elements in the Lovozero massif minerals is presented in a table indicating minerals, their location, spectral and chemical analyses and analysts' names. These nepheline syenites "are enriched in rare earth elements of the cerium group, particularly lanthan and cerium. In the nordite composition the odd lanthan element predominates over the even cerium element forming an exception to Oddo-Harkin's rule." The work of K. F. Murata and others is cited in support.

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51157. GERDEL, ROBERT WALLACE, 1901– , *and* **F. DROUET.** The cryoconite of the Thule area. Wilmette, Ill., Nov. 1958. iv. 12, 2 p. illus., map, table. (U.S. Army. Corps of Engineers. Snow, Ice and Permafrost Research Establishment. Research report 50.) 6 refs.

Reports results of study of holes which hamper travel on access routes to Greenland icecap in summer months, the material in them named cryoconite by Nordenskiöld in 1870 (cf. No. 12401). The holes on the Nuna and Thule ramps, as studied in July 1954 and July 1956, are described and the results of analyses of their mineral and organic content are discussed in relation to their formation. The closely spaced cylindrical holes range from a few cm. to more than 1 m. in diameter with a depth of 30–50 cm. The larger holes are found at low elevations in the wet-ice zone, and small holes (1–2 cm. diam.) occur near the firn line. Water fills the holes to within a few cm. of the ice surface, and a gelatinous, gritty material (cryoconite) covers the bottom. Oven drying of

the drip-free cryoconite yielded 93–96% water and a dry residue containing 13.2–20.1% organic matter (eight species of algae, four fungi, desmids, and a rotifer), with the mineral fraction consisting of fine sharp grains, apparently wind-transported over short distances. The holes may be at least partly the product of energy released from photosynthesis and metabolism of the algae (the largest fraction of the organic matter), since algae primarily utilize radiation in the blue region from 0.40–0.65 μ where ice has the greatest transmissivity. The organisms are identified, and the algae are described in detail. Also issued (May 1959, 17 p.) in U.S. Army, Corps of Engineers, *Greenland ice cap research program, studies conducted in 1955–56*, v. 3, pub. June 1959.

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51158. GERDEL, ROBERT WALLACE, 1901– . White-out in Greenland: cause and possibilities for control by weather modification. (Eastern Snow Conference, 15th, 1958. Proceedings, pub. 1958. v. 5, p. 31–45, illus., diagr., map.) 6 refs.

"The characteristics of various types of whiteout (overcast, fog, and precipitation whiteout) and related meteorological conditions are described; the results of studies by SIPRE since 1954 in Greenland are summarized; and possible countermeasures are discussed. An analysis of the formation of whiteout on the Greenland icecap indicates that whiteout of the fog and overcast type may be dispersed by seeding with freezing nuclei. Seeding from ground installations rather than the air appears to be the best solution for improving visibility of landing strips on snow and ice. A map showing the relation between wind flow and whiteout in Greenland is included."—SIPRE ***Copy seen:*** DGS.

GERDEL, ROBERT WALLACE, 1901– , *see* Diamond, M., *and* R. W. Gerdel. Occurrence of blowing snow . . . *1957*. No. 50539.

51159. GERHARDSEN, GERHARD MEIDELL, 1917– . Fifty years of Norwegian fisheries, 1905–1955. Bergen, Dec. 1955. 20 p., graphs. (Bergen, Norway. Norges handelshøgskole, paper no. 1.)

The five decades are characterized in turn: advances in operation, organization, research, production, extension of fishing to the open sea, and the international competition. The industry has changed from one of coastal to national importance in Norway. Plans are noted for the economic development of Finnmark, the northernmost province, through expansion of the fishery. ***Copy seen:*** DLC.

51160. GERKE, KARL. Die geodätischen Beiträge zum Internationalen Geophysikalischen Jahr. (Geographische Rundschau, Oct. 1958. Jahrg. 10, Heft 10, p. 385–90, illus., map.) 8 refs. Text in German. ***Title tr.:*** The geodetic contributions to the International Geophysical Year.

Outlines a four-point program and the German contribution to it; glaciological studies in the Antarctic and Arctic; plans of the International Glaciological Expedition to Greenland to begin work in 1959. Altitude, longitude, latitude, gravity measurements in Greenland are briefly discussed and graphed.

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GERKEN, G., *see* Thorn, W., *and others*. Beitrag zum Stoffwechsel von Leber . . . *1957*. No. 55420.

51161. GERLACH, RICHARD. Kanadagänse auch in Europa. (Orion, Sept. 1958. Jahrg. 13, No. 9, p. 737.) Text in German. ***Title tr.:*** Canada geese also in Europe.

Notes various forms of this goose, extinct and living; their coloration, size, distribution; *Branta c. canadensis* in England, France, Germany; its introduction and life in New Zealand; *Branta c. parvipes* in Europe; crossings with other forms. ***Copy seen:*** DLC.

51162. GERLING, Ė. K., *and* A. A. POLKANOV. Problema absolûtnogo vozrasta dokembriĭa Baltiĭskogo shchita. (Geokhimiĭa, 1958, no. 8, p. 695–717, tables, diagrs.) 18 refs. Text in Russian. Summary in English. ***Title tr.:*** The problem of the absolute age of the Precambrian of the Baltic shield.

Presents data on absolute age determination of mica specimens from north and south Karelia, Kola Peninsula, the White Sea region, various parts of Finland, and other regions, as done by the Laboratory for Cambrian Geology, Academy of Sciences of the U.S.R.R. For 240 micas, the age was determined by the potassium-argon method, for 10 with the strontium method, and for 15 with the lead method. Using the

criterion of mica ages as a measure of absolute age, the ages of various eras and periods are established and summarized in table (p. 715). The history of sedimentation and metamorphic cycles as well as cycles of intrusive rocks are outlined. ***Copy seen:*** DLC.

GERLING, É. K., *see also* Polkanov, A. A., *and* É. K. Gerling. K-A and Rb-Sr . . . age of Precambrian. *1958.* No. 54059.

51163. GERMAN, RÜDIGER. Beobachtungen zur Solifluktion in Schwedisch Lappland. (Geographica Helvetica, Dec. 1958. Bd. 13, no. 4, p. 295–300, illus.) 3 refs. Text in German. Summary in French. ***Title tr.:*** Observations on solifluction in Swedish Lapland.

Summarizes seven types of deposits resulting from solifluction observed near Torneträsk: stone accumulation, solifluction terraces; detrital mounds; rock streams; stone nets and stone rings; stone stripes, and stone islands. The downward migration of loose rock fragments with meltwater is discussed. The procedure and forms of such stone accumulation are treated in detail.

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51164. GERSHANOVICH, G. L., *and others.* Opyt zimneĭ ėkspluatatsii betonososov. (Gidrotekhnicheskoe stroitel'stvo, Feb. 1957. god 26, no. 2, p. 20–26, illus., tables, diagrs.) 4 refs. Text in Russian. *Other authors:* M. S. Segal' *and* A. I. Solov'ev. ***Title tr.:*** Winter experience in use of concrete pumps.

Construction of the Gorky hydroelectric plant during winters, 1955, 1956, at average daily temperature of −21° C. and minimum of −40° C. is described in detail. The concrete mixers, pumps and electric water-heaters were installed in an insulated and heated shed with air temperature about 12° C. Winter concrete is made of Portland cement and 38–43% fine sand of glacier or alluvial grade with addition of sulfite-alcoholic solution. The temperature of the concrete mass was held at about 25° C. (for good plasticity); higher temperature involves destruction of valve and connections, lower temperature creates difficulties in pumping. The pipe line from mixer to place of work is assembled of pipes of 204 mm. diameter and maximum length 250 m. The line is well insulated, electrically heated and covered by wooden boards. Before pumping of concrete, all the piping was preheated by steam from a locomotive or tug-boat and at specially remote places, by hot air. After continuous pumping, the pipes were washed with warm water and three or four wads passed through at short intervals from each other, the last wad thoroughly soaked in oil.

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51165. GERSON, DONALD J. A technique for time-lapse photography of sea ice. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 259–64, illus., 5 diagrs.)

Describes Bell and Howell 200 EE electric eye 16 mm. magazine camera used by the U.S. Hydrographic Office at Pt. Barrow, Alaska, to record the motion of ice during spring breakup June 16–Aug. 21, 1957. Method of operation (30-second time interval) is outlined. The 3700 ft. of film were analyzed to disclose variations in ice motion, and results compared with theories on wind and current effects on ice drift. Some changes in equipment and operation are recommended. ***Copy seen:*** DN–HO.

GERTSCH, WILLIS JOHN, 1906– , *see* Chamberlin, R. V., *and* W. J. Gertsch. The spider . . . Dictynidae . . . *1958.* No. 50159.

51166. GESSAIN, ROBERT, 1907– . Le motif Vagina Dentata dans les mythologies Eskimo et nord Amerindiennes. (International Congress of Americanists, 32nd. *Copenhagen,* 1956. Proceedings, 1958, p. 583–86.) 2 refs. Text in French. ***Title tr.:*** The Vagina Dentata motif in Eskimo and north Amerindian mythologies.

A psychoanalytic interpretation of certain sex motifs in mythology relating to the fear of castration or body mutilation. Some legends of the Angmassalik, Iglulik and Netsilik Eskimos are analyzed.

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51167. GETZ, BERNHARD. Noen antropologiske arbeidsoppgaver. (Naturen 1958. årg. 82, nr. 5, p. 266–71.) Text in Norwegian. ***Title tr.:*** Some problems of anthropological research.

Some characteristic features of Lappish and north Nordic skeletons found in Finland and Norway are described, and differences in early stone age and later Nordic skeletons are explained. The characteristic Lappish hip joint and upper part of the femur may be an inherited anomaly or result from infant adaptation to the Lappish cradle. This flattened

thigh bone found in the stone age skeletons occurs still in people who traverse difficult terrain, and in squatters.

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51168. GHIGLIONE, ANGELO F. Paving the permafrost. (Asphalt Institute quarterly, Oct. 1958. v. 10, no. 4, p. 4–7, illus.)

The characteristics of permafrost, its effects on roads and road-construction practices in Alaska are described. The most satisfactory location is that which disturbs the permafrost least: a raised fill above icing heights, swept relatively free of snow by winds, and situated on the south side of hills and mountain ranges. Minimum grades and curves are critically important for road maintenance and snow and ice removal. Drainage ditches should be deep and narrow to minimize icing. Asphalt pavements of either road-mix or hot plant mix have proved most satisfactory in permafrost areas since they suffer least damage from deformation, though extensive crack sealing, spot paving, and leveling are necessary to re-establish uniform grade. Standard design provides a 2-in. mat of asphalt plant mix laid over a 4-in. crushed-rock base primed with asphalt and placed over a 15-in. granular subbase. Stage-type construction is necessary, accomodated to the progress of natural or artificial thawing.—From SIPRE.

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51169. GHIGLIONE, ANGELO F. Subarctic highway construction and maintenance. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 16–21.)

Discusses geological and physical factors affecting design, construction, and maintenance of Alaskan roads. Permafrost, of major importance, underlies about 80% of the land, and is so complex and so interrelated with the environment that generalizations are not valid. Weather changes, vegetation, and surface icing, usually associated with permafrost, are also factors. Rules to follow in site selection for new roads: location, excavation, grades and curves, ditches, and pavements, are stated, together with comment on bridge sites. Costs and maintenance including snow removal are discussed. ***Copy seen:*** CaMAI.

51170. GHINOZZI, G. P. Comportamento della temperatura rettale di conigli sottoposti a depressione barometrica. (Revista di medicina aeronautica, Oct.-Dec. 1956. v. 19, no. 4, p. 669–75, illus., table.) 6 refs. Text in Italian. Summary in English. ***Title tr.:*** Condition of rectal temperature in rabbits exposed to barometric depression.

Rabbits exposed to low air pressure corresponding to that at 7,000 m. altitude showed a decrease of 1.7° C. in rectal temperature. This corresponds to earlier reports in literature.

Copy seen: DNLM.

51171. GIAEVER, JOHN. In the land of the musk-ox; tales of wild life in North-East Greenland. London, 1958. 191 p. 16 plates. Originally published as *Dyretrakk og fugletrekk pa 74° nord.* Oslo, Tiden, 1955; translated into English by 'Munda Whittaker and Walter Oliver.

Contains 25 stories (and photos) drawn from author's experience as hunter and trapper in northeast Greenland; they deal with wildlife, hunting episodes, natural and living conditions, etc.

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51172. GIAJA, JEAN, *and others.* L'état posthypothermique. (Académie des Sciences, Paris. Comptes rendus hebdomadaires des séances, Jan. 1957. t. 244, no. 1, p. 27–30, table.) 7 refs. Text in French. *Other authors:* J. Radulović *and* Ž. Gavrilović. ***Title tr.:*** The post-hypothermic state.

Account of observations on rats prior to and following hypothermia of 29° and 20° C. In the post-hypothermic phase, an increase in excitability and in work capacity of the muscle were observed.

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51173. GIAJA, JEAN. L'état posthypothermique et l'hypothermie stimulante. (Journal de physiologie, 1957. t. 49, no. 1, p. 178.) 7 refs. Text in French. ***Title tr.:*** The post-hypothermic state and stimulating hypothermia.

Author stresses the stimulating action of moderate hypothermia (25°–30° C.) upon subsequent heart activities, work of isolated muscle, resistance to hypoxia, etc. This invigorated activity persists some time after rewarming. The blood of hypothermic animals also has a stimulating action upon the heart.

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51174. GIBBS, HAROLD C., *and* **J. S. TENER.** On some helminth parasites collected from the musk ox, *Ovibos moschatus,* in the Thelon Game Sanc-

tuary, Northwest Territories. (Canadian journal of zoology, Aug. 1958. v. 36, no. 4, p. 529–32, table.) 17 refs.

Records of three species of nematodes and three cestodes, taken from males. A check list of helminth parasites found in these animals living in their natural habitat, is included. ***Copy seen:*** DLC.

GIBBS, W. E., *see* Meyer, G. E., *and others*. A versatile new family of elastomers. *1957*. No. 53255.

51175. GIBSON, HARRY V. Health Commissioner reports highlights of 1957–58 program. (Alaska's health, Dec. 1958. v. 15, p. 1–5, illus.)

Contains brief information on the nutrition program, radiation control, mental health and hospital projects; projects on respiratory, speech and hearing and mental defects, tuberculosis, poliomyelitis, and village sanitation. Completion or renovation of health centers is also reported.

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51176. GIBSON, T. Viability of cartilage after freezing. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 528–29, illus.) ref.

Human chondrocytes remained alive up to six weeks at 4° C.; freezing, however, invariably killed them. Pretreatment with glycerol and slow cooling did not substantially change survival: no cells survived cooling to −15° C. for 15 min. ***Copy seen:*** DNLM.

51177. GIBSON, WILLIAM M. Gulf of Alaska trough parallels Aleutian Trench. (Geological Society of America. Bulletin, May 1958. v. 69, no. 5, p. 611–14, chart.) 6 refs.

Describes a recently discovered trough which begins near the bottom of the continental slope south of Yakutat Bay and trends southwest for 400 mi. to curve into the Aleutian Trench southeast of Kodiak Island. It is 500–700 ft. deep and two to three mi. wide over most of its distance, and slopes down to the west about 16 ft./mi. The depression may be a tectonic element marking the southeast edge of the geosyncline of the Aleutian Trench which is marked on the north by an inferred parallel extension of the Chugach-St. Elias fault. The existence of similar troughs in the Gulf is indicated but awaits confirmation.

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51178. GIDDINGS, JAMES LOUIS, 1909– . Forest Eskimos: an ethnographic sketch of Kobuk River people in the 1880's. Philadelphia, 1956. 55 p. illus. (Pennsylvania. University Museum. Bulletin, June 1956. v. 60, no. 2.)

Reports recollections of pre-contact times as recounted, during author's 1940, 1941, and 1947 excavations along the upper Kobuk, in northwest Alaska, by three men and a woman in their seventies. The narratives deal in turn with summer, autumn, winter and spring activities, covering daily life, division of men's and women's work, fishing along the Kobuk and Squirrel Rivers, caribou and bear hunting, travel, house building, puberty and marriage rites, childbirth and children, sickness and shamanism, funeral customs, folklore, etc. Illus. by modern photographs. ***Copy seen:*** DSI.

51179. GIDDINGS, JAMES LOUIS, 1909– . Round houses in the western Arctic. (American antiquity, Oct. 1957. v. 23, no. 2, pt. 1, p. 121–35, illus., sketch map, diagrs.) 32 refs.

Describes discovery of six oval house pits on Choris Peninsula, Aug. 1956, during an archeological and tree-ring survey of the Eschscholtz Bay region of northwest Alaska. The northernmost of three large pits, 42 x 24 ft., on the ninth (oldest) of former beaches was excavated. The floor level began at 15 to 24 in. depth and yielded traces of postmolds, wood fibers, roof or wall remnants. A reconstruction of the original buildings is attempted. The forms and techniques of house contents refer the site toward Norton culture of the northern Bering Sea. The bone and stone artifacts and 250 potsherds with the Norton linear-stamped ornamentation are discussed. The excavated house is tentatively dated as 3000–4000 years old. The oval-shaped houses, apparently without corners or entrance passages, show some similarity to round houses excavated on St. Lawrence Island and on the Eskimo-Chukchi coast of Asia.

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51180. GIDDINGS, JAMES LOUIS, 1909– . The tenuous Beaufort Sea archeology. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957, p. 94–100.) 30 refs.

Reviews the paleo-Eskimo finds in Alaska, Canada and Greenland (Ipiutak, Denbigh, Birnirk, Dorset, Thule, etc.) and comments on the paucity of material

along the Beaufort Sea. The destruction of Eskimo and pre-Eskimo sites due to sea encroachment is suggested.
Copy seen: CaMAI.

GIDDINGS, JAMES LOUIS, 1909– , *see also* Harp, E. Arctic. *1957.* No. 51594.

GIER, J. T., *see* Dunkle, R. V., *and others.* Emissivity of ice, snow . . . *1957.* No. 50657.

51181. GIERSTEN, Ed. B., a/s, *Bergen, Norway.* Der ligger et land. Norway from above. Bergen, 1957. 4 p. 88 plates. Text in Norwegian and English. ***Title tr.:*** There lies a country. Norway from above.

Contains 88 aerial photographs of cities and landscapes; 13 of localities in the North: Traena, Saltdalen, Bodø, Lofoten ports, Gratangen, Jaeggervarre, Reisdal, etc. Brief bilingual notes accompany the photographs. ***Copy seen:*** DLC.

51182. GIFFORD, RAY WALLACE, JR., 1923– , *and others.* Sympathectomy for Raynaud's phenomenon; follow-up study of 70 women with Raynaud's disease and 54 women with secondary Raynaud's phenomenon. (Circulation, Jan. 1958. v. 17, no. 1, p. 5–13, tables.) 15 refs. *Other authors:* E. A. Hines, Jr., and W. McK. Craig.

Contains information on age of onset, symptoms, precipitating factors (exposure to cold); family history; complications before operation; types of sympathectomy and its effect on Raynaud's phenomenon, trophic lesions, and sclerodactylia; evaluation of overall results of sympathectomy; effects of sympathectomy in secondary Raynaud's disease. ***Copy seen:*** DNLM.

51183. GILARDI, ARNOLDO, *and* **P. EBNÖTER.** Erfolgreiche Wiedererwärmung stark unterkühlter junger Säuglinge unter Neuroplegie mittels Largactil. (Praxis, Aug. 8, 1957. Jahrg. 46, No. 32, p. 697–702, illus.) 37 refs. Text in German. ***Title tr.:*** Successful rewarming of severely hypothermic young infants through Largactil-neuroplegia.

Reviews earlier reports of hypothermia in babies, spontaneous and artificial "hibernation", etc., and reports two cases of hypothermia in infants (one premature) due to low room temperature. Rectal temperature (32° and 26° C.), rate of respiration and heartbeat; conditions of lungs, blood, urine, etc., are described. Very slow rewarming with application of decreasing doses of Largactil led to complete recovery. ***Copy seen:*** DNLM.

GILBERT, F. P., *see* Andreasen, G. E., *and others.* Aeromagnetic map . . . *1958.* No. 49302.

51184. GILBERT, JOSEPH EVAN JOSAPHAT, 1915– , *and* **R. BERGERON.** Northern Quebec. Quebec, 1957. 34 p. plates, maps incl. 1 fold. (Quebec. Dept. of Mines. Geological Surveys Branch. Geological report 75) 60 refs.

Describes the exploration and development of iron ore deposits in the "Caniapiskau Series," Late Precambrian formations, of the Labrador geosyncline; and surveys other known mineral resources such as manganese and sulphides of copper, lead, zinc, nickel, silver and gold. Zones of discovery and exploration are noted. Comments briefly on the geography, physiography, climate, etc.
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51185. GILBERT, KENNETH. Alaskan poker stories. Stories by Kenneth Gilbert; illus. by Eustace Ziegler. Seattle, R. D. Seal, 1958. 46 p. illus.

Contains 12 tales of gold-rush days.
Copy seen: DLC.

51186. GILCHRIST, W. M. The challenge of the North. (Western miner and oil review, July 1958. v. 30, no. 7, p. 54–55, 58).

Discusses mining potentials of northern Canada, lists the main developments; role of foreign capital and foreign operators in lieu of Canadian enterprise is stressed. ***Copy seen:*** DI.

GILETTI, BRUNO J. *see* Kulp, J. L., *and others.* Isotopic studies . . . *1957.* No. 52563.

51187. GILL, GORDON DANIEL, 1897– . Filth flies of Central Alaska. (Journal of economic entomology, Dec. 1955. v. 48, no. 6, p. 648–53, text map, 4 tables.) 9 refs.

Lists 118 species, with localities and time collected (in 1952–54) also notes on traps and baits. The author was working on a project initiated in 1950 by the Arctic Aeromedical Laboratory at Ladd Air Force Base, Fairbanks, to investigate potential disease vectors in the Territory. The numbers of flies collected with different baits and the frequency of certain flies in the collections are tabulated. The relative abundance

of some forms and the absence of common house fly, *Musca domestica*, are noted and discussed. ***Copy seen:*** DA.

51188. GILLESPIE, G. J. Halifax now main centre. (Canada. Dept. of Fisheries. Trade news, Feb. 1958. v. 10, no. 8, p. 7–8, illus.)

Includes information on vessels participating in this year's sealing (8); landings in the previous season; species hunted (harp and hooded seals); classes of seals, ways of hunting; processing of the skins; oil extraction, its grades and uses. ***Copy seen:*** DLC.

51189. GILLESPIE, J. A. The effect of lowered body temperature on histamine-induced gastric secretion. (Quarterly journal of experimental physiology, July 1956. v. 41, no. 3, p. 290–94, illus., tables.)

In cats, both acidity and volume of gastric juice fell rapidly on cooling. A reduction by 15° C. in body temperature caused a fall in acid secretion by about three quarters. On rewarming, secretion recovered though not as quickly as it fell. ***Copy seen:*** DNLM.

51190. GILLESPIE, J. S., *and* **M. WISHART.** The effect of cooling on the response of the rabbit colon to nerve and drug stimulation. (Journal of physiology, Feb. 1957. v. 135, no. 2, p. 45P–46P.) 3 refs.

Account of investigations on the isolated rabbit colon. Progressive cooling abolished first the response to stimulation of the pelvic nerve, then to stimulation of the post-ganglionic neurone by nicotine and finally the response of smooth muscle cells to direct stimulation with acetylcholine. Rewarming restores the motor response. ***Copy seen:*** DNLM.

51191. GILLETT, JOHN MONTAGUE, 1918– . A revision of the North American species of *Gentianella* Moench. (St. Louis, Missouri Botanical Garden. Annals, Sept. 1957. v. 44, no. 3, p. 195–269, 9 illus.) *Pub. also as:* Contrib. no. 1518, Botany and Plant Pathology Laboratory, Science Service, Canadian Dept. of Agriculture, Ottawa.

Contains a critical revision of this genus in North America, with a discussion of generic position and data on its history, cytology and geographic distribution followed by a taxonomic treatment. Keys are followed by descriptions of 13 species and 24 subspecies, with data on geographic distribution and detailed lists of specimens provided. *G. detonsa* ssp. *yukonensis* is described as new and several new combinations are established. Some forms are of circumpolar distribution and cover all arctic regions of Europe, Asia and North America. Check list of the species and index of botanical names are appended. ***Copy seen:*** DA.

51192. GILLIARD, ERNEST THOMAS. Living birds of the world. N.Y., Doubleday, 1958. 400 p. illus., col. plates, 94 refs.

Includes summary discussion of all families of living birds and descriptions of selected representative genera and species. Appearance, physical characteristics, habitat, ecological niches, food, mating dress and ceremonies, nesting and rearing of the young, are described; social habits, symbiotic relationships with man and other fauna, migration and hibernation are discussed, and other, incidental information is presented. Although emphasis is on many of the tropical groups, there are references to scores of both migratory and permanent arctic species. The text is abundantly illustrated by colored plates and text figures, and an 11-page index lists scientific names of all mentioned species. ***Copy seen:*** DLC.

51193. GILLMANN, H., *and others.* Über die Wirkung der tiefen künstlichen Hypothermie auf die Aktion des menschlichen Herzens; Frequenz, Phonokardiogramm und EKG. (Archiv für Kreislaufforschung, Dec. 1957. Bd. 27, Heft 3–4, p. 288–305, illus., tables.) 103 refs. Text in German. *Other authors:* M. Zindler *and* B. Löhr. ***Title tr.:*** The effect of deep artificial hypothermia upon cardiac activity of man; frequency, phonocardiogram and ECG.

A study based on records of 170 patients, made hypothermic to 31–24.9° C. Heart-beat varied considerably with age and between individuals; QRS and QT time showed significant individual variations. Other changes in the ECG are also discussed. No ventricular fibrillation was noted. Conditions in cardiac, pulmonary and nervous cases are also analyzed. ***Copy seen:*** DNLM.

51194. GIMBUTAS, MARJA (ALSEIKAITE), 1921– . The prehistory of eastern Europe, part 1; mesolithic, neolithic and copper age cultures in Russia and the Baltic area. Cambridge, Mass., Peabody Museum, 1956. ix, 241 p., illus., tables, maps incl. fold., +50

illus. on plates. (Harvard University. American School of Prehistoric Research. Bulletin, no. 20.). Refs.

This comprehensive and profusely illustrated work includes, in the chapter on the culture of the hunters and fishers of northeast Europe (p. 177–220), a description of the neolithic stage in the White Sea area from Karelia to the Urals: naturalistic animal sculptures and sculpture-decorated tools in stone, bone and wood, schematic flint figurines, etc. The style and motifs of rock engravings at Lake Onega and near the mouth of Vyg River are discussed and dated approx. 1000 B.C. Petroglyphs representing naked male skiers holding poles, bows and arrows, or associated with reindeer are noted in White Sea sites. A condensed version of this chapter's arctic elements has appeared as *An ancient art of hunters and fishers* in Archeology, Winter 1955. v. 8, no. 5, p. 268–77.

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51195. GIMMEL'FARB, BORIS MIKHAÏLOVICH, 1900– . Chto takoe fosfority, gde i kak ikh iskat'. Moskva, Gosgeoltekhizdat, 1954. 27 p. illus., Text in Russian. ***Title tr.:*** What is phosphorite, and where and how is it to be looked for.

Popular description of the main phosphate rocks and instructions for amateur prospectors. The apatites of Kola Peninsula are noted among the main phosphorite resources in the U.S.S.R., and their importance for agriculture is stressed. ***Copy seen:*** DLC.

51196. GIMMEL'FARB, BORIS MIKHAÏLOVICH, 1900– , *and* T. P. UNANÏANTS. Syr'evaîa baza tukovoĭ promyshlennosti SSSR. Moskva-Leningrad, Ob"edinennoe nauchnotekhnicheskoe izdvo, 1937. 250 p. illus., diagrs., tables. (Narodnyĭ komissariat tîazheloĭ promyshlennosti. TSentral'naîa komissiîa po zapasam poleznykh iskopaemykh, 257 refs. Text in Russian. ***Title tr.:*** Raw material base for the U.S.S.R. fertilizer industry.

Outlines location and resources of phosphate rocks, potassium salts and nitrite ores in the U.S.S.R. and their utilization for industrial production of fertilizers; included (p. 9–15 and 189) are the apatite deposits of Kola Peninsula.

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51197. GINI, CORRADO. De norrøne grønlandsbygders undergang. (Naturen, 1957. årg. 81, nr. 7, p. 410–32.) Text in Norwegian. ***Title tr.:*** The Norse Greenland communities' destruction.

Vestribygd, Eystribygd, and Herjolfnes in West Greenland were settled about 990 A.D. by at least 2000 Norwegians. Vestribygd was abandoned in 1342, the others about 200 years later. Reasons for their disappearance are analyzed in this study of comparative demography by a member of the Italian committee on population problems. It is concluded that, while many other factors contributed to adverse conditions, Vestribygd's abandonment resulted from an abnormally large number of the women joining neighboring Eskimo groups. Eystribygd's destruction is believed due to conflicts with Eskimos and to deterioration of the climate and economy. Herjolfnes probably was abandoned by a small degenerate group a short time later. These conclusions are discussed by K. Faegri, q.v. ***Copy seen:*** DGS.

51198. GINZBURG, ANNA IL'INICHNA, *and others.* Geologiîa mestorozhdeniĭ redkikh èlementov, vyp. 1; redkometal'nye karbonatity. Moskva, Gos. nauchno-tekhnicheskoe izd-vo lit-ry po geologii i okhrane nedr, 1958. 127 p. diagrs., tables, maps part fold. (Ministerstvo geologii i okhrany nedr SSSR. Vsesoîuznyĭ nauchno-issledovatel'skiĭ institut mineral'nogo syr'îa.) 132 refs. Text in Russian. *Other authors:* E. A. Nechaeva, IU. B. Lavrenev, *and* L. K. Pozharitskaîa. ***Title tr.:*** Geology of the deposits of rare elements, part 1; rare-earth mineral carbonatites.

Outlines the geological and geochemical features of such deposits, and describes several in Europe, in Africa and the Americas. Rare-earth mineral carbonatites in Kola Peninsula, the northwestern part of the Siberian platform and the Aldan region are also mentioned; characteristics of alkali rocks are given. The extensive list of literature (mostly foreign) was compiled by D. B. Egorov.

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51199. GINZBURG, I. V. Geologicheskoe polozhenie i vnutrennîaîa tektonika shchelochnykh granitov na Kol'skom poluostrove. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 213–24, illus., fold. diagr., map.) Text in Russian. ***Title tr.:*** Geological position and inner tectonics of alkaline granites of the Kola Peninsula.

Outlines the mode of genesis and paragenesis of alkaline granite intrusions and discusses the role of regional tectonics in the occurrence and distribution of alkaline granites. The tectonic fracture and distortion zones and especially disjunctive dislocations are examined and are shown to have played decisive roles in development of alkaline granite intrusions. A stratigraphic cross-section of Precambrian formations is evaluated and compared with the vertical distribution and mode of the alkaline granites. Tectonized forms of intrusions are treated and compared with the tectonic transformation of country rocks. Behavior of alkaline granites in the tectonic processes is examined from different angles and the effects are outlined. ***Copy seen:*** DLC.

51200. GINZBURG, I. V. K voprosu o formirovanii rel'efa severno-vostochnoĭ chasti Kol'skogo poluostrova. (Problemy Severa, 1958, vyp. 2, p. 116–28, illus. table, cross-sections, text map.) 6 refs. Text in Russian. ***Title tr.:*** On the question of relief formation in the northeastern part of the Kola Peninsula.

Presents morphologic characteristics of the area between the central watershed and Barents Sea, from the Voron'ya River in the west to the Iokanga River in the east. The relief is determined by the distribution and morphology of the fundamental crystalline rocks, mostly granites and para- and orthogneisses; by the arrangement of the lake-and-river net; and by the various forms of glacial deposits. These main features are treated in detail. Disposal of the crystalline rocks depends on the regional tectonics, geologic structure and physical and mechanical properties of the rocks. Relief forms of fundamental rocks shape the development of hydrographic net and the migration and deposition of glaciers. Lakes and river courses follow tectonic fracturing and distortion lines. Types of glacial forms: moraines, outwash fans, eskers, kames, etc., are described.

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51201. GINZBURG, I. V. K voprosu o petrokhimii shchelochnykh granitov. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 260–307, tables, diagrs., text map.) Text in Russian. ***Title tr.:*** The petrochemistry of the alkaline granites.

Presents a comprehensive account of the petrochemistry, geochemistry and metallogeny of alkaline granites of Kola Peninsula, based on author's field investigation in a small area (approx. 67°45′–67°57′ N. 36°20′–36°40′ E.) and on the investigations of others. The main petrochemical features of alkaline granites generally are reviewed; the aegirite-arfvedsonite and aegirite-augite-hastingsite granites are treated in detail. The component, secondary and accessory minerals are evaluated. Variations of minerals and their chemical composition in various stages of consolidated magma are discussed. Spectral analyses, optical constants and vector diagrams of both groups of granites are examined. Both groups are compared with similar granites in the other parts of the U.S.S.R. and foreign countries, with conclusion that the aegirite-arfvedsonite granites are the most alkaline of the granite family; and that the aegirite-augite-hastingsites may be considered as subalkaline granites.

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GINZBURG, I. V., *see also* Chumakov, A. A., *and* I. V. Ginzburg. Novaîa redkometal'naîa geokhimicheskaîa provinſsiîa . . . *1957*. No. 50266.

GIONO, HUMBERT, *see* Chevillard, L., *and others*. Action comparée de quelques vasodilatateurs . . . *1958*. No. 50228.

GIONO, HUMBERT, *see* Chevillard, L., *and others*. Activités respiratoire et cardiaque . . . *1958*. No. 50229.

GIONO, HUMBERT, *see* Chevillard, L., *and others*. Thermorégulation . . . après hypothermie . . . *1958*. No. 50230.

GIRADO, MARTIN, *see* Purpura, D. P., *and others*. Hypothermic potentiation . . . cardiac irregularities. *1958*. No. 54170.

51202. GIROUD, A., *and others*. Malformations urinaires dans l'hypervitaminose A. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 11, p. 1811–13, table.) 3 refs. Text in French. *Other authors:* M. Martinet *and* C. Roux. ***Title tr.:*** Urinary malformations due to hypervitaminosis A.

Description of anomalies affecting the kidneys and urinary ducts of rat embryos. Nearly all anomalies were produced when excess vitamin A was fed during the eighth to tenth day of gestation.

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GIRS, A. A., *see* IUGG. Symposium on polar meteorology. *1958*. No. 51947.

GIUDICE, P. A., *see* Ferrero, R., *and* P. A. Giudice. Considerazioni . . . temperature cutanea . . . *1957.* No. 50881.

51203. GIZENKO, A. Ivan Dementʹevich Cherskiĭ. (Svet nad Baĭkalom, Sept.–Oct. 1958. no. 5, p. 145–47, port.) Text in Russian.

Biographic sketch of this Russian geologist and review of recent publications devoted to his life and scientific work. His contribution in the field of zoology are noted. ***Copy seen:*** DLC.

51204. GJAEREVOLL, OLAV. Botanical investigations in central Alaska, especially in the White Mountains, part 1; Pteridophytes and Monocotyledones. Trondheim, 1958. 74 p. illus., 7 text maps. (Norske videnskabers selskab, Trondheim. Skrifter, 1958. nr. 5.) 49 refs.

Presents the first results on vascular plants from a floristic study of the White Mts. northeast of Fairbanks in 1953, with analysis of plant communities by the Scandinavian - Middle - European method. Some 1500 specimens of approx. 500 species were collected. The vascular flora: 169 species, subspecies and varieties, are listed (dicotyledons and phytogeographic discussion to be pub. as pt. 2). Locality, distribution, frequency, ecological conditions, substrate, habit, etc. are noted. Comparisons are made with European and Greenland forms. Six species are new to the flora of Alaska: *Carex franklinii, C. stenophylla* ssp. *eleocharis, C. filifolia, Eriophorum triste, Deschampsia brevifolia,* and *Poa porsildii.* Distribution of selected species is shown on maps; an alphabetic index of all species and an introductory account of the White Mts. region, its geology and climate are included.

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51205. GJAEREVOLL, OLAV. Noen mosefunn fra Norge og Sverige. (Norske videnskabers selskab, Trondheim. Museet. Årbok, 1953. p. 81–86) 5 refs. Text in Norwegian.

Title tr.: New records of Scandinavian bryophytes.

Annotated list of 17 species with distributional data and notes on ecology. Eight mosses and three liverworts are recorded in northern Norway and Swedish Lapland. ***Copy seen:*** DA.

51206. GJAEREVOLL, OLAV. *Poa porsildii,* a new species from Alaska-Yukon. (Norske videnskabers selskab, Trondheim. Forhandlinger, 1956. bd. 29, no. 16, p. 72–75, 2 illus.) 4 refs.

Contains a description of this grass collected by the author in a snow-bed on Lion Peak in the White Mts. of central Alaska, in 1953; it was also collected by A. E. Porsild and A. Chase in Yukon Territory, and reported as *Colpodium wrightii.* ***Copy seen:*** DLC.

51207. GJAEREVOLL, OLAV. Some species new to the flora of Alaska. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957, p. 30–33.)

Reports five species new to Central Alaska with information on their ecology and distribution: *Carex franklinii* Boott, *Carex eleocharis* L. H. Bailey, *Carex filifolia* Nutt, *Eriophorum triste* (Tr. Fr.) Hadac et Løwe, and *Stellaria umbellata* Turcz. ***Copy seen:*** CaMAI.

GJAEREVOLL, OLAV, *see also* Persson, H., *and* O. Gjaerevoll. Bryophytes . . . interior of Alaska. *1957.* No. 53939.

51208. GJELSVIK, TORE. Albittrike bergarter i den karelske fjellkjede på Finnmarksvidda, Nord-Norge. (Norway. Geologiske undersøkelse. Årbok 1957, *pub.* 1958. nr. 203, p. 60–72, tables, illus.) 5 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Albite-rich rocks in the Karelian mountain chain in the interior of Finnmark, North Norway.

"Greenschists and alternating, smaller beds of graphite schists, felsites, together with intrusive rocks of diabasic and granitoid character, all belonging to the Karelidic orogeny, show strong enrichment of albite. Chemical analyses demonstrate the Na_2O content amounting to 10%. Details of the most albite-rich rocks are given. It is suggested that the intrusive rocks are derived from palingenic magmas, inheriting the Na_2O richness from geosynclinal or early orogenic spilitization processes."—Author's abstract. ***Copy seen:*** DGS.

51209. GJELSVIK, TORE. Epigenetisk koppermineralisering på Finnmarksvidda. (Norway. Geologiske undersøkelse. Årbok 1957, *pub.* 1958. nr. 203, p. 49–59, illus. sketch map, profiles.) 4 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Epigenetic copper mineralization in the interior of Finnmark.

"In the Precambrian rocks of Finnmarksvidda, one large copper deposit,

Biddjovagge, and a series of small sulphide occurrences are located. The sulphides are pyrite, chalcopyrite and pyrrhotite, in some places also bornite and chalcocite. The ore deposits at Biddjovagge are formed in brecciated parts of tight anticlines, the other occurrences are disseminations, either within, or at the contacts of various greenstones. Most abundant, however, are quarts-carbonate-sulphide veins within the same rocks. Granitic rocks occur at some distance, but the field relations indicate a closer genetic relationship between the ores and some late orogenic gabbroic intrusives."—Author's abstract.

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51210. GJELSVIK, TORE. Extremely soda rich rocks in the Karelian zone, Finnmarksvidda, northern Norway; a contribution to the discussion of the spilite problem. (Geologiska föreningen i Stockholm. Förhandlingar no. 495, Nov.–Dec. 1958. bd. 80, häfte 4, p. 381–406, illus., tables.) 25 refs.

An expanded discussion of investigations of albite-enriched rocks reported in No. 51208, with some identical tables and microphotographs.

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51211. GJELSVIK, TORE. Pitchblende mineralization in the Precambrian plateau of Finnmarksvidda, northern Norway. (Geologiska föreningen, Stockholm. Förhandlingar, 1957. bd. 79, häfte 3, no. 490, p. 572–80, 4 illus., map, diagr.)

Pitchblende, hematite, and chlorite are formed in a large carbonate breccia consisting partly of greenstones and greenschists, partly of albite-rich rocks. One of the latter, a coarse-grained albite "syenite" contains the uranium mineralization, while hematite is common in the whole breccia. The genesis of the pitchblende mineralization is discussed in relation to the main petrogenic processes of the orogeny: the granitization, the carbonization, and the albite rock formation. The close spatial relationship of pitchblende and albite "syenite" indicates a close genetic relationship.—Author's abstract.

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51212. GJESSING, GUTORM, 1906– . Mountain-Saames (Mountain-Lapps) fishing at the sea-coast in the 17th and 18th centuries. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 198–202.) 10 refs.

Mountain- and sea-Lapps were distinctly differentiated, but their territories overlapped sometimes, and their activities interfered with each other's basic economy: coast-Lapps engaged in reindeer hunting, ptarmigan trapping, etc. in the mountains in winter; mountain-Lapps descended into the coastal area in summer ruining cattle pastures with their reindeer herds. The mountain-Lapps' movements are shown through contemporary documents and their sea-fishing traditions traced to medieval times. The possibility of the sea-Lappish culture of Helgeland deriving originally from Swedish mountain-Lapps is suggested.

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51213. GJESSING, GUTORM, 1906– . Oldsaksamlingens tilvekst 1939. Tromsø, 1948. 61 p., illus. (Tromsø. Museum. Årshefter 1945. v. 68, nr. 2. Humanistisk avd. nr. 11.) Text in Norwegian. ***Title tr.:*** Additions to the antiquities collection in 1939.

Enumerates and describes stone, bone and metal artifacts found mainly in northern Norway (locations stated) and presented to the Tromsø Museum by various donors.

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51214. GLADKOV, N. A. Novye svedeniîa o pozvonochnykh zapoliârnoĭ Îakutii, bukhta Tiksi. (Akademiîa nauk SSSR. Doklady, 1957, t. 112, no. 1, p. 159–62.) 7 refs. Text in Russian. ***Title tr.:*** New information on vertebrates of arctic Yakutia, Tiksi Bay.

Report on observations made during the summer of 1956 in the environs of Tiksi settlement. Six mammals and a dozen birds are recorded, with notes on frequency, nests, eggs, color, etc. An attempt to estimate the density of bird population in the area is made.

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51215. GLADKOV. N. A. Perelety ptiîs. (Priroda, Feb. 1957, no. 2, p. 31–42, 10 illus.) Text in Russian. ***Title tr.:*** Migration of birds.

Contains a general discussion of this phenomenon, routes, and factors influencing the migration of birds. Flights of some arctic species like *Limosa lapponica* (text map 9) are noted and discussed. The author is of the opinion that migration cannot be explained by instinct or hereditary factors; it is a seasonal phenomenon and is influenced by climatic changes, scarcity of food and physiological characteristics of the species. Study of each

species' physiology and ecology gives the clue for understanding its migration.

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51216. GLADKOV, N. A. Ptit͡sy zapolâ̂rnoĭ Ĭ̂Akutii; bukhta Tiksi. (Problemy Severa, 1958. vyp. 2, p. 169–93.) 24 refs. Text in Russian. ***Title tr.:*** Birds of polar Yakutia, Tiksi Bay.

Account of 38 forms studied in summer 1956 within a radius of 15 km. from Tiksi settlement (71°36′ N. 128°54′ E.). Geography of the area, soil, vegetation, fauna and man's effect upon them, are discussed (p. 169–75). Detailed account follows of 38 individual forms, including date(s) of appearance, nesting activities, size and weight of eggs, moult.

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51217. GLADKOV, N. A. Der rotkehlige Strandläufer, *Calidris ruficollis* ist eine selbständige Art. (Journal für Ornithologie, Apr. 1957. Bd. 98, Heft 2, p. 195–203, 2 illus., plate 3.) 15 refs. Text in German. ***Title tr.:*** The red-throated sandpiper *Calidris ruficollis*, is a valid species.

Contains a discussion of the status and taxonomic position of *C. ruficollis* and *C. minuta*, considered identical or at least vicarious species. Both were observed in summer 1956 in the Tiksi Bay region in Yakutia, and from study of their biology and ecology conclusion is offered that both species are valid. A table of morphological characteristics is appended.

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51218. GLADKOVA (Zvi͡agint͡seva), T. D. Forma poperechnogo sechenii͡a volos nekotorykh narodov Dal'nego Vostoka. (Akademii͡a nauk SSSR. Institut ėtnografii. Kratkie soobshcheniĭa, 1951. vyp. 13, p. 56–58, table.) 15 refs. Text in Russian. ***Title tr.:*** The shape of the cross-section of hair of some peoples of the Far East.

Discusses the technique and instruments used for micro-analysis of hair specimens, including those of Nanaitsy (Golds) and Nivkhi (Gilyaks), collected in 1947 by the Academy of Sciences' expedition under M. G. Levin and G. F. Debet͡s. The texture, thickness, etc., of hair is described and data tabulated.

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51219. GLASER, ERIC MICHAEL, *and others.* Adaptation to localized warming and cooling. (Journal of physiology, Feb. 1958. v. 140, no. 2, p. 42P–43P.) 2 refs. *Other authors:* M. S. Hall *and* G. C. Whittow.

The same hand was immersed daily six times at 47° C. and six times at 4° C. "Within 9–15 days the pain and the rise in blood pressure and heart rate diminished or disappeared both during hot and cold immersion." Earlier observations suggest that this kind of adaptation is effected by the brain.

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51220. GLASER, ERIC MICHAEL, *and* **P. S. B. NEWLING.** The control of body temperature in thermal balance. (Journal of physiology, June 1957. v. 137, no. 1, p. 1–11, illus., tables.) 29 refs.

Account of experiments with three subjects wearing shorts and exposed to four different temperatures, following 5-minute periods of cooling or warming. Previous cooling caused a reduction of the level of skin and mouth temperature at which thermal balance was achieved in any one of the four environments; prewarming had an opposite effect. The correlation of deep and surface temperatures with those of the environment during thermal equilibrium is discussed, also the effect of disturbance upon the latter and its fluctuations under physiological conditions. ***Copy seen:*** DLC.

51221. GLASER, ERIC MICHAEL, *and* **G. C. WHITTOW.** Retention in a warm environment of adaptation to localized cooling. (Journal of physiology, Apr. 1957. v. 136, no. 1, p. 98–111, illus., tables.) 34 refs.

Repeated immersion of one hand in water of 4° C. significantly diminished rise of blood pressure and heart rate during localized cooling, and abolished the pain of cooling. This effect of hand immersions persisted for one hour even in a warm environment. After repeating the hand immersions for a number of days, the described effect persisted over intervals of 24 hrs. ***Copy seen:*** DNLM.

GLAUKE, HAROLD, *see* Villalobos, T. J., *and others.* A cause . . . thrombocytopenia and leucopenia . . . hypothermia. *1958.* No. 55815.

GLAZEBROOK, GEORGE PARKIN DE TWENEBROKER, *see* Rich, E. E. Moose Fort . . . 1783–85 . . . *1954.* No. 54303.

GLEASON, J. J., *see* Wood, C. P., *and* J. J. Gleason. Weather and flying in Alaska. *1958.* No. 56102.

51222. GLEDITSCH, KRISTIAN, 1901– . Beretning om Norges geografiske oppmålings virksomhet i året 1957. Oslo, C. P. Mordt & Søn, 1958. 54 p. 20 maps, illus. Text in Norwegian. Summary in English. ***Title tr.:*** Report on the Norwegian Geographical Survey's activities in the year 1957.

Geodetic, topographic-cartographic, and technical work is reported, that of arctic interest is as follows: On the initial SAS polar flight, gravitational measurements were established between Oslo and Anchorage, Alaska. The European gravitational net was expanded in several localities, including Svalbard; at sea such measurements were made by submarine at 150-ft. depth, 4 nautical miles from land, from Bergen to Bodø. Waterlevel elevations at coastal stations are tabulated. Precise elevations, first order and detail triangulations, also changes in level are reported. Cartographic work continued on the 1:250,000 and 1:50,000 map series; special, large-scale maps include Tromsø, Harstad, and Svolvaer harbors. Control points were established for aerial mapping and some air photography was carried out. The Tromsø sheet in the 1:1 million map series, Markhambreen at 1:100,000 and others produced or under way are cited. Twenty outline maps indicate status of the various mapping activities.

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51223. GLEDITSCH, KRISTIAN, 1901– . Perspektivene for vår landsoppmåling. Hvordan vil de bli endret av Natosamarbeidet? (Teknisk ukeblad, Jan. 5, 1956. årg. 103, nr. 1, p. 4–14, text maps.) Text in Norwegian. ***Title tr.:*** Perspectives for our national survey. How will they be changed by the cooperation with NATO?

Discusses conflicting factors in mapping of Norway for civil and military purposes. Work on a general topographic atlas (scale 1:100,000) initiated in 1870, may be abandoned for one in scale 1:50,000. Precision levelling of southern Norway and basic levelling from Narvik to Vardø and Hammerfest, Karasjok and Kautokeino are completed; the first order triangulation of North Norway is out-dated. Military specifications calling for a different grid system, English- and American-produced maps introduced for military use, etc., are also factors in the situation. The present cooperation with the American Map Service should be continued for a while, but the Norges Geografiske Opmåling should be expanded to take full charge of all future surveying.

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GLEES, P., *see* Blumer, W., *and others.* A technique . . . studying . . . drugs . . . hypothermia. *1957.* No. 49781.

51224. GLEN, JOHN WALLINGTON, 1927– , *and* B. B. ROBERTS. Classification of snow, ice, frozen ground, and related subjects; development of the Universal Decimal Classification. Cambridge, Scott Polar Research Institute, May 6, 1954. 58 p. Mimeographed. also pub. "with parallel English and German texts in *Extensions and corrections* to the UDC, series 3, no. 3: F.I.D. publ. no. 248/3.3."

Contains schedule of classification numbers and an alphabetical subject index. *See also* Nos. 25592, 31643, and 37086.

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51225. GLEN, JOHN WALLINGTON, 1927– , *and others.* On the mechanism by which stones in till become oriented. (American journal of science, Mar. 1957. v. 255, no. 3, p. 194–205, diagrs.) 13 refs. *Other authors:* J. J. Donner *and* R. G. West.

In most till deposits, long axes of the stones tend to parallel direction of ice flow, but sometimes a transverse orientation also is noted. Experimental and theoretical studies show that elongated objects in a flowing liquid develop long axes parallel with flow direction in a short time, and over a long period a transverse orientation also develops. Theoretical results are compared with distribution of long axes found in various tills, including those in process of formation at Brageneset, Nordaustlandet (79°40′ N. 18°40′ E.) where large transverse orientations appear only in narrow band tills.

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GLEN, JOHN WALLINGTON, 1927– , *see* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

51226. GLIOZZI, M. Azione protettiva di alcoli polivalenti sulla sopravvivenza del miocardio embrionale alla perfrigerazione e alla liofilizzazione. (Società italiana di Biologia sperimentale. Bollettino, Mar. 1957. v. 33, no. 3, p. 211–15, illus.) 16

refs. Text in Italian. ***Title tr.:*** Protective action of polyvalent alcohols upon survival of chilled and lyophilized embryonic myocardium.

Account of experiments with embryonic chick tissues, grown in various fluids and cooled to temperatures down to —40° C. for 1–5 minutes, or lyophilized. Polyvalent alcohols, especially glycerol offered considerable protection to frozen cells, preserving their contractility, capacity to move and divide.

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GLOTOV, IU. G., *see* Baron, V. A., *and* IU. G. Glotov. Samokhodnyĭ morskoĭ ledokol'nyĭ parom. *1958*. No. 49552.

51227. GLUKHOVA, V. M. K faune mokretsov roda *Culicoides* Latr. (Diptera, Heleidae) Karelii. (Entomologicheskoe obozrenie, 1957. t. 36, no. 1, p. 248–51, illus.) 4 refs. Text in Russian. Summary in English. ***Title tr.:*** Genus *Culicoides* Latr. (Diptera, Heleidae) in Karelia.

Contains an annotated list of 14 species, of which one is described as new; based on material from Karelia and Kola Peninsula. ***Copy seen:*** DLC.

GLUSHINSKIĬ, P. I., *see* Atlasov, I.P., *and* P. I. Glushinskiĭ. Soveshchanie . . . *1958*. No. 49423.

51228. GLUSHKOVA, E. K. Opyt zakalivaniia deteĭ rannego vozrasta obliviem. (Gigiena i sanitariia, Nov. 1956, god 21, no. 11, p. 28–36, illus., tables.) 6 refs. Text in Russian. ***Title tr.:*** Experiment in hardening young children by sponging.

Report on the effects of sponging children 17–36 months old with progressively colder water (33°–26° C.). Diminished lowering of skin temperature following sponging and quicker return to earlier temperature were noted as immediate results. In addition, a reduction in nasal inflammations and colds was observed. ***Copy seen:*** DNLM.

51229. GLUSHNEV, M. Zverovodstvo v kolkhoze Krainego Severa. (Sel'skoe khoziaĭstvo Sibiri, 1958, no. 9, p. 104–105.) Text in Russian. ***Title tr.:*** Fur farming by a collective farm in the far North.

In 1953, the collective farm "Krasnyĭ promyshlennik" in Taymyr National District began breeding silver fox; after four years of failure, the situation improved markedly in 1957 when the farm made 196,000 rubles on fur. Methods of preserving fish in pits for fox feed is described. A five-fold increase of income from fur farming is claimed a possibility.

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GODFREY, K., *see* Chittleborough, R. G., *and* K. Godfrey. Whale mark. *1957*. No. 50240.

51230. GODFREY, W. EARL. Comments on the races of the myrtle warbler. (Canadian field-naturalist, Sept.–Oct. 1951. v. 65, no. 5, p. 166–67.) 6 refs.

Denroica coronata coronata is discussed with dimensions, based on specimens from James Bay, Lake Mistassini, Quebec, Yukon and Alaska.

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51231. GODFREY, W. EARL. Description of a new northwestern *Geothlypis*. (Canadian field-naturalist, May-June 1950. v. 64, no. 3, p. 104.)

Geothlypis trichas yukonicola n. ssp. is described, the Yukon yellow-throat, type from the Jarvis River at the Alaska Highway, June 29, 1949. ***Copy seen:*** DA.

51232. GODFREY, W. EARL. The new cowbird at James Bay, Ontario. (Canadian field-naturalist, Jan.-Feb. 1951. v. 65, no. 1, p. 46.)

Contains a note on *Molothrus ater artemisia*, a western race of the Nevada cowbird, collected on May 27, 1947 at the mouth of the Moose River.

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51233. GODFREY, W. EARL. A new northwestern olive-backed thrush. (Canadian field-naturalist, Sept.–Oct. 1951. v. 65, no. 5, p. 172–74.) 12 refs.

Hylocichla ustulata incana n. ssp. is described, type from Lapie River, Canol Road mile 132 in Yukon Territory, June 23, 1944, and known also from eastern Alaska (Chitina River at Glacier); it probably breeds in interior Alaska and western Mackenzie District.

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GODHAVN. GEOFYSISK OBSERVATORIUM, *see* Denmark. Meteorologiske Institut. Magnetisk årbog, 1926 . . . 1944– *in progress*. No. 50506.

51234. GODLEVSKIĬ, M. N. Ob osobennostiakh razvitiia trappovogo magnetizma na severo-zapade Sibirskoĭ platformy. (Akademiia nauk SSSR. Doklady, Nov. 11, 1958. god 26, t. 123, no. 2, p. 339–42, illus.) 6 refs. Text in

Russian. ***Title tr.:*** Features of trap magnetism development in the northwest of the Siberian platform.

Comments on the activity and intensity of magnetism in intrusive and effusive traps, with emphasis on the Noril'sk region. Four volcanic cycles during the Permian and Triassic periods are distinguished and their magma series are characterized and diagrammed. Depth, origin and directions of this volcanic activity are discussed. Differentiation and crystallization processes in various rocks are noted. ***Copy seen:*** DLC.

GODOVAN, S. A., *see* Ruzhitskiĭ, V. O. Almazy drevnego Timana. *1958.* No. 54462.

51235. GODSON, WARREN L. Canadian meteorological program for the International Geophysical Year. (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 1–8.)

Observational networks are to be expanded, chiefly to obtain high level data, and to correlate high level and low level circulation. ***Copy seen:*** CaMAI.

51236. GODSON, WARREN L. Canadian studies of the high-latitude stratospheric jet stream in winter. (*In:* Polar Atmosphere Symposium, Oslo 1956. v. 1, *pub.* 1958. p. 85–86.) Abstract only of No. 52732. ***Copy seen:*** DLC.

51237. GODSON, WARREN L. High-level fields of wind and temperature over the Canadian Arctic (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 20–21.)

Brief report on aspects of wind and temperature conditions and changes; from study of the 100-, 50-, and 25-mb. levels in Oct.-Apr. 1954–55—1956–57; temperature conditions, especially at 100 mb. vary in detail from one winter to another, and generally decrease toward the Pole; during baroclinic conditions, high-level jet streams were noted, with velocities exceeding 230 knots; the sudden ending of the high-level arctic winter must be related to the general circulation even in temperate latitudes.

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51238. GODSON, WARREN L. Models for numerical weather prediction. (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 9–19.)

Brief study of four equations, and their use in arriving at the theoretical basis of numerical weather prediction. The comparative success of electronic (numerical) prediction results largely from concentration on the large-scale features of atmospheric flow patterns, and the filtering out of smaller-scale features by the use of a grid network. Simplified equations and certain restrictive assumptions are used, exact equations may be used ultimately with better results.

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51239. GODSON, WARREN L., *and* **M. A. MacFARLANE.** Pressure-contour variance and kinetic energy over the Arctic. Montreal, Mar. 1958. 49, 20 p. map. diagrs., tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 7.) 7, 9 refs. Contract no. AF 19 (604)–1141, scientific report no. 5.

In "some statistical aspects of numerical representation problems" (p. 1–21), Godson discusses relations between the standard deviation of contour height and the vector standard deviation of geostrophic wind velocity, both for variations in time and for variations in space. The relation between wind and contour variances for a simple schematic contour pattern is examined to shed light on the existing data for such parameters. In "Contour variance and kinetic energy" (p. 22–49), MacFarlane submits Godson's theory to an empirical test, based on the 500 mb. daily forecast charts (1955) drawn by the Dept. of Transport Arctic Forecast Team at Edmonton, and sampling the area from the North Pole to approx. 60° N. As expected, a high correlation was found to exist between the two parameters of Godson's study, for variations in time and in space. In both cases the standard error of estimate was too large to calculate the wind variance from the height variance, but climatological estimates may be made of the mean kinetic energy and of the size of the dominant pressure systems. Data tables are appended.

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GODSON, WARREN L., *see also* Hare, F. K., *and others.* Specification of pressure fields and flow patterns . . . *1957.* No. 51587.

GODSON, WARREN L., *see also* IUGG. Symposium on polar meteorology. *1958.* No. 51947.

GODSON, WARREN L., *see also* Lee, R., *and* W. L. Godson. The arctic . . . jet stream. *1957.* No. 52732.

51240. GOETGHEBUER, MAURICE, 1876– . Deux chironomides nouveaux du Groenland. (Association philomathique d'Alsace et de Lorraine. Bulletin, 1955. t. 9, fasc. 3, p. 167, illus.) Text in French. ***Title tr.:*** Two new chironomids from Greenland.

Two new forms of these midges are described: *Trichocladius ater.* nov. sp. from Lac des Feuilles (69°43′ N. 49°45′ W.) and *T. lucidus* Staeg., var. *baueri* nov. They were collected by A. Bauer while with Expéditions polaires françaises in 1949, at two small lakes, 900 m. altitude, on the inland ice 20 km. from the west coast of Greenland.

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51241. GOETZE, ARTHUR B. The DEW Line story. (Signal, Jan. 1957. v. 11, no. 5, p. 9–12, illus.)

Description (by the president of Western Electric Co.) of reconnaissance and siting operations, transportation, construction, communications, etc.

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51242. GÖTZLINGER, JULIUS. Motordrivna snöslungor. (Teknisk tidskrift, Apr. 1944. årg. 74, häfte 15, p. 427–31, illus.) Ref. in text. Text in Swedish. ***Title tr.:*** Motor-driven snow removal equipment.

Reviews development of such equipment; the American "Snow King Rotary Plow" and the Swiss "Peterfräse" are mentioned. Swedish AJ–42, AJ–43, and AJ–44 are briefly described. AJ–42 is tractor-driven and throws the snow 45 m. to either sidė; AJ–42, driven by a truck, has a throwing distance of 40–45 m. and is capable of removing hard-packed snow more than 1 m. thick. Truck-driven AJ–44 removes 25 cm. at a speed of not less than 20 km./hr., and has a throwing distance of 9–10 m.

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51243. GÖTZLINGER, JULIUS. Slagseghetsdata och spröbrott. (Teknisk tidskrift, Apr. 10, 1956. årg. 86, häfte 15, p. 335–39, diagrs.) 11 refs. Text in Swedish. ***Title tr.:*** Impact-bending data and brittle fractures.

Discusses the transition temperature of iron and steel and criticizes the use of the Charpy-V test for determining brittle-facture temperature of large steel constructions. Other factors than composition and aging of the steel, such as shape of the structure, type of load, and the choice of welding electrodes and methods may be decisive factors. Major brittle fractures which have occurred in Sweden during the last 10–15 years should be published for use of construction engineers.

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51244. GOGOLEV, IVAN MIKHAĬLOVICH, 1930– , *and others.* Iz îâkutskoĭ poėzii. (Druzhba narodov, Dec. 1957, no. 12, p. 7–14.) Text in Russian. *Other authors:* P. Toburokov, Él'lîĭ, I. I. Ėrtûkov, L. A. Popov, A. A. Beriîâk, and B. Khabyryys. ***Title tr.:*** Yakut poetry.

Eight lyric and epic poems in Russian translation from the original Yakut.

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51245. GOGOLEV, IVAN MIKHAĬLOVICH, 1930– . V dal'niĭ put'. ÎÂkutsk, ÎÂkutskoe knizhnoe izd-vo, 1957. 95 p. port. Text in Russian. ***Title tr.:*** Long journey.

Russian translation of lyric and epic poems written by this young Yakut poet.

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51246. GOGOLEV, Z. V. Iz istorii Aldanskogo promyshlennogo raĭona, 1923–1934 gg. (In: Akademiîâ nauk SSSR. ÎÂkutskiĭ filial. Doklady 1954, p. 44–61.) Approx. 40 refs. Text in Russian. ***Title tr.:*** From the history of the Aldan industrial district, 1923–1934. Paper delivered to the 5th session of Yakut Branch of Academy of Sciences, June 1952.

In 1922, M. P. Tarabukin, a Yakut, discovered gold on Nezametnyy Creek in the almost uninhabited taiga of Yakutia where the town of Aldan now stands. Further discoveries were made, and the Aldan gold fields became among the richest in the U.S.S.R. Mining development is outlined: organization of the trust "ÎÂkutzoloto" (now: "Aldanzoloto") in 1923, new settlements, Aldan, Tommot, Seligdar, etc.; construction of the Never-Aldan highway; modern mining equipment; effects of the Aldan gold industry on economy of Yakutia.

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GOGOLEV, Z. V., *see also* Akademiîâ nauk SSSR. ÎÂkutskiĭ filial. Doklady . . . pîâtoĭ i shestoĭ . . . sessiîâkh . . . *1954.* No. 49165.

GOGOLEV, Z. V., *ed., see also* Akademiîâ nauk SSSR. ÎÂkutskiĭ filial. Ocherk . . . îâkutskoĭ . . . literatury. *1955.* No. 49169.

GLEASON, J. J., *see* Wood, C. P., *and* J. J. Gleason. Weather and flying in Alaska. *1958.* No. 56102.

51222. GLEDITSCH, KRISTIAN, 1901– . Beretning om Norges geografiske oppmålings virksomhet i året 1957. Oslo, C. P. Mordt & Søn, 1958. 54 p. 20 maps, illus. Text in Norwegian. Summary in English. ***Title tr.:*** Report on the Norwegian Geographical Survey's activities in the year 1957.

Geodetic, topographic-cartographic, and technical work is reported, that of arctic interest is as follows: On the initial SAS polar flight, gravitational measurements were established between Oslo and Anchorage, Alaska. The European gravitational net was expanded in several localities, including Svalbard; at sea such measurements were made by submarine at 150-ft. depth, 4 nautical miles from land, from Bergen to Bodø. Waterlevel elevations at coastal stations are tabulated. Precise elevations, first order and detail triangulations, also changes in level are reported. Cartographic work continued on the 1:250,000 and 1:50,000 map series; special, large-scale maps include Tromsø, Harstad, and Svolvaer harbors. Control points were established for aerial mapping and some air photography was carried out. The Tromsø sheet in the 1:1 million map series, Markhambreen at 1:100,000 and others produced or under way are cited. Twenty outline maps indicate status of the various mapping activities.

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51223. GLEDITSCH, KRISTIAN, 1901– . Perspektivene for vår landsoppmåling. Hvordan vil de bli endret av Natosamarbeidet? (Teknisk ukeblad, Jan. 5, 1956. årg. 103, nr. 1, p. 4–14, text maps.) Text in Norwegian. ***Title tr.:*** Perspectives for our national survey. How will they be changed by the cooperation with NATO?

Discusses conflicting factors in mapping of Norway for civil and military purposes. Work on a general topographic atlas (scale 1:100,000) initiated in 1870, may be abandoned for one in scale 1:50,000. Precision levelling of southern Norway and basic levelling from Narvik to Vardø and Hammerfest, Karasjok and Kautokeino are completed; the first order triangulation of North Norway is out-dated. Military specifications calling for a different grid system, English- and American-produced maps introduced for military use, etc., are also factors in the situation. The present cooperation with the American Map Service should be continued for a while, but the Norges Geografiske Opmåling should be expanded to take full charge of all future surveying.

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GLEES, P., *see* Blumer, W., *and others.* A technique . . . studying . . . drugs . . . hypothermia. *1957.* No. 49781.

51224. GLEN, JOHN WALLINGTON, 1927– , *and* B. B. ROBERTS. Classification of snow, ice, frozen ground, and related subjects; development of the Universal Decimal Classification. Cambridge, Scott Polar Research Institute, May 6, 1954. 58 p. Mimeographed. also pub. "with parallel English and German texts in *Extensions and corrections* to the UDC, series 3, no. 3: F.I.D. publ. no. 248/3.3."

Contains schedule of classification numbers and an alphabetical subject index. *See also* Nos. 25592, 31643, and 37086.

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51225. GLEN, JOHN WALLINGTON, 1927– , *and others.* On the mechanism by which stones in till become oriented. (American journal of science, Mar. 1957. v. 255, no. 3, p. 194–205, diagrs.) 13 refs. *Other authors:* J. J. Donner *and* R. G. West.

In most till deposits, long axes of the stones tend to parallel direction of ice flow, but sometimes a transverse orientation also is noted. Experimental and theoretical studies show that elongated objects in a flowing liquid develop long axes parallel with flow direction in a short time, and over a long period a transverse orientation also develops. Theoretical results are compared with distribution of long axes found in various tills, including those in process of formation at Brageneset, Nordaustlandet (79°40′ N. 18°40′ E.) where large transverse orientations appear only in narrow band tills.

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GLEN, JOHN WALLINGTON, 1927– , *see* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

51226. GLIOZZI, M. Azione protettiva di alcoli polivalenti sulla sopravvivenza del miocardio embrionale alla perfrigerazione e alla liofilizzazione. (Società italiana di Biologia sperimentale. Bollettino, Mar. 1957. v. 33, no. 3, p. 211–15, illus.) 16

refs. Text in Italian. ***Title tr.:*** Protective action of polyvalent alcohols upon survival of chilled and lyophilized embryonic myocardium.

Account of experiments with embryonic chick tissues, grown in various fluids and cooled to temperatures down to —40° C. for 1–5 minutes, or lyophilized. Polyvalent alcohols, especially glycerol offered considerable protection to frozen cells, preserving their contractility, capacity to move and divide.

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GLOTOV, IU. G., *see* Baron, V. A., *and* IU. G. Glotov. Samokhodnyĭ morskoĭ ledokol'nyĭ parom. *1958.* No. 49552.

51227. GLUKHOVA, V. M. K faune mokretsov roda *Culicoides* Latr. (Diptera, Heleidae) Karelii. (Entomologicheskoe obozrenie, 1957. t. 36, no. 1, p. 248–51, illus.) 4 refs. Text in Russian. Summary in English. ***Title tr.:*** Genus *Culicoides* Latr. (Diptera, Heleidae) in Karelia.

Contains an annotated list of 14 species, of which one is described as new; based on material from Karelia and Kola Peninsula. ***Copy seen:*** DLC.

GLUSHINSKIĬ, P. I., *see* Atlasov, I.P., *and* P. I. Glushinskiĭ. Soveshchanie . . . *1958.* No. 49423.

51228. GLUSHKOVA, E. K. Opyt zakalivaniia deteĭ rannego vozrasta oblivaniem. (Gigiena i sanitariia, Nov. 1956, god 21, no. 11, p. 28–36, illus., tables.) 6 refs. Text in Russian. ***Title tr.:*** Experiment in hardening young children by sponging.

Report on the effects of sponging children 17–36 months old with progressively colder water (33°–26° C.). Diminished lowering of skin temperature following sponging and quicker return to earlier temperature were noted as immediate results. In addition, a reduction in nasal inflammations and colds was observed. ***Copy seen:*** DNLM.

51229. GLUSHNEV, M. Zverovodstvo v kolkhoze KraĭnegoSevera. (Sel'skoe khoziaĭstvo Sibiri, 1958, no. 9, p. 104–105.) Text in Russian. ***Title tr.:*** Fur farming by a collective farm in the far North.

In 1953, the collective farm "Krasnyĭ promyshlennik" in Taymyr National District began breeding silver fox; after four years of failure, the situation improved markedly in 1957 when the farm made 196,000 rubles on fur. Methods of preserving fish in pits for fox feed is described. A five-fold increase of income from fur farming is claimed a possibility.

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GODFREY, K., *see* Chittleborough, R. G., *and* K. Godfrey. Whale mark. *1957.* No. 50240.

51230. GODFREY, W. EARL. Comments on the races of the myrtle warbler. (Canadian field-naturalist, Sept.–Oct. 1951. v. 65, no. 5, p. 166–67.) 6 refs.

Denroica coronata coronata is discussed with dimensions, based on specimens from James Bay, Lake Mistassini, Quebec, Yukon and Alaska.

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51231. GODFREY, W. EARL. Description of a new northwestern *Geothlypis.* (Canadian field-naturalist, May-June 1950. v. 64, no. 3, p. 104.)

Geothlypis trichas yukonicola n. ssp. is described, the Yukon yellow-throat, type from the Jarvis River at the Alaska Highway, June 29, 1949. ***Copy seen:*** DA.

51232. GODFREY, W. EARL. The new cowbird at James Bay, Ontario. (Canadian field-naturalist, Jan.-Feb. 1951. v. 65, no. 1, p. 46.)

Contains a note on *Molothrus ater artemisia,* a western race of the Nevada cowbird, collected on May 27, 1947 at the mouth of the Moose River.

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51233. GODFREY, W. EARL. A new northwestern olive-backed thrush. (Canadian field-naturalist, Sept.–Oct. 1951. v. 65, no. 5, p. 172–74.) 12 refs.

Hylocichla ustulata incana n. ssp. is described, type from Lapie River, Canol Road mile 132 in Yukon Territory, June 23, 1944, and known also from eastern Alaska (Chitina River at Glacier); it probably breeds in interior Alaska and western Mackenzie District.

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GODHAVN. GEOFYSISK OBSERVATORIUM, *see* Denmark. Meteorologiske Institut. Magnetisk årbog, 1926 . . . 1944– *in progress.* No. 50506.

51234. GODLEVSKIĬ, M. N. Ob osobennostiakh razvitiia trappovogo magnetizma na severo-zapade Sibirskoĭ platformy. (Akademiia nauk SSSR. Doklady, Nov. 11, 1958. god 26, t. 123, no. 2, p. 339–42, illus.) 6 refs. Text in

Russian. ***Title tr.:*** Features of trap magnetism development in the northwest of the Siberian platform.

Comments on the activity and intensity of magnetism in intrusive and effusive traps, with emphasis on the Noril'sk region. Four volcanic cycles during the Permian and Triassic periods are distinguished and their magma series are characterized and diagrammed. Depth, origin and directions of this volcanic activity are discussed. Differentiation and crystallization processes in various rocks are noted. ***Copy seen:*** DLC.

GODOVAN, S. A., *see* Ruzhitskiĭ, V. O. Almazy drevnego Timana. *1958.* No. 54462.

51235. GODSON, WARREN L. Canadian meteorological program for the International Geophysical Year. (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 1–8.)

Observational networks are to be expanded, chiefly to obtain high level data, and to correlate high level and low level circulation. ***Copy seen:*** CaMAI.

51236. GODSON, WARREN L. Canadian studies of the high-latitude stratospheric jet stream in winter. (*In:* Polar Atmosphere Symposium, Oslo 1956. v. 1, *pub.* 1958. p. 85–86.) Abstract only of No. 52732. ***Copy seen:*** DLC.

51237. GODSON, WARREN L. High-level fields of wind and temperature over the Canadian Arctic (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 20–21.)

Brief report on aspects of wind and temperature conditions and changes; from study of the 100-, 50-, and 25-mb. levels in Oct.-Apr. 1954–55—1956–57; temperature conditions, especially at 100 mb. vary in detail from one winter to another, and generally decrease toward the Pole; during baroclinic conditions, high-level jet streams were noted, with velocities exceeding 230 knots; the sudden ending of the high-level arctic winter must be related to the general circulation even in temperate latitudes.

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51238. GODSON, WARREN L. Models for numerical weather prediction. (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 9–19.)

Brief study of four equations, and their use in arriving at the theoretical basis of numerical weather prediction. The comparative success of electronic (numerical) prediction results largely from concentration on the large-scale features of atmospheric flow patterns, and the filtering out of smaller-scale features by the use of a grid network. Simplified equations and certain restrictive assumptions are used, exact equations may be used ultimately with better results.

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51239. GODSON, WARREN L., *and* **M. A. MacFARLANE.** Pressure-contour variance and kinetic energy over the Arctic. Montreal, Mar. 1958. 49, 20 p. map. diagrs., tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 7.) 7, 9 refs. Contract no. AF 19 (604)–1141, scientific report no. 5.

In "some statistical aspects of numerical representation problems" (p. 1–21), Godson discusses relations between the standard deviation of contour height and the vector standard deviation of geostrophic wind velocity, both for variations in time and for variations in space. The relation between wind and contour variances for a simple schematic contour pattern is examined to shed light on the existing data for such parameters. In "Contour variance and kinetic energy" (p. 22–49), MacFarlane submits Godson's theory to an empirical test, based on the 500 mb. daily forecast charts (1955) drawn by the Dept. of Transport Arctic Forecast Team at Edmonton, and sampling the area from the North Pole to approx. 60° N. As expected, a high correlation was found to exist between the two parameters of Godson's study, for variations in time and in space. In both cases the standard error of estimate was too large to calculate the wind variance from the height variance, but climatological estimates may be made of the mean kinetic energy and of the size of the dominant pressure systems. Data tables are appended.

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GODSON, WARREN L., *see also* Hare, F. K., *and others.* Specification of pressure fields and flow patterns . . . *1957.* No. 51587.

GODSON, WARREN L., *see also* IUGG. Symposium on polar meteorology. *1958.* No. 51947.

GODSON, WARREN L., *see also* Lee, R., *and* W. L. Godson. The arctic . . . jet stream. *1957.* No. 52732.

51240. GOETGHEBUER, MAURICE, 1876– . Deux chironomides nouveaux du Groenland. (Association philomathique d'Alsace et de Lorraine. Bulletin, 1955. t. 9, fasc. 3, p. 167, illus.) Text in French. ***Title tr.:*** Two new chironomids from Greenland.

Two new forms of these midges are described: *Trichocladius ater.* nov. sp. from Lac des Feuilles (69°43′ N. 49°45′ W.) and *T. lucidus* Staeg., var. *baueri* nov. They were collected by A. Bauer while with Expéditions polaires françaises in 1949, at two small lakes, 900 m. altitude, on the inland ice 20 km. from the west coast of Greenland.

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51241. GOETZE, ARTHUR B. The DEW Line story. (Signal, Jan. 1957. v. 11, no. 5, p. 9–12, illus.)

Description (by the president of Western Electric Co.) of reconnaissance and siting operations, transportation, construction, communications, etc.

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51242. GÖTZLINGER, JULIUS. Motordrivna snöslungor. (Teknisk tidskrift, Apr. 1944. årg. 74, häfte 15, p. 427–31, illus.) Ref. in text. Text in Swedish. ***Title tr.:*** Motor-driven snow removal equipment.

Reviews development of such equipment; the American "Snow King Rotary Plow" and the Swiss "Peterfräse" are mentioned. Swedish AJ–42, AJ–43, and AJ–44 are briefly described. AJ–42 is tractor-driven and throws the snow 45 m. to either side; AJ–42, driven by a truck, has a throwing distance of 40–45 m. and is capable of removing hard-packed snow more than 1 m. thick. Truck-driven AJ–44 removes 25 cm. at a speed of not less than 20 km./hr., and has a throwing distance of 9–10 m.

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51243. GÖTZLINGER, JULIUS. Slagseghetsdata och spröbrott. (Teknisk tidskrift, Apr. 10, 1956. årg. 86, häfte 15, p. 335–39, diagrs.) 11 refs. Text in Swedish. ***Title tr.:*** Impact-bending data and brittle fractures.

Discusses the transition temperature of iron and steel and criticizes the use of the Charpy-V test for determining brittle-facture temperature of large steel constructions. Other factors than composition and aging of the steel, such as shape of the structure, type of load, and the choice of welding electrodes and methods may be decisive factors. Major brittle fractures which have occurred in Sweden during the last 10–15 years should be published for use of construction engineers.

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51244. GOGOLEV, IVAN MIKHAĬLOVICH, 1930– , *and others.* Iz i͡akutskoĭ poėzii. (Druzhba narodov, Dec. 1957, no. 12, p. 7–14.) Text in Russian. *Other authors:* P. Toburokov, Él'hai͡ ĭ, I. I. Ėrtu͡kov, L. A. Popov, A. A. Beriu͡ak, and B. Khabyryys. ***Title tr.:*** Yakut poetry.

Eight lyric and epic poems in Russian translation from the original Yakut.

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51245. GOGOLEV, IVAN MIKHAĬLOVICH, 1930– . V dal'niĭ put'. I͡Akutsk, I͡Akutskoe knizhnoe izd-vo, 1957. 95 p. port. Text in Russian. ***Title tr.:*** Long journey.

Russian translation of lyric and epic poems written by this young Yakut poet.

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51246. GOGOLEV, Z. V. Iz istorii Aldanskogo promyshlennogo ra͡ iona, 1923–1934 gg. (In: Akademii͡a nauk SSSR. I͡Akutskiĭ filial. Doklady 1954, p. 44–61.) Approx. 40 refs. Text in Russian. ***Title tr.:*** From the history of the Aldan industrial district, 1923–1934. Paper delivered to the 5th session of Yakut Branch of Academy of Sciences, June 1952.

In 1922, M. P. Tarabukin, a Yakut, discovered gold on Nezametnyy Creek in the almost uninhabited taiga of Yakutia where the town of Aldan now stands. Further discoveries were made, and the Aldan gold fields became among the richest in the U.S.S.R. Mining development is outlined: organization of the trust "I͡Akutzoloto" (now: "Aldanzoloto") in 1923, new settlements, Aldan, Tommot, Seligdar, etc.; construction of the Never-Aldan highway; modern mining equipment; effects of the Aldan gold industry on economy of Yakutia.

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GOGOLEV, Z. V., *see also* Akademii͡a nauk SSSR. I͡Akutskiĭ filial. Doklady . . . pi͡atoĭ i shestoĭ . . . sessii͡akh . . . *1954.* No. 49165.

GOGOLEV, Z. V., *ed., see also* Akademii͡a nauk SSSR. I͡Akutskiĭ filial. Ocherk . . . i͡akutskoĭ . . . literatury. *1955.* No. 49169.

GOGOLEVA, M. V., *see* Spiro, N. S., *and* M. V. Gogoleva. Ob opredelenii mineral'nogo sostava . . . *1958*. No. 55093.

51247. GOLA, GIOVANNI. Modificazioni della temperatura rettale nel nuoto. (Biologia latina, 1957. v. 10, fasc. 2, p. 209–222, illus.) 9 refs. Text in Italian. Summary in English. ***Title tr.:*** Modifications of rectal temperature during swimming.

Rectal temperature in men swimming over 30 minutes, rose continuously and independently of the water temperature. Equilibrium is reached at about the 20th minute at a rectal temperature of ca. 38.5° C. ***Copy seen:*** DNLM.

GOLD, LORNE W., *see* Shvaĭshteĭn, Z. I. Laboratoriiâ . . . v Kanade. *1958*. No. 54845.

GOLD, LORNE W., *see* Williams, G. P., *and* L. W. Gold. Snow density . . . *1958*. No. 56052.

51248. GOLDBERG, LEON I. Effects of hypothermia on contractility of the intact dog heart. (American journal of physiology, July 1958. v. 194, no. 1, p. 92–98, illus., tables.) 20 refs.

Account of direct and indirect observations. Marked increase in the heart's contractile force and reduction in rates of contraction and relaxation were observed during cooling. At temperatures near 20° C. myocardial depression appeared in some cases. The effects of sympathetic block, of hexamethonium and of epinephrine were also followed.

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GOLDBY, F., *see* Gamble, H. J., *and others*. Effect of temperature . . . degeneration of nerve fibres. *1957*. No. 51070.

GOLDER, FRANK ALFRED, 1877–1929, *see* Belov, M. I. Semen Dezhnev . . . *1957*. No. 49641.

GOLDMAN, R. F., *see* Brebbia, D. R., *and others*. Water vapor loss . . . respiratory tract . . . cold. *1957*. No. 49899.

51249. GOL'DSHTEĬN, MIKHAIL NAUMOVICH. Issledovanie na modeliâkh deformatsiĭ osnovaniĭa pri ego promerzanii. (*In:* Materialy po laboratornym issledovaniiâm merzlykh gruntov, sbornik 3, 1957. p. 296–311, illus., tables, diagrs.) 7 refs. Text in Russian. ***Title tr.:*** The use of models to study ground deformation under foundations during freezing.

"The problem is examined on the basis of laboratory experiments and field observations at Kiev and Sverdlovsk. Wooden 10 x 10 cm. blocks used as foundation models were placed on clay samples and subjected to frost action under various conditions. The moisture of the clay samples, the speed and rate of freezing, and the loading of the wood blocks were varied to determine their effects separately. It appears possible to construct foundations in seasonally frozen ground except for cases with intense ice formations, when the foundation must be set below the frost line. Foundation surveys should not neglect lateral heaving forces around foundations."—SIPRE.

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51250. GOLDSTEIN, NORMAN, 1923– . Scientific activities of the Terrestrial Sciences Laboratory of GRD on Fletcher's Ice Island, T–3, 7 March 1957 to 6 June 1957. Cambridge, Mass. July 15, 1957. 4 p. (U.S. Air Force Cambridge Research Center, Geophysics Research Directorate, Technical Memorandum GRD-TM–57–25.)

Brief description of activities during reoccupation of T–3, for the IGY. Tentative values for location of the station, direction readings, gravity measurements, bathymetric studies, hydrographic observations, ice temperatures, ablation, meteorological observations, and notes on fauna, are included.

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GOLDSTEIN, NORMAN, 1923– , *see also* Crary, A. P., *and* N. Goldstein. Geophysical studies . . . Arctic Ocean. *1957*. No. 50374.

GOLDSTEIN, ROBERT, *see* Bunker, J. P., *and* R. Goldstein. Coagulation . . . hypothermia in man. *1958*. No. 50000.

51251. GOLENHOFEN, KLAUS. Zentralisation der Muskelaktivität bei Abkühlung des Menschen. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 266, Heft 6, p. 665–68, illus.) 7 refs. Text in German. ***Title tr.:*** Centralization of muscle activity during chilling of man.

Report on experiments with subjects exposed to 10° C. ambient temperature. Muscle tonus and trembling began on the periphery (lower arm, calf); later on it

moved centrally to the thighs. Th possible significance of this shift is discussed. ***Copy seen:*** DLC.

GOLGOFSKAIÂ, G. V., *see* Nikonov, M. N., *and others.* Agrokhimicheskaiâ kharakteristika torfov . . . *1956.* No. 53610.

GOLIKOVA, M. N., *see* Polîanskiĭ, IÛ. I., *and* M. N. Golikova. Ob infuzoriîakh . . . morskikh ezheĭ . . . II . . . *1957.* No. 54058.

51252. GOLLAN, FRANK, 1909- , *and others.* Electrolyte transfer during hypothermia and anoxia in dogs. (American journal of physiology, May 1957. v. 189, no. 2, p. 277–80, tables.) 23 refs. *Other authors:* G. G. Rudolph *and* N. S. Olsen.

A study of electrolyte changes during hypothermia and artificial respiration in dogs equilibrated with K^{42}, Na^{24} or B^{82}. The various changes in electrolytes indicate that increased myocardial irritability during hypothermia and anoxia "is caused or accompanied by a loss of potassium and an inability to extrude sodium." ***Copy seen:*** DLC.

51253. GOLODNYĬ, TS. Issledovatel' Arktiki. (Nauka i zhizn', Nov. 1957. god 24, no. 11, p. 57–58, illus., port.) Text in Russian. ***Title tr.:*** Explorer of the Arctic.

Biographical sketch of Petr Filimonovich Shvetsov, Director of the Institute for Permafrost Study; his hydrological, glaciological and permafrost investigations in Chukotka, Yakutia and Spitsbergen are noted, also his main scientific publications. ***Copy seen:*** DLC.

51254. GOLOTA, D. Gagary. (Na severe dal'nem, 1955, vyp. 2, p. 160–63.) Text in Russian. ***Title tr.:*** Loons.

Stories of loon hunting on the upper Kolyma and Indigirka River during geological exploration of the Tas-Kystabyt Range (approx. 64° N. 144° E.) and in the Chinyakinskaya valley in 1942–44. The difficulty of killing loons, protected against small shot by a thick layer of down and an exceedingly tough skin, is noted. ***Copy seen:*** DLC.

GOLOUSHIN, N. S., *see* Averina, M. S., *and* N. S. Goloushin. Kharakteristika bituma . . . *1958.* No. 49437.

GOLOVANOV, G. A., *see* Bobrushkin, L. G., *and others.* Obezvozhivanie konîsentrata . . . *1958.* No. 49787.

GOLOVANOV, G. A., *see* Zubarev, S. N., *and others.* Puti . . . obogashcheniîa . . . Olenegorskoĭ . . . *1958.* No. 56254.

51255. GOLOVIN, A. N. Issledovanie profsessa vydeleniîa zhira iz podkozhnogo sala kitov. (Rybnoe khozîaĭstvo, June 1957. god 33, no. 6, p. 85–91, illus., tables.) Text in Russian. ***Title tr.:*** Study of the separation process of oil from the blubber of whales.

Account of chemical-technological investigations on utilization of blubber from Antarctic finwhales. Wet, dry and vacuum methods of oil extraction were studied and compared. Increasing the amount of water during processing preserved the structure of the oil but lowered its yield. The latter increased as the structure of the blubber and the collagen bundles became progressively altered. ***Copy seen:*** DLC.

51256. GOLOVKO, ARSENIĬ GRIGOR'EVICH. Pervye dni; iz zapisok byvshego komanduîushchego Severnym flotom. (Sovetskiĭ morîak, May 1958. god 18, no. 10, p. 4–7, illus.) Text in Russian. ***Title tr.:*** The first days; from diaries of the former Commander of the Northern Fleet.

Reminisces about the beginnings of Soviet-German fighting on Kola Peninsula and the Barents Sea during World War II: land, sea and air operations, heroic deeds, etc. ***Copy seen:*** DLC.

51257. GOLOVNYKH, F. I. Razlichiîa v usloviîakh proizvodstva otdel'nykh grupp kolkhozov Megino-Kangalasskogo raĭona. (Akademiîa nauk SSSR. ÎAkutskiĭ filial, *Yakutsk.* Trudy, ser. ėkonomicheskaiâ, 1957. vyp 1, Materialy po ėkonomike sel'skogo khozîaĭstva ÎAkutii, p. 21–29, tables.) Text in Russian. ***Title tr.:*** Differences in production conditions of various collective farm groups of the Megino-Kangslasskiy District.

Outlines agricultural conditions in this district of central Yakutia. In 1955, it had 13.4% of the arable land, 31.7% of the hay-meadows, and 2.8% of the pastures of all Yakutia. Five factors are involved in the economic development and structure of the collective farms: natural conditions, location, facilities for processing agricultural products, a stable labor supply, and profits from the produce. The collectives are dealt with in three groups, according to land unit productivity, and for each group examples

and data are given in tables. Specialization is discussed and plans for better development are outlined.

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51258. GOLUBEV, A. Za vsestoronnee razvitie pushnogo khozîaĭstva. (Okhota i okhotnich'e khozîaĭstvo, Feb. 1957, no. 2, p. 18–19.) Text in Russian. ***Title tr.:*** Develop the fur trade in every possible way.

Outlines hunting of fur animals and fur farming in Khanty-Mansi National District; the recovery of local sable stock; acclimatization of the Barguzin sable, muskrat and American mink; activities of 135 fur farms. The decline of hunting is stressed: e.g. the annual squirrel catch has decreased from over one million in the 1936–40 period to a mere 350 thousand, and is attributed to the decrease in number of hunters (4,068 in 1940, only 1,680 in 1955). Attempts at collectivizing the hunting industry, also need of expert guidance and economic support are noted. ***Copy seen:*** DLC

GOLUBEV, ALEKSANDR VASIL'EVICH, *see* Tîûtîûnov, I. A., *and others.* K voprosu khimicheskogo izmeneniîa pochv. *1957.* No. 55456.

51259. GOLUBEV, GLEB. O chem rasskazal sudovoĭ zhurnal "Sv. Anny." (Vokrug sveta, Sept. 1957, no. 9, p. 13–17, illus.) Text in Russian. ***Title tr.:*** On what the log of the *Sv. Anna* told.

Story of G. L. Brusilov's expedition on the *Sv. Anna* in 1912–1914 and the studies of her drift by V. Îû. Vize, which led to discovery of Vize Island and to the hypothesis of an inverse relationship between the water level in lakes of Central Africa and the amount of ice in arctic seas. ***Copy seen:*** DLC.

51260. GOLUBEV, S. A., *and* **A. V. MAKEDONOV.** Sovremennye predstavleniîa o Pechorskom kamennougol'nom basseĭne i perspektivy poiskov i razvedki novykh mestorozhdeniĭ. (Razvedka i okhrana nedr, Apr. 1958. god 24, no. 4, p. 1–7, tables, map.) 8 refs. Text in Russian. ***Title tr.:*** Modern views on the Pechora coal basin and prospects for search and exploration of new deposits.

Outlines the coal reserves of the Pechora basin, mainly on the basis of recent investigations of a team of geologists of "Pechorauglegeologiîa" Trust. The coal basin, some 100,000 sq. km., about half north of the Arctic Circle, has its main areas along the right tributaries of the Usa, the middle and lower Pechora and along the Korotaikha and Kara. The lithology and stratigraphy of the basin is outlined; the depths, thickness and mineral impurities indicated, specimen coal seams are described. Much of the coal has a low ash content and is especially suitable for coking. Known and potential reserves are given. They are sufficient for years to come for all northeastern European Russia. Further exploration of the basin, the transport of coal to metallurgical industries of the northern and middle Ural, new railroad construction, and the development of a large power base are discussed.

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51261. GOLUBEVA, L. V. K voprosu o znachenii opredeleniîa pyl'tsy vidov roda *Betula* L. dliîa tseleĭ stratigrafii chetvertichnykh otlozheniĭ. (Akademiîa nauk SSSR. Doklady, May 21, 1957. t. 114, no. 3, p. 645–47, diagr.) 3 refs. Text in Russian. ***Title tr.:*** On the importance of pollen determination of various species of the genus *Betula* L. for the stratigraphy of Quaternary deposits.

Quaternary deposits in the lower Ob basin in western Siberia were studied on the basis of pollen analysis of *Betula pubescens, B. verrucosa, B. nana* and *B. humilis.* The whole complex of morphological characteristics of pollen must be considered. The spore-pollen diagram of a peat bog of the region elucidates the process of its formation, which consisted of a cold phase (southern zone of tundra and forest-tundra), a warm phase (forest zone), and another cold phase (southern tundra zone and forest-tundra). These three phases correspond to the earlier, middle and later parts respectively of the Holocene era. ***Copy seen:*** DLC.

51262. GOLUBEVA, L. V. Stratigraficheskaîa skhema chetvertichnykh otlozheniĭ severo-zapadnoĭ chasti Zapadno-Sibirskoĭ nizmennosti i ee paleofitologicheskoe obosnovanie. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Feb. 1958. god 23, no. 2, p. 44–54, diagrs.) 19 refs. Text in Russian. ***Title tr.:*** The stratigraphic division of Quaternary deposits in the northwestern part of the West Siberian lowland and their palaeophytological foundation.

Reviews the stratigraphic division worked out by S. G. Boch, I. I. Krasnov and others and adopted by the Inter-

departmental Conference in Leningrad, 1956. Spore and pollen analyses are presented for 420 samples taken from 60 cross-sections in the lower Ob' valley, north and south of Arctic Circle. These results imply some adjustments to be made in the division as developed. Such analyses provide valuable material on the palaeophytological foundation of Quaternary deposits. ***Copy seen:*** DLC.

51263. GONIN, G. V. Vozmozhnosti deshifrirovaniîa l'da po aėrosnimkam shchelevoĭ kamery. (Problemy Arktiki, sbornik statei, 1957. vyp. 2, p. 219–31, illus., diagrs.) 5 refs. Text in Russian. ***Title tr.:*** Interpretation of aerial photographs of ice obtained with the continuous strip camera.

"Advantages in using this camera for ice photography in the Arctic are described as well as proper methods of application. Sources of probable errors and their magnitudes under various conditions are mathematically analyzed. Scale of the photograph should not be less than 1:5,000 and flying speed should be as high as possible."—SIPRE.

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51264. GON'SHAKOVA, V. I. Nekotorye osobennosti razmeshcheniîa i mekhanizma vnedreniîa trappovykh intruziĭ v îugovostochnoĭ chasti Sibirskoĭ platformy. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Aug. 1958. god 23, no. 8, p. 38–56, illus., tables, cross-sections, maps.) 17 refs. Text in Russian. ***Title tr.:*** Some features of the occurrence and mode of trap intrusions in the southeastern part of the Siberian platform.

Outlines geotectonic structures and distribution of trap intrusions in the Angara-Lena, Vilyuy-Aldan and Nizhnyaya Tunguska regions; discusses connections between trap volcanism and the movements of the earth crust; gives petrographic and chemical characteristics of the main types of traps, and treats mechanism of implantation of trap intrusions. ***Copy seen:*** DLC.

51265. GONSOVSKAÎA, G. A. Osobennosti formirovaniîa fumarol'nykh term îuzhnoĭ Kamchatki. (Akademiîa nauk SSSR. Doklady, Mar. 1, 1957. t. 113, no. 1, p. 172–74, table.) 3 refs. Text in Russian. ***Title tr.:*** Peculiar features in the formation of the thermal springs of southern Kamchatka.

A hydrogeological study in which these thermal springs are considered in two large groups: carbonic sulfite springs in the active volcanic zones, and carbonic springs of complex content in the zone of less active, dying volcanoes. The most important differences between the two are the higher temperature (95°–100° C.), larger amount of gases, and higher boric acid content (80–100 mg/l) in the first group. Comparative chemical analyses are tabulated. Representative of the first group are the North Koshelevskiy, South Koshelevskiy, South Pauzhitskiy, Upper Mutnovskiy and fumarole springs of the volcano Dikiy Greben' situated on the slopes and craters of active volcanoes. To the second group belong: Sivachinskiy and Teplovskiy hot springs.

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51266. GONTAREV, IÛ. M. Rabota na sel'dîanom promysle v Severnoĭ Atlantike. (Rybnoe khozîaĭstvo, May 1957. god 33, no. 5, p. 67–69.) Text in Russian. ***Title tr.:*** Work in herring fisheries of the North Atlantic.

Fishing operations of the *Aldan* during Aug. 1956 in the North Atlantic are described by its captain: activities during a work day, search for schools of fish and their location, etc.

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GONZALES, FREDERICO W., *see* O'Brien, L. J., *and others.* Functional reactivation . . . hypothermic heart . . . arrest. *1957.* No. 53693.

51267. GOOD, A. L., *and* **A. F. SELLERS.** Effects of carbon dioxide, epinephrine and Ilidar on skin, blood and rectal temperatures of unanesthetized dogs exposed to extreme cold. (American journal of physiology, Mar. 1957. v. 188, no. 3, p. 451–55, illus.) 11 refs.

CO_2-inhalation caused a fall in core temperature but little change in that of the skin. Intravenous epinephrine was associated with cessation of shivering, slight fall in core temperatures, little change in skin temperature. Intravenous Ilidar (a sympathetic blocking drug) caused marked rise in blood and rectal temperature with skin temperature only slightly affected.

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51268. GOOD, A. L., *and* **A. F. SELLERS.** Temperature changes in the blood of the pulmonary artery and left atrium of dogs during exposure to ex-

reme cold. (American journal of physiology, Mar. 1957. v. 188, no. 3, p. 447–50, illus., table.) 13 refs.

Report based on continuous temperature recordings in dogs suddenly exposed to an ambient temperature of −35° C. for 30 minutes. Shivering, rectal temperature and temperature differences between the various loci recorded, were also studied. Increased metabolism and cutaneous vasoconstriction are assumed to be responsible for blood- and rectal-temperature increase noted.

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GOOD, LEROY V., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

GOODALL, R. G., *see* Hoar, W. S., *and others*. Reactions of juvenile . . . salmon to light. *1957*. No. 51735.

51269. GOODMAN, A. J., *Editor*. Jurassic and Carboniferous of western Canada. Tulsa, Oklahoma, American Association of Petroleum Geologists, 1958. 514 p. illus., maps, charts, cross-sections, tables.) chapter refs.

Results of a symposium sponsored by the American Association of Petroleum Geologists and Alberta Society of Petroleum Geologists, discussing and interpreting geological evidence mainly accumulated in gas and oil exploration. Most of the papers were presented to the Western Canada Regional Meeting at Jasper, Alberta on Sept. 15–16, 1955. Two deal with the North: *Mississippian succession in South Nahanni River area, Northwest Territories*, by W. J. H. PATTON (No. 53883); and J. LAW's paper *Geology of northwestern Alberta and adjacent areas* (No. 40959).

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GOODMAN, ROBERT S., *see* Knigge, K. M., *and* R. S. Goodman. Initial . . . cold exposure . . . thyroidal I^{131} in hamsters. *1957*. No. 52335.

GOODMAN, ROBERT S., *see* Knigge, K. M., *and others*. Role of pituitary . . . thyroid responses of cold . . . *1957*. No. 52337.

51270. GOODWIN, WILLIAM F., Jr. Scandinavia. New York, American Geographical Society, 1955. 6 p. 5 maps. (Focus, Jan. 1955. v. 5, no. 5.) 5 refs.

Economic geography of Denmark, Norway and Sweden is outlined, with mention of the Lapps, iron ores, forests, fisheries, etc., as features of the North.

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GOODY, R. M., *see* Murgatroyd, R. J., *and* R. M. Goody. Sources . . . radiative energy . . . *1958*. No. 53459.

51271. GOR, IU. G. Novye dannye po stratigrafii verkhnego paleozoia raĭona reki Gorbiachin. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ biulleten', 1958. vyp. 10, p. 5–7) Text in Russian. ***Title tr.:*** New data on the stratigraphy of the Upper Paleozoic in the Gorbiyachin River region.

Presents results of investigating the 1955–57 collections of material from the Paleozoic Tungusska series in this northwestern border region (approx. 67° 45′ N. 88–90° E.) of the Siberian platform. The lithology of a continental-lagoon stratum 800 m. thick is examined and its floral characteristics indicated. The stratigraphy of the Tungusska series as adopted at the Interdepartmental Stratigraphical Conference in Leningrad, 1956, may be revised now and supplemented. Recommendations are made.

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51272. GORAZDOVSKIĬ, T. IA. Opyt izmereniia absoliutnykh napriazheniĭ, deĭstvuiushchikh v massive merzlykh gornykh porod. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy, 1958. t. 14, p. 129–34, illus., diagrs.) Text in Russian. ***Title tr.:*** Experience in measuring absolute stresses in frozen rock.

A pneumatic method, which allows measurement of the radius-vectors of the cross section of a bore hole, is described. The apparatus consists essentially of a pressure regulator, a 3-tube rotameter from which a hose leads into the bore hole, and a pneumatic gage with 7 nozzles, which is inserted in the holes and measures linear values in the range from a few mm. to a fraction of a μ. The vectors of deformational distortions and stresses around the bore holes permit determination of stress characteristics at a given point, the direction of principal stresses, and absolute stresses in any given direction in the orthogonal plane. Tests conducted in a frozen coal stratum at −1° C. in Vorkuta gave stress values from 0.7–3.4 kg./sq. cm., depending on the distance of the point studied from the base of the stope, the

modulus of elasticity of the coal under compression being 3.2 x 10^3 kg./sq. cm.—From SIPRE. ***Copy seen:*** DLC.

51273. GORBACHEV, T. F. Zapadnosibirskiĭ filial AN SSSR. (Akademiâ nauk SSSR. Izvestiâ vostochnykh filialov, 1957, no. 8, p. 60–66). Text in Russian. ***Title tr.:*** The West Siberian Branch of the Academy of Sciences of U.S.S.R.

Outlines the organization and activities of this branch founded in 1944, and now comprised of two sections, six scientific institutes and a botanical garden, with 322 scientific workers. A new Siberian Section (Sibirskoe otdelenie) of the Academy is to be set up (p. 65–66) with 13 scientific institutes, in the Novosibirsk area; it will coordinate the activities of the Academy's West Siberian, East Siberian, Far Eastern and Yakut Branches and the Sakhalin Complex Scientific Institute. ***Copy seen:*** DLC.

51274. GORBAT͡SKIĬ, G. V. Ėkspediт͡siâ na Novosibirskie ostrova. (Problemy Arktiki, 1958, vyp. 3, p. 127–29.) Text in Russian. ***Title tr.:*** Expedition to the New Siberian Islands.

Preliminary account, dated Oct. 31, 1956, of a 20-man Arctic Institute expedition headed by the author, to Stolbovoy, Bol'shoy Lyakhovskiy, Kotel'nyy and Bennet Islands in May-Oct. 1956. Division of party into five teams and their geologic, hydrologic, paleontologic, botanical and zoological explorations of each island, are noted, with stress on the ornithological observations on Stolbovoy, paleontologic and glaciological study of Bol'shoy (so-called) and the first systematic exploration of Bennet Island. Glaciological studies revealed that the fossil ice of Bol'shoy is basically of Quaternary origin. Further investigations in other parts of New Siberian archipelago are needed.

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51275. GORBAT͡SKIĬ, G. V. Tak nazyvaemye ledniki Penka na Novoĭ Zemle i nekotorye cherty raĭona ikh rasprostraneniâ. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiâ, Jan.–Feb. 1958. t. 90, vyp. 1, p. 55–58, map.) 2 refs. Text in Russian. ***Title tr.:*** The so-called Penck's glaciers on Novaya Zemlya and some features of their regional distribution.

The problem of glaciation in the Bezymyannaya River basin in the northwest part of the south island of Novaya Zemlya, where Penck's glaciers were discovered by P. L. Samoĭlovich in 1923, is discussed on the basis of author's investigations, in 1947. Signs of intense melting of the snowbeds and active development of rivers and lakes were observed as well as permafrost degradation. A large and relatively even snow-firn field was found in the region, but no signs of glacier activity: these "glaciers" seem to be in fact snowbeds, melting rapidly under the recent general warming trend in the Arctic. The extensive development of thermokarst in local limestones is a further indication of continuous fossil-ice melting.—From SIPRE. ***Copy seen:*** DLC.

51276. GORBUNOV, G. I. Mednonikelevye mestorozhdeniâ Ortoaĭvi v Pechengskom raĭone. (*In:* Akademiâ nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova, 1958. p. 181–90, illus., map.) 3 refs. Text in Russian. ***Title tr.:*** Copper-nickel ores of Ortoayvi in the Pechenga region.

Outlines the morphology, structure and occurrence of small groups of sulphide copper-nickel ores, mainly in the western part of Ortoayvi mountain. Nine other copper-nickel beds in the Pechenga ore field are enumerated from west to east. The similarity in occurrence, structure and composition of the west Ortoayvi ores with two of the others (Kaula and Kamminkivi) is stressed.

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51277. GORBUNOV, G. I. Nauchnaâ deâtel'nost' Kol'skogo filiala AN SSSR v 1957 g. (Akademiâ nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiâ, 1958, no. 3, p. 179–81.) Text in Russian. ***Title tr.:*** Scientific activities in 1957 of the Kola Branch of the Academy of Sciences of U.S.S.R.

Reviews work done by the main scientific organizations of the Branch, including its Geological Institute (p. 179–80), Polar Alpine Botanical Garden and Murmansk Biological Station. In all, 41 problems were studied in 1957. Work at the new seismic station "Apatity" is noted. ***Copy seen:*** DLC.

51278. GORBUNOV, I͡U. A. O vodoobmene Vostochno-Sibirskogo i Chukotskogo moreĭ cherez proliv Longa. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 35–40, illus. tables, maps.) Text

in Russian. ***Title tr.:*** Water exchange of the East Siberian and Chukchi Seas through the DeLong Strait.

Deals with changes in speed of the cold Chukotsk current and the nature of water exchange at different wind directions, on the basis of recent years' observations from late May through late September. This so-called "stable" current is found to be much influenced by winds which when blowing for long periods have a considerable effect in depth.

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GORBUNOVA, G. S., *see* Dadykin, V. P., *and others.* Ob usvoenii sveta . . . Tiksi. *1957.* No. 50410.

51279. GORCHAKOVSKIĬ, P. L., *and* V. I. PROKAEV. Ob organizat͡sii Ural'skogo filiala Geograficheskogo obshchestva SSSR. (Vsesoi͡uznoe geograficheskoe obshchestvo. Izvestiia, Jan.–Feb. 1957. t. 89, vyp. 1, p. 85–87.) Text in Russian. ***Title tr.:*** Organization of the Ural Branch of the Geographical Society of U.S.S.R.

Account of the Geographical Society's Conference of local sections at Sverdlovsk, May 1956. The Conference decided to organize the Ural Branch and outlined its purpose. Several papers delivered on the scientific exploration of the Ural are briefly reported. ***Copy seen:*** DLC.

51280. GORCHAKOVSKIĬ, P. L. Rastitel'nost' khrebta Sabli na Pripolʹi͡arnom Urale. (Rastitel'nost' Kraĭnego Severa SSSR i ee osvoenie, 1958. vyp. 3, p. 95–127, illus., map.) 31 refs. Text in Russian. ***Title tr.:*** The vegetation of the Sablya Range in the Sub-Polar Urals.

These mountains, with Mt. Sablya (64°44′ N. 58°57′ E.) the highest peak, 1425 m., extend north-south 29 km. on the west side of the Urals, descending into the Pechora valley. The geomorphology, hydrography and flora of the area are outlined on the basis of previous investigations and on author's study in July 1954. Three floristic belts (mountain-taiga forest, sub-bald-peak, and bald-peak vegetation) are distinguished and described in detail, and their predominant plant associations are characterized. Spruce and fir prevail in the taiga of the lowest belt, high grass meadows dominate the middle belt, and the flora of the highest belt is chiefly lichens and moss. Traces of former glaciation are present in relict glaciers and cirque lakes; the upper forest line seems stabilized. Plant forms cited are included in the general index at end of volume. Those new for the area from the author's collection are listed (p. 123–25). The forest, meadows and fauna are of economic value.

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51281. GORDAN, JOAN. A bibliography of the order Mysidacea. (American Museum of Natural History, New York. Bulletin, 1957. v. 112, art. 4, p. 279–304.) Approx. 1200 refs.

Lists publications on crustaceans of this order, to the end of 1955, in three parts. The first section records the literature alphabetically by authors; the second alphabetically under the species, and genera of the five families of Mysidacea. The third part is a listing according to (ten) subjects: general, taxonomy, morphology, etc., in which (85) papers of arctic interest may be found under fresh- and brackish-water, oceanic and coastal distribution. ***Copy seen:*** DSI–M.

51282. GORDIENKO, PAVEL AFANAS'EVICH. Arctic ice drift. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 210–21, 5 text maps, 6 graphs, 3 tables.) 60 refs.

Summarizes problem of ice drift; discusses Soviet studies of 1948–1956 on large- and small-scale ice movements. The wind-coefficient value of ice drift was found to depend on the compactness of the ice, the size of the ice floes, and the state of the ice surface (ice-jamming). Ellesmere Island ice drift in the region south of the New Siberian Islands is directed toward the Greenland Sea along the arc of a large circle. Farther away from the Greenland Sea toward Bering Strait, the role of surface currents in the general ice transport diminishes, and that of the wind increases. The wind component is less than 20% of the total drift value in the Strait between Spitsbergen and Greenland, and rises to 80% in the regions adjacent to Canada, Alaska, and eastern Asia. Only 20–30% of the wind energy is used for ice drift, the remaining 70–80% are spent in deforming the ice fields and local shifting. A circular ice drift exists in the vicinity of Canada and Alaska. Drift meander, loop-like evolutions, and rotary movements of the ice fields are also discussed.—From SIPRE.

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51283. GORDIENKO, PAVEL AFANAS'EVICH. Dreĭf l'dov v t͡sentral'nol chasti Severnogo ledovitogo okeana.

(Problemy Severa, 1958. vyp. 1, p. 5–29, maps, tables, diagrs.) Ref. Text in Russian. ***Title tr.:*** Drift of ice in the central part of the Arctic Ocean.

Analyzes the drifts of North Pole–3, –4, and –5 in Apr.–Sept. of 1954 and 1955 with a view to establishing more definite rules for ice drift, and to illustrate the influence of variations in the general regime in the Arctic Basin on ice conditions in the shelf seas. Attempts to forecast the drifts of North Pole–3 and –4 according to "Zubov's rule" (No. 56257) were not entirely successful. In North Pole–4's 174–day drift in 1955, 50% of the time was occupied in describing loops (9), each completed in 4–18 days; the loops (three anticyclonic, six cyclonic) are diagrammed and wind, current, etc. data tabulated. The severe ice conditions on the Northern Sea Route in 1954 and 1955 are analyzed and explained on basis of the prevailing atmospheric pressure distribution in the Central Arctic, which, among others, created countercurrent winds delaying the seasonal drift of ice into the Greenland Sea. Changes in the currents of the Central Arctic and reciprocal action of drifting masses in coastal regions must be considered in the preparation of ice prognoses for any part of Arctic Ocean. ***Copy seen:*** DLC.

51284. GORDIENKO, PAVEL AFANAS'EVICH. Issledovaniia morskikh arkticheskikh l'dov; mezhdunarodnaia konferentsiia v Vashingtone. (Priroda, Sept. 1958. god 47, no. 9, p. 68–71). Text in Russian. English translation (8 p.) by Judith I. B. Danner, American Meteorological Society, for the Geophysics Research Directorate, Cambridge Research Center. U.S. Air Force. (copy at CaMAI). ***Title tr.:*** Study of arctic sea ice; international conference in Washington.

Account of the Arctic Sea Ice Conference, Easton, Md., Feb. 1958, to which writer was one of four Russian delegates: personnel and course of the Conference; work of Scandinavian and American scientists and how it compares with Soviet research; outstanding papers; exchange of ideas and literature; and post-Conference activities in the United States.
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51285. GORDIENKO, PAVEL AFANAS'EVICH. Stantsiia "Severnyĭ Polius–4" prodolzhaet svoĭ dreĭf. (*In:* Burkhanov, V. F. Cherez okean na dreĭfuiushchikh l'dakh, 1957, p. 283–311, illus.) Text in Russian. ***Title tr.:*** Station North Pole–4 continues its drift.

Activities of this drifting station during Apr. 1955–Apr. 1956 are recounted by the head of its second team. The station comprised nine prefabricated houses, ten or more tents, store-houses, structures for aerological and geomagnetic work, generator, vehicles, etc., nearly 30 in all. The personnel, struggle with melt water in summer, hunting polar bears, the 120-day winter night, and an emergency appendectomy are noted. The station drifted 2,500 km. in 1955–56 between 80°39′ N. 176°06′ W. and 87°32′ N. 170°04′ W. Some results are mentioned of the oceanographic, hydrobiological, bathymetric, aerological, magnetic and seismic observations. Radiosondes are said to have reached altitudes of 33,000 and 35,400 m.
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GORDIENKO, V. V., *see* Sosedko, A. F., *and* V. V. Gordienko. Évkriptit . . . Kol'skogo poluostrova. *1957.* No. 55063.

51286. GORDON, MALCOLM S., *and* **R. H. BACKUS.** New records of Labrador fishes with special reference to those of Hebron Fjord. (Copeia, Apr. 5, 1957, no. 1, p. 17–20.) 10 refs. *Pub. also as:* Contrib. no. 800 from the Woods Hole Oceanographic Institution.

Contains distributional and systematic notes on 14 species of fishes collected during cruises of the R/V *Blue Dolphin* in 1952 and 1954; bottom fishes obtained in Hebron Fjord in 1954, are tabulated: 13 species and numbers of each.
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51287. GORDON, MALCOLM S. Observations on osmoregulation in the arctic char. (*Salvelinus alpinus* L. (Biological bulletin, Feb. 1957. v. 112, no. 1, p. 28–33, illus., tables.) 25 refs.

Account of observations on adult fishes taken in the summer from Hebron Fjord, Labrador, and from Hudson Bay, Manitoba, and transferred directly into fresh water under fairly constant conditions. A decrease of the blood freezing point and Cl-concentration of 25% was recorded as in most other anadromous salmonids. Data on plasma freezing point, potassium, muscle solids, etc., are also presented.
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51288. GORDON, MALCOLM S. Supercooled fish from northern Labrador. (Polarboken 1958, p. 78–87, illus., maps.) 2 refs.

Results are recounted of investigations carried out by a summer 1954 expedition to Hebron Fjord (58°06′N. 63° W.), organized at the Woods Hole Oceanographic Institution. The survival of fish at temperatures of −1.7 to −1.8° C. was studied: the blood and other internal fluids of marine fishes generally begin to freeze at temperatures in the range of −0.7 to −0.9° C. Data obtained were inconclusive, but later experiments indicated that small amounts of supercooling (to about 2.5°) can be tolerated by fish provided there is no ice, hence the survival of the deepwater fish in Hebron Fjord. A March 1955 expedition established that the shallow water fish, which encounter considerable ice during the winter, change their blood concentrations seasonally and avoid freezing by increasing the concentration in their blood of some kind of antifreeze substance. ***Copy seen:*** SPRI.

GORELEĬCHENKO, *Engineer, see* Zil'bernik, A. 28 dneĭ . . . *1958.* No. 56221.

51289. GORELIK, V. S. Puti resheniia transportnoĭ problemy na Kamchatke. (Rybnoe khoziĭaĭstvo, July 1957. god 33, no. 7, p. 11–13.) Text in Russian. ***Title tr.:*** Ways of solving transport problems on Kamchatka.

Contains information on the ports of exit and entry for Kamchatka's fish products; loading and shipping conditions in these Far-Eastern seasonally ice-bound harbors; insufficiency of Petropavlovsk harbor; proposals for harbor improvement and new road construction to improve fish exports.

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51290. GORHAM, EVILLE. The salt content of some ice samples from Nordaustlandet (North East Land), Svalbard. (Journal of glaciology, Mar. 1958. v. 3, no. 23, p. 181–86, tables, diagr.) 8 refs.

Contribution to study of chemical composition of precipitation based on samples (remote from areas of industrial pollution) collected by E. Plumpton with the Oxford University Exploration Club Expedition to Nordaustlandet Aug. 1955, from the "West Ice" near Brageneset and north of Wohlenbergfjorden. The samples were taken from a fresh snowfall, from firn 6 km. inland and 350 m. above sea level, from surface ice at the edge of a moraine, from a crevasse, and a series at 1 m. intervals to 14 m. depth from another crevasse 1 km. from sea ice and moraines. "The results of analyses for pH, Na, K, Ca, Mg, HCO_3, SO_4, and No_3 . . . are reported. The individual ion composition did not show a clear correlation with depth, except for slightly higher nitrate levels in the upper samples with more morainic contamination. Na was predominant among the metal cations with values up to 7.5 p.p.m., while K was least, not exceeding 0.6 p. p. m. The maximum concentration of Ca and Mg were 1.3 and 1.0 p.p.m., respectively. Among anions, Cl reached the highest level with a maximum of 12.6 p.p.m., while bicarbonate generally did not exceed 3.2 p.p.m., except 7.8 p.p.m. near the moraine. SO_4 was the least abundant of all major anions. The concentration of NO_3 was 0.5 p.p.m. down to a depth of 7 m. and 0.010 p.p.m. at lower levels. Most of the samples were less acid than distilled water in equilibrium with atmospheric CO_2, pH ranging from 5.4–6.7."—SIPRE. Supply of atmospheric salts, like the precipitation is low on Nordaustlandet. Contribution of sea spray, soil dust, and Vestspitsbergen coal mines (sulphur) to the salts in the ice samples is discussed.

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51291. GORHAM, STANLEY W. The comparative number of species of amphibians in Canada and other countries. (Canadian field naturalist, Nov.-Dec. 1957. v. 71, no. 4, p. 182–92.) 148 refs.

Contains a summary of families, genera and number of species by continents; and a bibliography of 128 publications arranged geographically, with an additional list of twenty "other important references." A very few works on arctic regions of Canada and Alaska are included. ***Copy seen:*** DA.

51292. GORIZONTOV, B. B. Razvitie perevozok v Eniseĭskom basseĭne. (Rechnoĭ transport, July 1958. god 17, no. 7, p. 15–18.) Text in Russian. ***Title tr.:*** Development of transportation in the Yenisey basin.

Deals with river transportation of various cargos from and into Krasnoyarskiy Kray, particularly, the economic and technical aspects. The main cargos (50%) are timber and coal, the former floated down the Angara and Yenisey to Igarka and Dudinka for loading on ocean-going ships. Coal is brought from the Krasnoyarsk region by the Yenisey and in early spring by the Pit, Vel'mo and the Tunguskas. Improvements to

extend navigation on these rivers are discussed in connection with local hydroelectric power development programs. Construction of a railroad to be coordinated with this improved river transport is mentioned to absorb part of the cargo for steel and other plants. Cargo to be shipped in may include apatites and other ores from Kola Peninsula for production of sulfites and mineral fertilizers. Economic consideration of water transportation are discussed in detail. ***Copy seen:*** DLC.

51293. GORLOV, N. Na Enisee. (Sovetskaĭa muzyka, Feb. 1957. god 21, no. 2, p. 146–52, illus.) Text in Russian. ***Title tr.:*** On the Yenisey.

Describes the old local Russian songs (over 80) collected in and around Yeniseysk by a team of the musical-folkloristic expedition to Krasnoyarskiy Kray. The songs (mostly lyrics for chorus), music (polyphony), manner of rendering, individual improvization, etc., are discussed and examples of score and words given. Some 400 songs altogether were recorded in Krasnoyarskiy Kray.

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GORMAN, M. F., *see* Greenberg, L., *and others.* An immunological study of the Canadian Eskimo. *1958.* No. 51347.

51294. GORNAĬA, O. Ot Volkhova do Angary. (Neva, Oct. 1957, no. 10, p. 220, illus.) Text in Russian. ***Title tr.:*** From Volkhov to the Angara.

Describes work of the "Ėlektrosila" (Electric power) plant's construction dept. preparing blue prints for the 200,000 kwt-generator for the Bratsk hydroelectric station. ***Copy seen:*** DLC.

51295. GORODETSKIĬ, P. I., *and others.* Razvitie sistem razrabotki na rudnike 7/9 Noril'skogo kombinata. (Gornyĭ zhurnal, Mar. 1958, no. 3, p. 21–32, illus., tables.) Text in Russian. *Other authors:* L. A. Zaĭdman, A. S. Pakhomov, V. D. Paliĭ, G. I. Sadovskiĭ, *and* A. I. Shablygin. ***Title tr.:*** Development of a mining system in pit 7/9 of Noril'sk Combine.

Unusual underground permafrost conditions in the Noril'sk area necessitate the use of different ore-mining methods. Explosive charges are used for blasting heavy ore layers, since water cannot be used due to the permafrost. Character and distribution of the deposits, course of their survey (1948) and development (1951) are outlined. Arrangement and composition of the explosives and the mining operations generally are detailed; production statistics are given.

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51296. GORODKOV, BORIS NIKOLAEVICH, 1890–1953. Analiz rastitel'nosti zony arkticheskikh pustyn' na primere ostrova Vrangelia. (Rastitel'nost' Kraĭnego Severa SSSR i ee osvoenie, 1958. vyp. 3, p. 59–94.) 12 refs. Text in Russian. ***Title tr.:*** Analysis of the vegetation of the arctic desert zone based on investigation of Vrangel Island.

Contains outline of arctic vegetation, published posthumously and based chiefly on author's investigation of Vrangel Island flora in 1938 (cf. No. 5989, 51298) also, in part, on studies of other arctic regions of U.S.S.R., including the author's in Kola Peninsula, the Pechora basin, Polar and Northern Urals, western Taymyr, Kara Sea Islands, Franz Josef Land, Severnaya Zemlya, Kotel'nyy Island, the lower Lena, Penzhina basin and Chukotka. Various types of arctic vegetation are distinguished and described: lichens on stones and stony scatterings; vegetation of gravel-clay deserts and polygon arctic deserts; tundras; alpine meadows; aquatic vegetation, flooded meadows and moss bogs. Not affected by glaciation, Vrangel preserves almost in pure state the preglacial vegetation of the northern part of "Beringia." Common features of the vegetation of Spitsbergen, the northern island of Novaya Zemlya and Arctic desert regions with the vegetation of Vrangel Island, are noted. Plants mentioned in this paper are included in the cumulative index at the end of the volume. ***Copy seen:*** DLC.

51297. GORODKOV, BORIS NIKOLAEVICH, 1890–1953, *and* **E. S. KOROTKEVICH.** Pitanie beloĭ kuropatki v zone arkticheskikh pustyn'. (Zoologicheskiĭ zhurnal, Sept. 1957. t. 36, vyp. 9, p. 1382–84.) 5 refs. Text in Russian. Summary in English. ***Title tr.:*** Food of ptarmigan in the zone of arctic deserts.

Report based on stomach examination of 25 birds killed during two summers (1947, 1954) on Kotel'nyy Island (75°30′ N. 139° E.). Food consisted chiefly of the shoots, flowers and fruits of willow (*Salix polaris*), creeping shrubs and about a dozen herbaceous plants (*Saxifraga, Draba,* etc.). ***Copy seen:*** DLC.

51298. GORODKOV, BORIS NIKOLAEVICH, 1890–1953. Pochvenno-rastitel'nyĭ pokrov ostrova Vrangelîa. (Rastitel'nost' Kraĭnego Severa SSSR i ee osvoenie, 1958. vyp. 3, p. 5–58, tables.) 18 refs. Text in Russian. ***Title tr.:*** The vegetation and soils of Vrangel Island.

Monographic study, published posthumously, based chiefly on the author's investigation during the Vrangel Island Expedition of the Academy of Sciences in 1938. The geomorphology of the island, with its three parallel mountain ranges extending west-east in the south, and a plain, called the Academy of Sciences Tundra in the north, is outlined. Thirteen types of vegetation are distinguished and described: dispersed stone vegetation, p. 8–10; stone lichen arctic desert, p. 10–13; lichen tundra, p. 13–14; lichen polygon desert, p. 14–18; lichen-moss polygon desert, p. 18–23; vegetation of recent deposits, p. 23–25; gravel-clay arctic desert, p. 25–28; moss polygon desert, p. 28–40; hypnum-sphagnum bog, p. 40–45; hypnum bog, p. 45–49; wind-eroded arctic desert, p. 49–52; snow meadow, p. 53–56; arctic meadow, p. 56–57. For each type, the distribution is noted, its lichens, mosses, grasses and shrubs are listed by Latin names, and the effect of soil and climatic conditions on specific plants and their associations discussed. There are no traces of glaciation on the island and its vegetation is of great importance as relict flora of the northern part of the hypothetical preglacial continent "Beringia." The plants are included in general index at the end of the volume. ***Copy seen:*** DLC.

51299. GORODKOV, K. B. Helomyzidae, Diptera, kak sinantropy v usloviîakh severa ĪAkutskoĭ ASSR. (Akademiîa nauk SSSR. Doklady, 1958. t. 122, no. 5, p. 948–49.) 7 refs. Text in Russian. ***Title tr.:*** Helomyzidae, Diptera, as synanthrops under conditions of northern Yakut ASSR.

During the summer of 1957 the author found about half a dozen species of these flies living in and around human dwellings in the tundra and forest tundra, although they were rare elsewhere. Their occurrence, biology, multiplication, etc. are noted. ***Copy seen:*** DLC.

51300. GORSHKOV, G. S., *and* **I. I. TOVAROVA.** Geochemical effect of Bezymianny volcano eruption. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 124.)

"The eruption of Bezymianny volcano in 1955–56 produced 4 km.^{3} of loose ejectamenta. The soluble part, which is being carried over by surface water into the Pacific Ocean amounts to 2.8 x 10^6 t. of Cl, 12.8 x 10^6 t. of SO_4, 1.5 x 10^5 t. of SiO_2, 5.4 x 10^5 t. of Fe, 4.2 x 10^5 t. of Mg, 4.5 x 10^6 t. of Ca, 4.1 x 10^5 t of Na and 1.2 x 10^5 t. of K."

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51301. GORSHKOV, G. S. Izverzhenie novykh pobochnykh kraterov Klîuchevskogo vulkana letom 1956 g. (Akademiîa nauk SSSR. Vulkanologicheskaîa stantsiîa. Bîulleten', 1958. no. 27, p. 25–37, illus., plan.) Text in Russian. ***Title tr.:*** Eruption of new lateral vents of Klyuchevskiy Volcano in summer 1956.

Describes in detail eruptions of Kryzhanovskiy and Vernadskiy Craters, in the vicinity of the lateral crater Yubileynyy. Preceded by a weak seismic tremor, the eruption had begun between July 27th and 29th when the author arrived at the piedmont of Klyuchevskiy. He made close observations (July 30–Aug. 1) of several lateral eruptions and the flow of lava streams; his photographs are included. ***Copy seen:*** DLC.

51302. GORSHKOV, G. S. Izverzhenie sopki Bezymîannoĭ; predvaritel'noe soobshchenie. (Akademiîa nauk SSSR. Vulkanologicheskaîa stantsiîa. Bîulleten', 1957. no. 26, p. 19–72, illus. diagrs., tables, map.) 9 refs. Text in Russian. ***Title tr.:*** Eruption of Bezymyannyy Volcano; a preliminary report.

A seismic shock recorded Sept. 29, 1955 by the station at Klyuchi, was followed by local weak earthquakes increasing in number and force Oct. 2–18, with epicenter in the region of Bezymyannyy Volcano (55°58′ N. 160° 35′ E.) of the Klyuchevskaya group. Bezymyannyy, considered extinct, began to eject vapour and ash from its eastern slope on Oct. 22; the volcanic cloud of increasing density extended to Ust'-Kamchatsk by Oct. 26, covering the ground with a thin layer of ash. After several relatively quiet days, eruptions resumed Nov. 7–20, and continued intermittently for several months with some fumarolic activities till, Mar. 30, 1956, a tremendous explosion occurred: the ejectamenta covered a 50 by 400 km. area, and the hot mud flow annihilated forests and flooded the Kamchatka River, contaminating its water for a week. Smaller eruptions

followed, May 17, June 4, and the volcano was still active at the end of June 1956, when this report closed. The author observed the eruption from the Volcanological Station at Klyuchi, 40 km. distant, and from various camps to 12 km. distance, with a flight, Jan. 26, to observe the crater, and dog-sled trips April 11–14, after the big explosion. All phases of the eruption are described and illus. by numerous photographs. The volcanic ash proved to be pulverized solid hypersthenic andesite; tabulated data are given on size of particles and chemical composition. The ash ejected from October till June is estimated at 0.4–0.5 km ^{3}; it lay 30 cm. deep at 15 km. distance and in Klyuchi 4.5 cm. deep or over 40 kg./m.^{2}. Seismic records for the time of explosion are discussed; the considerable increase of humidity in the air during ash fall-out is noted. The baric wave of the explosion attained a speed of approx. 0.8 of sound in the westerly and southwesterly direction, and to the east and northeast it equalled the speed of sound, causing standing waves in the mouth of Kamchatka River. The energy of the explosion is estimated at 5.10^{23} ergs, that of the released heat amounted to 2.10^{25} ergs. A geomorphic description of Bezymyannyy before the eruption (based on summer 1954 field work) is given in G. E. Bogoſavlenskaſa's paper: Vulkan Bezymſannyĭ i ego ėkstruzivnye obrazovaniſa (Bezymyannyy Volcano and its extrusive formations), in the same issue of this bulletin, p. 13–18, illus.

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51303. GORSHKOV, G. S. Kamchatka Valley of Ten Thousand Smokes. (Pacific Science Congress, 9th. *Bangkok, Thailand,* 1957. Abstracts of papers, p. 121.)

"As a result of an eruption of Bezymiannaia sopka, a powerful agglomeratic stream 18 km. long was formed. It is similar to the Katmai stream. The mudflow passed a distance of 85 km. Thousands of secondary fumaroles rose from the surface of the agglomeratic stream; strong secondary explosions took place. The conditions under which the Bezymiannaia stream was formed were studied in sufficient detail to permit us to understand the conditions which prevailed when the Katmai stream was formed."

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51304. GORSHKOV, G. S. Neobychaĭnoe izverzhenie na Kamchatke. (Priroda, Jan. 1958. god 47, no. 1, p. 61–68, illus., map.) Text in Russian. ***Title tr.:*** Unusual eruption on Kamchatka.

Account of the October 1955 eruption of the Bezymyannaya (55°57′ N. 160°35′ N.), with details on adjacent volcanoes and the entire Klyuchevskiy group: tremors preceding the eruption; expedition to study the volcano; details of high activity which continued through November with moderate activity till autumn 1956; effects of eruptions on the shape of the volcano; effects of volcanic ash and sand; mud streams; explosion of Mar. 30, 1956, and its effects; earthquakes during the whole period (33,150); calculations of the energy spent. ***Copy seen:*** DLC.

51305. GORSHKOV, G. S. On the relations between seismic and volcanic phenomena and the energy balance of Bezymianny volcano eruption. (Pacific Science Congress, 9th. *Bangkok, Thailand,* 1957. Abstracts of papers, p. 121.)

Reports briefly that 33,000 volcanic earthquakes were registered in the Mar. 30, 1956 eruption of Bezymyannaya Sopka on Kamchatka Peninsula. The total expended energy is divided into its earthquake, thermal, tectonic, and explosion components. ***Copy seen:*** DLC.

51306. GORSHKOV, G. S. Sostoſanie vulkanov Severnoĭ Kamchatki v 1956 g. (Akademiſa nauk SSSR. Vulkanologicheskaſa stanſsiſa. Bſûlleten', 1958. no. 27, p. 3–15, illus.) Text in Russian. ***Title tr.:*** State of volcanoes of northern Kamchatka in 1956.

Account of the activity of Klyuchevskiy, Bezymyannyy, Tolbachik, Kizimen, Dal'nyaya Ploskaya Sopka, and several other volcanoes, based on long-distance observations from the volcanological station at Klyuchi and on air observations. Most of the volcanoes only emitted vapors; the tremendous explosion of Bezymyannyy on Mar. 30, 1956 (cf. No. 51302), a weak eruption of Klyuchevskiy in July and August, and the beginning of eruptive activity of Koryakskiy and Zhupanovskiy Volcanoes at the end of the year are briefly reported. Author's 16 photos are reproduced.

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GORSHKOV, G. S., *see also* Akademiſa nauk SSSR. Vulkanologicheskaſa stanſsiſa. Katalog . . . *1957.* No. 49187.

51307. GORSHKOV, L. A. K metodike izucheniſa torfoizolſâſsionnogo syr'ſa. (*In:* R.S.F.S.R. Glavnoe upravlenie

torfi͡anogo fonda. Sbornik statei . . . 1956, p. 81–100, illus., diagrs., tables, plans incl. 1 fold.) 3 refs. Text in Russian. ***Title tr.:*** Method of study of raw peat insulation materials.

Formation and development of deposits suitable for insulation material are associated with specific type, structure and botanic composition of the peat. Moisture content is limited to 5–8%, degree of botanic decomposition less than 25% (heat conductivity and strength are controlled by the final manufacturing processes). The reserves of such peat deposits in the U.S.S.R. are estimated at about 65 million tons distributed through northern European and western Siberian regions including the Arkhangel'sk Province and Karelia, large areas between the Ob and Irtysh. Methods of surveying and sampling areas with peat deposits are described in detail. Data on microrelief, changes in botanic composition, degree of decomposition and boundaries of condensational peat are recorded for various depths, tabulated and illustrated by cross sections of stratigraphic profiles.

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51308. GORSHKOV, V. Ė. O zimneĭ t͡siklonicheskoĭ deĭat͡el'nosti nad raĭonami kontinental'nogo Dal'nego Vostoka. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geograficheskai͡a, May–June 1958, no. 3, p. 69–70, maps.) Text in Russian. ***Title tr.:*** Winter cyclonic activity over the continental regions of the Far East.

Reports data on cyclone and anticyclone trajectories in the month of January. Synoptic materials for the 1933–54 period, obtained from the Kolymsk Hydrometric Administration, were used to map separately the cyclone and anticyclone trajectories for each year. Working method is explained. Average paths of cyclones and anticyclones for period 1950–54 are also calculated and mapped. Cyclonic and anticyclonic regimes in the Russian Far East and adjacent areas are characterized. ***Copy seen:*** DLC.

51309. GORSHKOVA, T. I. Organicheskoe veshchestvo i karbonaty v osadkakh Belogo morĭa. (Akademiĭa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniĭu Belogo morĭa, 1957. vyp. 1, p. 472–88, illus., tables, maps.) 17 refs. Text in Russian. ***Title tr.:*** Organic matter and carbonates in the White Sea sediments.

Study of sediments to a depth of 3 m. and up to 1 mm. in diameter with information on their genesis, chemical nature of organic deposits and physical nature, their carbon content, regional differences in chemical composition, differences with depth of sediment, and distribution of carbonates. Comparisons with other seas are presented, and the general character of the sediments outlined. ***Copy seen:*** DLC.

51310. GORSHKOVA, T. I. Osadki Karskogo morĭa (Vsesoi͡uznoe gidrobiologicheskoe obshchestvo. Trudy, 1957. t. 8, p. 68–99, illus., tables, maps.) 27 refs. Text in Russian. ***Title tr.:*** Deposits of the Kara Sea.

Tabular data are presented and discussed on the mechanical (size) composition of the deposits, distribution of mineral complexes, horizontal and vertical distribution of chemical elements and compounds in the sediments (Mn, Fe, P, C, CO_2, Fe_2O_3, etc.), the bottom microfauna and its horizontal and vertical distribution. Results of the Kara Scientific Expedition of 1945 on the trawler *M. Gorki* and expeditionary vessel *Osetr*. Appended is a morphological description of bottom cores taken at 50 stations.

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51311. GORT͡SEVSKAIA, VERA AVGUSTOVNA. O fleksii i slovoslozhenii v ėvenkiĭskom ĭazyke. (Akademiĭa nauk SSSR. Institut ĭazykoznaniĭa. Doklady i soobshcheniĭa, 1958. no. 11, p. 20–35.) 18 refs. Text in Russian. ***Title tr.:*** Inflection and word-building in the Evenki language.

Discusses the three basic types of Evenki (Tungus) word formation: internal inflection (phonetic modification of the wordstem), use of suffixes, and word compounds. ***Copy seen:*** DLC.

51312. GOSTILOVSKAIA, M. G. Mshanki Belogo morĭa. (Akademiĭa nauk SSSR. Karel'skiĭ, filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniĭu Belogo morĭa, 1957. vyp. 1, p. 434–71, illus., tables.) 47 refs. Text in Russian. ***Title tr.:*** Bryozoa of the White Sea.

A comprehensive study of these invertebrates based on collections back to 1860, and comprising 131 forms, 40 of them recorded for the first time from the area, and one of them, *Smittina pseudoacutirostris*, n. sp., new. Distribution, depth of occurrence, substrate, anatomy, etc., are noted. General

characteristics of the White Sea bryozoans, their geographic origin, zones of distribution, distribution in depth, etc. are also discussed and tabulated.

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51313. GOTSKIĬ, MIKHAIL VLADIMIROVICH. Opyt ledovogo plavaniîa. Moskva, Izd-vo Morskoĭ transport, 1957. 359 p. illus., tables, diagrs. Text in Russian. ***Title tr.:*** Experience in ice navigation.

Provides theoretical information and field directions for commercial vessels and ice-breakers on practically all aspects of ice navigation and ice-breaking. The book is intended for navigators and for use in marine schools. Navigation with and without the aid of ice-breakers and aerial reconnaissance, drift, calculation of speeds, various methods of position determination, organization of convoys, etc., are treated in turn, together with descriptions of navigational instruments and auxiliary equipment. Special emphasis is given to the theoretical aspects of navigational procedures.

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GOTT, R. E., *see* Schrock, V. E., *and* R. E. Gott. Specific heats of aircraft . . . lubricants . . . *1957*. No. 54626.

51314. GOULD, LAURENCE McKINLEY, 1896– . The polar regions in their relation to human affairs. New York, American Geographical Society, 1958. 54 p., illus., 3 maps, incl. 1 fold. (*Its:* Bowman Memorial Lectures, ser. 4.) 12 refs.

Lecture delivered Jan. 30, 1958. Limits of the Arctic and subarctic are distinguished (map). Renewable and unrenewable resources and their development are outlined. The economic importance of the area is at present obscured by the significance of the geographic location which makes it a cross roads of air traffic. Strategic considerations are discussed. This sketch of the north polar area (p. 1–10, 11 photos) is followed by one on the Antarctic, IGY and documents on sovereignty. Reviewed by Trevor Lloyd in *Arctic*, June 1959, v. 12, no. 2, p. 113–15.

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GOURAS, PETER, *see* Li, C.-L., *and* P. Gouras. Effect of cooling on neuromuscular transmission . . . frog. *1958*. No. 52809.

51315. GOVINDU, H. C., *and* **C. G. SHAW.** Cercosporae of the Pacific Northwest. (Washington. State College, *Pullman*. Research studies, Sept. 1957. v. 25, no. 3, p. 236–51, 28 illus.) 9 refs. *Pub. also as:* Scientific paper no. 1652, Washington Agricultural Experimental Stations, Pullman. Project no. 1047.

Contains an annotated list of 46 accepted species of these fungi, with distributional data and illus. Several are recorded in Alaska: *C. galii* (on *Galium triflorum*), *C. angelicae* (St. Paul Island, on *Angelica* species), *C. selini-gmelini* (on *Conioselinum gmelini*), *C. symphoricarpi* (on *Symphoricarpos albus*) and *C. varia* (on *Viburnum* sp.). A list of 17 rejected or doubtful species is appended.

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51316. GOVOROV, P. M. Opyt vyrashchivaniîa kukuruzy na Chuchur-Muranskoĭ biologicheskoĭ stanîsii. (Akademiîa nauk SSSR. Îakutskiĭ filial, *Yakutsk*. Institut biologii. Trudy, 1957. vyp. 3, p. 167–74, tables.) Text in Russian. ***Title tr.:*** Attempt to grow corn at the Chuchur-Muransk biological station.

Account of experiment with 50 varieties of corn planted in the open during the summer of 1954 on non-flooded terraces of the Lena. Due to the short vegetation period, June 3–Sept. 1, no seed appeared and the corn was considered as green fodder. As such, it yielded up to 25 tons per hectare. Methods of cultivation and some physiological aspects are discussed. ***Copy seen:*** DLC.

51317. GOWER, JOHN ARTHUR. X-ray measurement of the iron-magnesium ratio in biotites. (American journal of science, Feb. 1957. v. 255, no. 2, p. 142–56, graphs, 3 tables.) 18 refs.

Describes a method of determining extent of magnesium-iron substitution in biotites by X-ray diffractometry, using a ratio of X-ray intensities sensitive to changes in amounts of iron and magnesium and relatively insensitive to other compositional changes. Accuracy is obtained to approx. five percent of iron-magnesium content. Analyses given include that of siderophyllite from Brooks Mt., Alaska. ***Copy seen:*** DGS.

GRABB, G. A., *see* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958*. No. 50694.

GRABOVSKAÎA, O. A., *see* Baranovskaîa, A. V., *and* O. A. Grabovskaîa. Z. ÎU. Shokal'skaîa. *1957.* No. 49530.

51318. GRACH, A. D. Sessiîa, posvîashchennaîa itogam arkheologicheskikh i ėtnograficheskikh issledovaniĭ 1956 goda. (Sovetskaîa ėtnografiîa, 1957, no. 4, p. 148–53.) Ref. Text in Russian. ***Title tr.:*** Session, devoted to the results of archeological and ethnographic investigations of 1956.

Synopsis of papers read Mar. 25–30, 1957, in Moscow at a joint session of the Academy of Sciences' Dept. of History, Institute of Material Culture and Institute of Ethnography. Includes (p. 149) B. O. Dol'gikh's report on the "Ethnic composition, number and distribution of the aboriginal population of Siberia in the 17th century": twelve basic ethnic groups are recognized, including the Ob' Ugrians, Samoyeds, Tungus, Yukaghirs, northeastern Paleo-Asians, Eskimos; and the total population of Siberia in the 17th-early 18th centuries is estimated at 240,000. A. P. Okladnikov (p. 151) spoke on excavation results of the Angara archeological expedition including discovery of paleolithic tools near Bratsk and neolithic petroglyphs near Bol'shaya Kada. I. S. Gurvich (p. 152) reported his ethnographic research on Koryaks, Evens (Lamuts) and Itel'mens (Kamchadals) of the Koryak National District. ***Copy seen:*** DLC.

51319. GRAD, B., *and* **V. A. KRAL.** The effect of senescence on resistance to stress, 1; response of young and old mice to cold. (Journal of gerontology, Apr. 1957. v. 12, no. 2, p. 172–81, illus., tables.) 35 refs

Old females exposed to 6°–7° C. or 9°–11° C. showed "a very significantly higher" mortality than young females. Old mice withstood cold better when gradually adapted to it, but still showed a much higher mortality than young animals under similar conditions. Cold-exposed young mice showed greater O_2- and food-consumption, higher blood sugar and body weight, a larger fall in lymphocytes and a greater increase in erythrocytes. ***Copy seen:*** DNLM.

51320. GRAD, B., *and* **V. A. KRAL.** Response of young and old mice to cold. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 49.)

Old females showed a higher mortality upon cold exposure than mature young females. Temperatures which killed 100% old, unadapted mice killed none if they were gradually introduced to cold. Two-thirds of cold-adapted old animals died at low temperature within a week, while young mice survived under identical conditions. Differences in O_2-consumption, food intake, leucocyte counts, etc. are also discussed. ***Copy seen:*** DLC.

51321. GRADIN, ROLF. Utnyttjande av Nordkalottens vattenkraft. (Teknisk tidskrift, Nov. 4, 1958. årg. 88, häfte 40, p. 1047–48, maps.) Text in Swedish. ***Title tr.:*** Exploitation of northern waterpower.

Outlines general recommendations made by a Swedish-Finnish-Norwegian committee on coordinated exploitation of rivers in the northern regions of these countries. The Muonio, Torne, and Kalix Rivers offer the best prospects for cooperative development. By transferring water from the Kalix to the Torne, a billion kw-h. could be developed by constructing 20 power plants along the latter. The committee suggested continuation of the negotiations. ***Copy seen:*** DLC

51322. GRAENSEFORENINGEN. Det nye Norden; om modsaetninger og samspil mellem Nordens folk, tilegnet brobyggeren Jørgen Bukdahl på 60 årsdagen den 8. december 1956. København, Danske forlag, 1956. 101 p., port. Text in Danish. ***Title tr.:*** The new Scandinavia; conflicts and cooperation between the peoples of Scandinavia, dedicated to Jørgen Bukdahl, the bridge builder, on his 60th birthday, December 8, 1956. Edited with a foreword by Bent A. Koch.

Twelve articles by various authors on national and minority relationships in northwestern Europe, dedicated to a Danish champion of minority problems. The papers are concerned with the thesis that the northern (Scandinavian) peoples have a common basis for growing cooperation. Karl Nickul's discussion of the Lapps (p. 49–54) sketches their economic conditions, and political and cultural history. The fostering of a Lappish nationalism at the present time is attributed in part to the exceptional recognition of the minority group by the northern governments. The federation of Lapps to support development of arctic Fennoscandia is noted as of international significance. ***Copy seen:*** DLC.

51323. GRAETER, PAUL. Die sauren devonischen Eruptivgesteine des Kap Franklingebiets am Kejser Franz Josephs Fjord in Zentral-Ostgrönland. København, C. A. Reitzel, 1957. 102 p. plates, illus. incl. 3 fold., maps, diagrs., tables. (Meddelelser om Grønland. bd. 155, nr. 3.) 68 refs. Text in German. Summary in English. ***Title tr.:*** The acid Devonian volcanic rocks of the Cape Franklin region of Kejser Franz Josephs Fjord in central East Greenland.

Describes Devonian eruptives, investigated during the Danish East Greenland Expedition led by L. Koch. Granites of the Cape Franklin region, known to be of Middle Devonian age, were mapped, chemically analyzed, and compared with granites of the northern Giesecke Bjaerge and the Central Metamorphic Complex. Comparisons showed no major difference. A Middle Devonian age has been assumed for all granites of the Giesecke Bjaerge, and, possibly, for post-orogenic granites of the Central Metamorphic complex. This may contribute to dating the events of the Caledonian orogeny in central East Greenland. Rhyolites, covering a much wider area than the granites, are regarded as the volcanic phase of the same magmatic activity. A late hydrothermal phase is represented by veins of fluorite, quartz, hematite, barite, strontianite and calcite. Supplements, petrographically, No. 39053. ***Copy seen:*** DGS.

GRAF, K., *see* Graf, W., *and* K. Graf. The rectum-liver temperature gradient in man. *1957*. No. 51325.

51324. GRAF, W. The effect of histamine on skin and deep temperatures in man with particular reference to liver temperature. (Journal of clinical investigation, Aug. 1957. v. 36, no. 8, p. 1285–94, illus., table.) 42 refs.

Administration of histamine caused an identical fall in liver, hepatic vein, and gastric temperatures, with a less marked drop in rectal temperature. Concomitantly a rise in skin temperature took place, both effects being proportional to the dosage used. Other agents eliciting cutaneous vasodilatation acted similarly. It is concluded that the temperature lowering effect of histamine is due to increase of heat radiation from the skin. ***Copy seen:*** DNLM.

51325. GRAF, W., *and* K. GRAF. The rectum-liver temperature gradient in man. (Acta physiologica scandinavica, 1957. v. 41, fasc. 2–3, p. 138–48, illus.) 26 refs.

Account of continuous recordings, with thermocouples placed in the liver and rectal ampulla. In all ten cases examined rectal temperature was higher by a mean of $0.18 \pm 0.03°$ C. Pharmaca raising liver circulation increased the liver-rectum temperature gradient; a reversal of the gradient took place during initial phases of induced fever.

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GRAHAM, HARRY M., *see* Webb, J. E., *and* H. M. Graham. Observations . . . filth flies . . . Churchill . . . *1956*. No. 55957.

GRAHAM, HERBERT WILLIAM, 1905–, *see* International Commission NW Atlantic Fisheries. Proceedings . . . 1956–57. *1957*. No. 51934.

GRAHAM, HERBERT WILLIAM, 1905–, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958*. No. 51935.

GRAHAM, MARCUS W. R. de V., *see* Delucchi, V., *and* M. Graham. La revision . . . *Trichomalus* . . . *1956*. No. 50486.

51326. GRAINGE, J. W. Water and sewer facilities in permafrost regions. (Municipal utilities magazine, Oct. 1958. v. 96, no. 10, p. 29, 62–67, map.)

The various sources of water in permafrost areas (wells, rivers, lakes, ice), and their exploitation are discussed; the construction of water and sewer systems is described; experience at Fort Smith, Inuvik, Hay River, Tuktoyaktut, etc. is cited. River water can be exploited by standard methods or with portable pumps where permafrost, unstable soil conditions, or the problem of ice erosion of river banks exists. Water can be drawn from deep lakes in winter by an intake pipe, or obtained from sea ice, or just under the sea ice near a river mouth, since the fresh river water floats on the heavier salt water. Freezing of buried pipes can be prevented by maintaining at all times sufficient water velocity in the pipes or by heating the water in dual-main systems. Dual-main (Yellowknife) and single-main (Fairbanks) water systems, also sewage-discharge methods used at DEW Line stations are described.—From SIPRE. ***Copy seen:*** DLC.

51327. GRAMBERG, IGOR' SERGEEVICH. Geokhimicheskie issledovaniia kak odin iz metodov poiskov genetichеskikh priznakov neftematerinskikh tolshch, na primere Arkticheskikh raĭonov SSSR. (*In:* Leningrad. Naucho-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958. p. 171–82, diagrs.) 4 refs. Text in Russian. ***Title tr.:*** Geochemical investigation as one of the methods for prospecting genetical signs of matrix oil strata; according to samples from arctic regions of the U.S.S.R.

Presents results of geochemical study of mother substances of oil. Samples from Permian deposits at Nordvik, Olenek and Cape Tsvetkova (southeast Taymyr) and from Mesozoic deposits in the Ust'-Yenisey, Nordvik and Olenek districts were used, and the data are graphically depicted and discussed. In the Permian marine, lagoon and continental deposits, high content of potassium was indicated, and in Mesozoic deposits high sodium content. Other chemical differences between Permian and Mesozoic deposits are also noted and the reasons are discussed. Different sedimentation processes are treated. Assuming that the mother substances of oil are organic compounds and dependent on physical and chemical environments, the geochemical type of investigation is to be considered a supplementary method for oil prospecting.

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51328. GRAMBERG, IGOR' SERGEEVICH. Stratigrafiia i litologiia permskikh otlozheniĭ severo-vostochnogo kraia Sibirskoĭ platformy v sviazi s ikh neftenosnost'iu i uglenosnost'iu. Leningrad, Gostoptekhizdat, 1958. 216 p. illus., diagrs., cross-sections include 3 fold., maps incl. 1 fold. (Leningrad. Naucho-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 84.) 68 refs. Text in Russian. ***Title tr.:*** The stratigraphy and lithology of Permian deposits on the northeastern edge of the Siberian platform as related to their oil- and coal-bearing properties.

Monographic treatment of the stratigraphy and lithology of the Permian deposits in the Taymyr depression and adjacent regions, 70°–74° N. 100°–124° E. Distribution, main geographic and geologic features, and previous studies are reviewed. Stratigraphy of the cross-sections of Permian terrigenous and effusive-tuffaceous strata, mainly from the Anabar basin, is described and paleontological and palynological characteristics analyzed. The cross-sections are compared with those of Yuzhnyy Tigyan structure and other districts. Lithology of the Permian deposits of Anabar, Pura, Popigay, and Kotuy River basins is treated. Textural features, granulometric, mineralogic, and chemical characteristics are outlined and processes of diagenesis and epigenesis analyzed. Appraisal of mineral resource occurrence of studied area is disclaimed, but oil-bearing properties are indicated in the Pura basin and in western part of Yuzhnyy Tigyan uplift, and coal in the Kotuy River basin. Data supporting these indications are analyzed. ***Copy seen:*** DGS.

GRAMBERG, IGOR' SERGEEVICH, *see also* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Nefte-gazonosnost' severa Sibiri . . . *1958*. No. 52751.

GRAMBERG, IGOR' SERGEEVICH, *see also* Ravich, M. G., *and others*. O stat'e . . . *1958*. No. 54241.

51329. GRAN, HAAKON HASBERG, 1870– . Das Plankton des Norwegischen Nordmeeres von biologischen und hydrographischen Gesichtspunkten behandelt. Bergen, J. Grieg, 1902. iii, 222 p. illus. tables, maps. (Norway. Fiskeridirektoratet. Skrifter, serie havundersøkelser. Report on Norwegian fishery and marine investigations. v. 2, no. 5.) 95 refs. Text in German. ***Title tr.:*** The plankton of the Norwegian Sea considered from biological and hydrographic points of view.

A comprehensive study based on field work conducted during 1900–1901 over a roughly quadrangular area between Norway, Iceland and Bjørnøya. The first, general, part (p. 1–126) offers an historical outline of planktology, role of plankton as food of fishes and other animals, and as aid in hydrography; accounts of the biology and geographic distribution of common forms of phyto- and zooplankton of the area; geographic aspects and forms of plankton and their utilization as indicators of different water masses; quantitative distribution of plankton: its abundance in the upper layers of water and paucity in deep water. Pt. 2 (p. 127–212) deals with individual observations on the biological character of the sea at stations during cruises of *Michael Sars* (1900–1901) and the *Heimdal* (1900–1901), and further with the different species studied: their morphology and

taxonomy, location; geographic and depth distribution, age frequency, etc. Some 178 planktonic forms are thus treated in a systematic order of Protophyta, Protozoa and invertebrates. An alphabetic index of the Latin names of these forms, is appended. ***Copy seen:*** DI.

51330. GRANIK, GRIGORIĬ IL'ICH. Rechnoĭ transport v basseĭnakh rek ĪAny, Indigirki i Kolymy. (Rechnoĭ transport, Mar. 1958. god 18, no. 3, p. 15–17, illus., table, map.) Text in Russian. ***Title tr.:*** River transportation in the Yana, Indigirka and Kolyma River basins.

Navigation conditions are described for various sections of these rivers, particularly the northern parts. Data on their major characteristics are tabulated: navigable distances, depths, navigation periods, flow velocity; their position in relation to other rivers and roads in the transportation net is shown (map). The Yana, Indigirka and Kolyma have the same basic characteristics: northern flow direction, short navigation periods (60–138 days), rocky shore structure, and shallow sand banks, variable water flow during a season, and heavy ice cover. Transportation economics are discussed, particularly the high cost of shipping grain and other basic commodities. Improvements in the transportation system, including port construction landing facilities, repair shops, hoisting machinery, etc. are discussed in view of the new developments in mining, industry, forestry. The possibility is mentioned of an interconnected system of nearby rivers and highways. ***Copy seen:*** DLC.

51331. GRANIK, GRIGORIĬ IL'ICH, *and* **B. F. SHAPALIN.** Vazhnaĭa problema razvitiĭa rybnoĭ promyshlennosti Kamchatskoĭ oblasti. (Rybnoe khozĭaĭstvo, Oct. 1958. god 34, no. 10, p. 75–79.) Text in Russian. ***Title tr.:*** An important problem in developing the fishing industry of Kamchatskaya Oblast'.

Stressing the lack of railways in Kamchatka and the scarcity of roads and harbors, the author discusses prospects of developing economic and transport conditions in four areas of the peninsula: western Kamchatka, Petropavlovsk rayon, Kamchatka River valley, and Karaginsk-Olyutorsk Oblast'. The problem of supplying the fishing industry with raw materials as well as the question of export of finished fish products is given special attention.

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GRANIK, GRIGORIĬ IL'ICH, *see also* Akademiĭa nauk SSSR. Institut ėkonomiki. Problemy . . . ĪAkutskoĭ ASSR. *1958.* No. 49171.

51332. GRANINA, ALEKSANDRA NIKIFOROVNA. Deĭatel'nost' V. A. Obrucheva v Vostochno-Sibirskom otdele Geograficheskogo obshchestva SSSR. (Vsesoĭuznoe geograficheskoe obshchestvo. Izvestiĭa, Mar.–Apr. 1957. t. 89, vyp. 2, p. 123–30.) Approx. 100 refs. Text in Russian. ***Title tr.:*** V. A. Obruchev's activities in East Siberian Section of the Geographical Society of U.S.S.R.

Includes a list of 17 papers delivered by V. A. Obruchev to the Section (p. 126), and another of his 61 books, pamphlets, articles and reviews published in Irkutsk, by the Section or in a local newspaper. Some of these publications relate to geographic and geologic exploration in the Arctic and sub-Arctic.

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51333. GRANLUND, JOHN. Kulturhistoriskt lexikon för nordisk medeltid från vikingatid till reformationstid. Malmö, Allhems förlag, 1956, 1957. 2 v.; 668 col. in each v., plates. Text in Danish, Norwegian, Swedish. ***Title tr.:*** Culture-historical lexicon for nordic Middle Ages from Viking times to the Reformation.

Projected in ten volumes; articles on topics, customs, etc., of geographic, historical, theological, and cultural connotation, contributed by lexicographers, etc., of Denmark, Finland, Iceland, Norway, and Sweden. Each article has bibliographic references. Cultural influences of neighboring peoples, including Lapps and Greenland Eskimos, are noted.

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GRANT, F. S., *see* Canada. Defence Research Board. Op. Hazen 1957. *1958.* No. 50061.

GRANT, F. S., *see* Hattersley-Smith, G. F., *and* F. S. Grant. Glaciological "Operation Hazen" . . . *1958.* No. 51623.

GRANTZ, ARTHUR, 1927– , *see* Andreasen, G. E., *and others.* Aeromagnetic study . . . *1957.* No. 49303.

GRANTZ, ARTHUR, 1927– , *see* Zietz, I., *and others.* Aeromagnetic reconnaissance . . . Cook Inlet . . . *1957.* No. 56219.

51334. GRASSI, B., *and* S. CALTABIANO. Effetto della fatica, del fumo e della perfrigerazione su la coagulazione del sangue. (Rassegna di fisiopatologia clinica e terapeutica, Sept. 1956. anno 28, fasc. 9, p. 755–76, tables.) 31 refs. Text in Italian. Summary in English. ***Title tr.:*** Effect of fatigue, of smoke and of cooling upon blood coagulation.

Report on the effect of these factors in normal and vasculopathic subjects. The Howell time, prothrombin activity, residual prothrombin, platelet number and clot retraction have been evaluated before and after stress. Due to the latter, the blood showed an increased tendency towards hypercoagulation; in normal patients this tendency was of a transient nature. ***Copy seen:*** DNLM.

51335. GRAVE, NIKOLAĬ ALEKSANDROVICH. V zone kriosfery. (Ogonëk, June 1957. god 35, no. 27, p. 3.) Text in Russian. ***Title tr.:*** In the zone of the cryosphere.

Notes a glaciological station set up for the IGY. by the Institute of Permafrostology on the Su(a)ntar-Khayata Range, 2,000 m. above sea level, 150 km. from the nearest settlement, personnel and supplies were flown in by V. V. Kuzakov; timber and instruments were taken by reindeer and truck. Another glaciological station was set up at Tomtor, a village on the Oymyakon plateau in the area of the Cold Pole. (approx. 63°05′ N. 143°15′ E.). ***Copy seen:*** DLC.

GRAVE, NIKOLAĬ ALEKSANDROVICH, *see also* Akademiîa nauk SSSR. Zashchita dissertatsiĭ . . . *1957*. No. 49162.

GRAVE, NIKOLAĬ ALEKSANDROVICH, *see also* Kriss, A. E., *and* N. A. Grave. Ob anabioze v vechnoĭ merzlote . . . *1944*. No. 52503.

51336. GRAVEL, JOFFRE-ANDRÉ, *and* **A. McCLISH.** Hypothermie et arrêt cardiaque électif; étude expérimentale. (Union médicale du Canada, Feb. 1958. t. 87, no. 2, p. 138–42, tables.) 8 refs. Text in French. ***Title tr.:*** Hypothermia and selective cardiac arrest; an experimental study.

Account of experiments with dogs submitted to cardiac arrest by a variety of methods. Recovery and survival are appraised and discussed with each technique applied. ***Copy seen:*** DNLM.

GRAY, JANE, *see* Langenheim, R. L., *and others*. Cretaceous amber . . . *1957*. No. 52646.

51337. GRAY, NORMAN G. Charting Canada's waterways. (Canadian shipping, Oct.-Nov. 1958. v. 30, no. 1–2, p. 46–50, 29–33, illus., map.)

Dominion Hydrographer describes activities of the Canadian Hydrographic Service, of interest to the shipping, mining, fishing industries. Map shows standard and provisional charting completed to 1958, including such (mainly provisional) in the North. Inland charting includes parts of the Mackenzie River system. Harbor surveys include ports to serve new mineral developments, Rankin Inlet, Ungava, Knob Lake, among others. Current operations and survey methods are outlined, stressing the significance of radar, echo-sounding equipment, and Decca. Vessels (7) of the Service are listed with note of tonnage, launch and helicopter equipment; three operate in the North; the newest, CGS *Baffin*, is described. Sailing directions issued are listed; one for arctic Canada (3 vols.) is in preparation.
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51338. *GRAZHDANSKAÎA AVIATSIÎA.* Vozdushnye linii Sovetskogo Soûza. (Grazhdanskaîa aviatsiîa, June 1957. god 14, no. 6, fold. map, p. 20–21.) Text in Russian. ***Title tr.:*** Air lines of the Soviet Union.

Map of the U.S.S.R., Eastern Europe and North China, showing Soviet, foreign and jointly-used air routes. Soviet lines to Murmansk, Arkhangel'sk, Pechora, Vorkuta, Noril'sk, Yakutsk and Magadan are included. ***Copy seen:*** DLC.

51339. GREAT BRITAIN. MINISTRY OF AGRICULTURE, FISHERIES AND FOOD. Bear Island cod; prospect for 1958. Lowestoft, Fisheries Laboratory, 1958. 10 l. illus. tables, map. (*Its:* Laboratory leaflet no. 19.)

An outline of the cod stock of Bjørnøya waters and the availability in 1957, and based on these two, an appraisal of prospects for 1958. "Fish stock record 1957" dealing with the Barents Sea is added. ***Copy seen:*** DI.

51340. GREAT BRITAIN. MINISTRY OF AGRICULTURE, FISHERIES AND FOOD. Plankton, currents, wind and the Bear Island cod. Lowestoft, Fish-

eries Laboratory, 1958. 9 l. illus. maps. (*Its:* Laboratory leaflet no. 20.)

An outline of factors which cause variations in the number of cod surviving to marketable size i. e. to an age of four-five years. Based on these factors and on the size of the year classes, a prediction of the general size ("poor," "good," etc.) of cod catches in the coming five-seven years, is attempted.

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GREAT BRITAIN. NATIONAL COMMITTEE ON OCEAN BOTTOM FEATURES, *see* Wiseman, J. D. H., *and* C. D. Ovey. Proposed names of features . . . deep-sea floor. *1955.* No. 56088.

GREBENSHCHIKOVA, A. A., *see* Nikonov, M. N., *and others.* Agrokhimicheskaîa kharakteristika torfov . . . *1956.* No. 53610.

51341. GRECHUKHIN, VLADIMIR VASIL'EVICH, *and* **S. A. IFANOV.** Opyt beskernovogo bureniîa v Pechorskom ugol'nom basseĭne. (Razvedka i okhrana nedr, July 1958. god 24, no. 7, p. 38–41, diagrs., map, cross-section.) Text in Russian. ***Title tr.:*** Experimental coreless drilling in the Pechora coal basin.

Describes preliminary tests of geophysical prospecting for coal. Despite its favorable cost and efficiency in comparison with core drilling, it has only a limited use without further improvement in method. Gamma-ray examination was used because of inability to use either the polarization or equipotential method. Some data are reported on the Vorkuta coal basin.

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51342. GRECHUKHIN, VLADIMIR VASIL'EVICH. Rezul'taty provedeniîa promyslovo-geofizicheskikh rabot v Pechorskom ugol'nom basseĭne. (Razvedka i okhrana nedr, May 1957. god 23, no. 5, p. 43–51, table, graphs.) Text in Russian. ***Title tr.:*** Results of geophysical prospecting in the Pechora coal basin.

Methods and coordination of the results of geophysical determination of coal deposits are described. Coal deposits in the Pechora region are of Permian age with complexes of sandy-siltstone-argillitic deposits and conglomerates. All coal layers have high electric resistance, on the basis of which, thickness and character of the coal can be estimated. The apparent electrical resistance method (KS method) is described with graphs. Other methods used (PS natural polarization, RT registered current, and VP induced potential) are noted. Results of all four are correlated (fig. 3) with definite agreement in a particular coal layer. In a very thick layer additional potential sounding is carried out for supplemental checking and correlation with data from core samples. Sharp decline of resistance in the coal layer is often caused by large ash content. Electrometric diagrams are correlated with the data of petrographic and other analyses (fig. 5). A satisfactory new technique in locating coal deposits and determining their extent is indicated. ***Copy seen:*** DLC.

GREELEY, ARTHUR W., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

GREEN, G. R., *see* Campbell, J., *and others.* Effect . . . cold . . . coenzyme A . . . liver . . . *1958.* No. 50056.

51343. GREEN, L. H. McQuesten Lake and Scougale Creek map areas, Yukon Territory: report and 2 maps. Ottawa, Queen's Printer, 1958. 5 p., 2 fold. maps. (Canada. Geological Survey. Paper 58–4, maps 8–9, 1958.) 6 refs.

Maps at scale 1:63,360 cover a region 64°00′–64°15′ N. 134°30′–135°30′ W., six miles north of Keno Hill village. Text describes eight formations and other geologic features shown on the maps. Investigations within the map areas are noted, some having shown ores of possible economic value.

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51344. GREEN, L. H., *and* **K. C. McTAGGART.** Structural studies in the Mayo District, Yukon Territory. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1752.) Abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958.

Describes minor folds and other structures suggestive of intense deformation with the production of large-scale overturned isoclinal folds and low-angle faults observed in the Keno and Galena Hills, and a large-scale overturned fold in the Davidson Range. The overturned isoclinal folds formed during an early period of deformation, and in part of the district their axes were rotated in a later period of deformation characterized by open folding, faulting, and the develop-

ment of a wrinkle lineation. The silver-lead-zinc deposits occur in faults formed after these major deformations.

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51345. GREEN, R. Polar wandering, a random walk problem. (Nature, *London*, Aug. 9, 1958. v. 182, no. 4632, p. 382–83, diagr.) 7 refs.

An attempt is made to fit paleomagnetic data to a random walk of the pole over the earth's surface, using the pole paths relative to Europe and North America. Angular displacement of the pole from its present position is plotted against the square root of time (in millions of years). It is emphasized that there are periods of very little effective displacement, e.g. the Quaternary; and periods of rapid displacement, e. g. the Carboniferous.

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GREENAWAY, KEITH ROGERS, 1916– , *see* Dunbar, M., *and* K. R. Greenaway. Arctic Canada from the air. *1956.* No. 50656.

51346. GREENBANK, JOHN. Aggregational behavior in a freshwater sculpin. (Copeia, July 15, 1957. no. 2, p. 157.)

Some 100–125 sculpins, *Cottus aleuticus* Gilbert, adults and sub-adults, were observed July 25, 1956 on a boulder on a narrow shoal of one to three ft. depth along the southeast shore of Karluk Lake on Kodiak Island, Alaska. The fish, two or three deep in spots, were motionless, and remained so till the boat was almost upon them. ***Copy seen:*** DSI

51347. GREENBERG, L., *and others.* An immunological study of the Canadian Eskimo. (Canadian Medical Association. Journal, Jan. 1958. v. 78, no. 1, p. 27–31, tables, map.) Ref. *Other authors:* J. D. Blake *and* M. F. Gorman.

Report on a summer 1955 and winter 1954/55 study of the Eskimos in the Eastern and Western Arctic, the former probably the most isolated and "most clearly defined racial group in North America." Those living near large settlements were found to be well immunized, but not so those in isolated areas. A low incidence of "O" and "H" agglutinins to all salmonella tests was found. Tests for tularemia suggest this disease to be endemic in some areas; syphilis was found not to be prevalent in the population studied. ***Copy seen:*** DNLM.

51348. GREENBERG, L., *and others.* An immunological study of the Canadian Indian. (Canadian Medical Association. Journal, Aug. 1957. v. 77, no. 3, p. 211–16, tables, map.) 4 refs. *Other authors:* J. D. Blake *and* M. F. Connell.

Report on an immunological survey of Indian bands in various (including northern) parts of the country aimed at "evaluating past procedures and determining which infectious diseases were of particular importance in different areas." Past active immunization has proven very effective especially as far as diphtheria is concerned. Typhus and paratyphus appear to be highly endemic, and in certain areas (Northern Manitoba, James Bay region), tularemia. ***Copy seen:*** DNLM.

51349. GREENBLATT, J. H. Polarization in the corrosion of ice breakers. (Corrosion, Dec. 1957. v. 13, no. 12, p. 51–54, illus., tables.) 4 refs.

Polarization characteristics of steel coupons subject to the usual laboratory treatments given ship plating, were measured, and cathodic depolarization found to be the major factor influencing the corrosion observed. Higher temperatures and oxygenation are the most favorable conditions for corrosion; at low temperatures in oxygenated water, considerable anodic polarization occurred, mitigating corrosion. The measured cathodic and anodic polarization in volts/milliampere for steel specimens of varied surface treatment and under varied laboratory conditions, are tabulated; results are applied to explain the observations on three dry-docked vessels which had been operating in ice. ***Copy seen:*** DLC.

51350. GREENE, EDWARD LEE, 1843–1915. Certain Polygonaceous genera. (Leaflets of botanical observation and criticism, Jan.–Aug. 1904. v. 1, p. 17–50.)

A critical revision recognizing as genera the groups subgenerically known as *Bistorta, Persicaria,* and *Bilderdykia.* The first is known from Alaska: *Bistorta littoralis* (shores of Yes Bay, Th. Howell, no. 1048) and *B. ophioglossa* (an inland species from Ranch Creek in the Yukon Valley, June 26, 1899, by M. W. Gorman.)

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51351. GREENE, EDWARD LEE, 1843–1915. Novitates occidentales, I. (Erythea, Jan. 1893, v. 1, no. 1, p 4–7.) Text in English. ***Title tr.:*** Western novelties, I.

Contains descriptions of 11 flowering plants, chiefly from California, but

Pulsatilla multiceps from northern Alaska, collected by J. H. Turner in 1891 on the Porcupine River. Later parts of this series do not contain arctic material.

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51352. GREENE, EDWARD LEE, 1843–1915. Phytographic notes and amendments, I. (Erythea, Apr. 1895. v. 3, no. 4, p. 53–57.)

Contains critical notes on nine species, among them *Kumlienia cooleyae, Ranunculus bongardi* and *R. nelsonii,* recorded in Alaska. ***Copy seen:*** DA.

51353. GREENE, EDWARD LEE, 1843–1915. Some new lupines. (Leaflets of botanical observation and criticism, 1910–12, *pub.* Oct. 22, 1912. v. 2, p. 233–36.)

Describes six new species of *Lupinus,* among them: *L. yukonensis,* collected on the Klondike River by J. Macoun in 1902.

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GREENFIELD, LAZAR, *see* Moyer, J. H., *and others.* Hypothermia 2; the effect of agents . . . sympathetic nervous system . . . *1957.* No. 53430.

51354. GREENHAM, C. G., *and* H. DADAY. Electrical determination of cold hardiness in *Trifolium repens* L. and *Medicago sativa* L. (Nature, Sept. 1957. v. 180, no. 4585, p. 541–43, tables.) 8 refs.

Description of experiments and of a rapid method, "which can be used for establishing differences in cold hardiness between strains and between individual plants, particularly of certain forage legumes." The principle of the method consists in measuring the electrical resistance of the cold-exposed tissue.

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51355. GREENING, W. E. Some recent changes in the economy of Newfoundland. (Canadian geographical journal, Oct. 1957. v. 55, no. 4, p. 128–49, 20 illus., text map.)

Deals (p. 143–49) with the Newfoundland Labrador resource development: Knob Lake iron ores; British Newfoundland Corporation organized in 1953, its mineral exploration, timber concessions, uranium discovery in the Makkovik area (55°07′ N. 59°07′ W.); Grand Falls power site (53°35′ N. 64°17′ W.), hydroelectric potential of the Hamilton River, and road built between the Falls and the Quebec North Shore & Labrador Railway; low-grade iron ore discovery in the Wabush Lake region (53°02′ N. 66°52′ W.) with potential of 22 million tons annually by 1966; exploration of the 49 million-cord pulp-wood reserves.

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51356. GREENWOOD, MELVIN R. Bottom trawling explorations off Southeastern Alaska. (Commercial fisheries review, U.S. Fish and Wildlife Service, Dec. 1958. v. 20, no. 12, p. 9–21, illus., tables, maps.) 5 refs.

Account of exploratory trawling conducted by the U.S. Bureau of Commercial Fisheries in the fall of 1956 and spring of 1957 between Dixon Entrance and Hazy Island. Except for Alaska coral growth, much of the bottom was clear. Pacific ocean perch was the most abundant food fish caught; arrow-toothed flounder and Alaska pollock dominated in the fall. Promising catches of shrimp were also made. ***Copy seen:*** DI.

51357. GREGOIRE, V. Open-pit mining by the Iron Ore Company of Canada at Knob Lake, Quebec. (Canadian mining and metallurgical bulletin, Aug. 1958. v. 51, no. 556, p. 505–511, illus., text map.) *Also pub.:* Canadian Institute of Mining and Metallurgy. Transactions, v. 61, 1958, p. 279–85.

Report on development of the Quebec-Labrador mining project by the Iron Ore Company of Canada and outline of current mining practices. Accomplishments to date, location, topography and climate, similarities to other open-pit operations and conditions peculiar to these mines, also organization of work and staff, are dealt with. Bodies of ore, and methods of extraction, maintenance of equipment and problems of personnel procurement and turnover are discussed.

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51358. GREGORY, ROBERT A. Soil temperature changes associated with clearcutting. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 7–10.) 2 refs.

Describes two changes responsible for the creation of seedbed conditions favorable for germination and survival of commercial trees in Southeast Alaska: disruption of stable soil conditions; and increased insolation. Initiation of these beneficial changes is believed to result in part from soil temperature, of which studies were made in the 1952 field season at the Alaska Forest Research Center in an open two-acre area. A warming influence in connection with the

mall clearing is evident, and the effect of warming on decomposition and plant activity is suggested.

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51359. GREGORY, ROBERT A. Some silvicultural characteristics of western red cedar in Southeast Alaska. (Ecology, Oct. 1957. v. 38, no. 4, p. 646–49, illus., tables, map.) 4 refs.

Reports investigation of *Thuja plicata* in old-growth and young-growth stands. It was found not to reproduce appreciably in the well stocked old stands apparently due to lack of light. In this area the species is at its northern limits and probably very sensitive to environmental differences. It was most common in stands of site index 110 and less, usually having a fire history. ***Copy seen:*** DLC.

GREGORY, ROBERT A., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

GREIFF, DONALD, *see* Privitera, C. A., *and others*. Effects of freezing . . . oxydative phosphorylation of mitochondria. *1957*. No. 54145.

GREIFF, DONALD, *see also* Privitera, C. A., *and others*. Oxydative phosphorylation . . . freezing . . . *1958*. No. 54146.

51360. GRENAGER, BIRGER. Kvantitative undersøkelser av tang- og tareforekomster i Helgøy, Troms 1953. Oslo, 1958. 31 p. illus., tables, maps. (Norsk institutt for tang- og tareforskning. Rapport no. 21.) Text in Norwegian. ***Title tr.:*** Quantitative investigations on the occurrence of tangs and seaweeds in Helgøy, Troms, 1953.

Reports field study made during July on about half-a-dozen of algae common in this area (ca. 70° N. 19° E.). Depth, weight per area unit, estimated total weight for area studied are computed for each species and for the whole plant cover. A comparative morphological study of *Laminaria digitata* and *L. hyperborea*, is included. ***Copy seen:*** DA.

51361. GRENAGER, BIRGER. Kvantitative undersøkelser av tareforekomster i Øst-Finnmark 1953. Oslo, 1956. 37 p. illus. tables, maps. (Norsk institutt for tang- og tare-forskning. Rapport no. 13.) Text in Norwegian. ***Title tr.:*** Quantitative investigations into the occurrence of seaweeds in East Finnmark in 1953.

Account based on field work conducted during July–October in the sublittoral and littoral zone located between ca. 31° and 31°07′ E. The weight per 0.5 m², total weight for an area and the species composition were determined for the more common forms. Data for *Laminaria digitata* and *L. hyperborea* are treated in a separate section. ***Copy seen:*** DA.

51362. GRENIER, FERNAND. Essor et bilan de la production minière Canadienne depuis 1957. (Cahiers de géographie de Québec, Oct. 1957. année 2, no. 3, p. 161–62, table.) Text in French. ***Title tr.:*** Progress and financial status of Canadian mining production since 1946.

Mineral production values are tabulated by provinces and percentage of national production shown for 1946 and 1956. Value of Yukon production rose from 1.7 to 15.7 and Northwest Territories from 1.04 to 22.9 millions of dollars in the 11-yr. period and their percentage of total Canadian production from 0.3 to 0.8, and 0.2 to 1.1, respectively.

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51363. GREZE, I. I. Lichinki tendipedid Eniseĭa. (Vsesoûznoe gidrobiologicheskoe obshchestvo. Trudy, 1957. t. 8, p. 231–45, tables.) 22 refs. Text in Russian. ***Title tr.:*** Tendipedid larvae of the Yenisey.

A review of these insects from the upper reaches of the river down to, and including, its delta and tributaries. In addition the nature of bottom and currents, species occurrence and distribution, quantitative aspects and biomass are dealt with. Differences between the various sectors of the Yenisey's course and such of other large Siberian rivers are discussed. ***Copy seen:*** DLC.

51364. GREZE, VLADIMIR NIKOLAEVICH. Kormovye resursy ryb reki Eniseĭa i ikh ispol'zovanie. Moskva, 1957. 236 p. illus., tables. (Leningrad. Vsesoûznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozîaĭstva. Izvestiĭa, t. 41.) 263 refs. Text in Russian. Summary in English. ***Title tr.:*** Food resources of the Yenisey River fishes and their utilization.

A comprehensive study of conditions in some 3500 km. of this river, from Kyzyl (51°42′ N. 94°27′ E.) to the estuary. A review of past hydrobiological studies and methods introduces seven chapters, dealing in turn with: (*1*) general features of the basin, climate, geology, soils, hydrology, flora; (*2*) the fauna,

described (p. 37–113) in taxonomic order, from protozoans to higher fishes, with notes on the ecology of each form; (*3*) general review of the fauna and its formation: taxonomic and ecological composition, zoogeography, Quaternary history of the basin, and formative stages of its fauna. (*4*) The zooplankton, its composition and distribution, quantitative aspects, and (*5*) the bottom plankton, its elements, quantity and productivity are treated. (*6*) The animal benthos and its biocenoses, biomass and its distribution, annual production of the benthos are presented. (*7*) Fishes are considered from the economic viewpoint: distribution of species; food and its utilization; fish production and possibilities of increasing it. Biological and fish productivity was found to be not high due to low temperatures, poor soil and often swift current. This is partly compensated by the high quality of fish, consisting largely of salmon and pike. ***Copy seen:*** DLC.

51365. GREZE, VLADIMIR NIKOLAEVICH. Osnovnye cherty gidrobiologii ozera Taĭmyr. (Vsesoûznoe gidrobiologicheskoe obshchestvo. Trudy, 1957. t. 8, p. 183–218, illus., tables.) 49 refs. Text in Russian. ***Title tr.:*** Basic features of the hydrobiology of Lake Taymyr.

Account of a year-round study (July 1943–July 1944) of this large lake (4650 km² in area, 74°30′ N. 102° E.) in central Taymyr Peninsula. The plankton is dealt with first and its special composition, horizontal and vertical distribution, seasonal fluctuations and biomass are analyzed. The benthos is similarly reported: its qualitative composition, geographic origin, ecological zones, effects of freezing, biomass, etc. Discussion follows of the particular characteristics of this lake as an arctic water body, the effects of climate on seasonal growth periods and on duration of life.

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GRÎAZNOV, MIKHAIL PETROVICH, *see* Lisifsyna, N. K. Arkheologicheskie . . . RSFSR 1955. *1958.* No. 52859.

51366. GRÎAZNUKHIN, A. N. Rezul'taty vypuska vitimskogo sobolîa v raĭone ûgo-zapadnykh otrogov Verkhoîanskogo khrebta. (Akademiîa nauk SSSR. ÎAkutskiĭ filial, *Yakutsk.* Institut biologii, Trudy, 1958. vyp. 4, p. 143–71, illus. tables, maps.) Text in Russian. ***Title tr.:*** Results of the release of Vitim sables in the area of the southwestern spurs of the Verkhoyansk Ridge.

Report on material and observations gathered during four field trips into an area (approx. 64° N. 129° E.) where Vitim sables have been released since 1950. Character of the area, collection and transport of the animals, outline and results of individual releases, over-all results, are discussed, and the new habitat is described in detail. Early behavior of the animals in the new areas, their distribution and reproduction are noted. ***Copy seen:*** DLC.

51367. GRIBIN, A. A. O sozdanii almazodobyvaûshcheĭ promyshlennosti v ÎAkutskoĭ ASSR. (Gornyĭ zhurnal, Nov. 1957, no. 11, p. 33–40, illus.) 7 refs. Text in Russian. ***Title tr.:*** Creation of a diamond mining industry in the Yakut A.S.S.R.

The world's diamond mining industries are reviewed; the mining is described and diamonds for industrial purposes and gems are characterized. Early mining in the Urals (1938) and Yakutia is briefly outlined, with indication of the general geological character of the areas. In the major mining district of Yakutia, diamond deposits of three types were found: basic, loose (scattered), and conglomerate. The basic deposit found in 1954 represents numerous oval pipes of kimberlite in areas of 12,000 to 228,000 sq. m. and 4–5 m. depth. Mining is difficult, due to permafrost conditions to a depth of 200 m. The largest diamond (32.5 carats) of clear, gem type was found in the "Mir" deposit, of 120,000 sq. m. area. Another deposit Udachnyy ranges over an area of 225,000 sq. m. The loose diamond deposits are classified as: valley, brook, inclined, river bed and terracic types. The conglomerate deposits were found in the Vilyuy, Markha, Muna, and other river basins. Characteristics of these deposits and quality of the diamonds are described in detail. ***Copy seen:*** DLC.

51368. GRICE, G. D., Jr., *and others.* An unexplained mortality of Canada geese. (Journal of wildlife management, July 1956. v. 20, no. 3, p. 330–31, table.) *Other authors:* E. I. Tyson *and* E. B. Chamberlain, Jr.

Report on mass mortality around Huggle Pond, 12 miles north of Tallahassee observed during Feb.–Apr. 1954. Except for an extensive bloom of *Peridinium volzi* observed in this, but not

in neighboring ponds, no clue to this pestilence was found. It is believed to be a case of "red tide" affecting occasionally marine life, and also caused by dinoflagellates. ***Copy seen:*** DI.

51369. GRICHUK, V. P. Osnovnye momenty pleĭstotsenovoĭ istorii flory i rastitel'nosti Russkoĭ ravniny i drevnee oledenenie Evrazii. (Akademiîa nauk SSSR. Komissiîa po izucheniû chetvertichnogo perioda. Trudy, 1955. t. 12, p. 81–105, illus., maps.) 31 refs. Text in Russian. ***Title tr.:*** Basic moments of the Pleistocene history of the flora and vegetation of the Russian plain and the ancient glaciation of Eurasia.

Outlines the basic paleobotanic features of post-Tertiary and Pleistocene periods in the Russian plain. Characteristics of Pleistocene fossil flora, its species and distribution are summarized. Main attention is given to the Russian plain and Western Siberia, including the aretic regions from the lower Ob' in the west to the Omoloy and Aldan Rivers in the east. Among other plants, the circumpolar alpine species *Selaginella selaginoides*, L. is discussed, its distribution in northern Scandinavia, Kola Peninsula, Arkhangel'skaya Oblast' and West Siberia is mentioned and mapped (p. 95). ***Copy seen:*** DLC.

GRIDGEMAN, N. T., *see* Héroux, O., *and* N. T. Gridgeman. The effect of cold acclimation . . . size of organs and tissues . . . *1958*. No. 51701.

51370. GRIFFIN, W. R. WADC evaluation of experimental polymers. (Rubber world, Aug. 1957. v. 136, no. 5, p. 687–94, 701, illus., tables, graphs.)

Describes progress in the search for elastomers capable of service over the temperature range −100° F. to +600° F. New polymers, mostly fluorine-containing, have shown promising results. Serviceable temperature range in various fluids is discussed for fluoroacrylate rubbers, fluoroalkyl vinylidene fluoride-type elastomers, hexafluoropentamethylene adipate, and fluoroalkyl silicone elastomers. ***Copy seen:*** DLC.

GRIFFITH, ISABELLE V., *see* Scott, E. M., *and others*. Serum-cholesterol . . . blood-pressure of Alaskan Eskimo . . . *1958*. No. 54644.

51371. GRIFFITH, P. C., *and others*. The combined effects of ionizing radiation and low temperature on the metabolism, longevity, and soft tissues of the white rat; histologic changes, Mar. 1957. 8 p. illus., tables. (U.S. Air Force. School of Aviation Medicine, Randolph Field, Tex. Rept. no. 57–79.) 5 refs. *Also pub.:* Radiation research, Sept. 1957. v. 7, no. 3, p. 288–97. *Other authors:* W. J. Scheyer *and* S. W. Lippincott.

Account of investigations on rats raised at 5° and 25° C. and irradiated, or not, for one year with 0.84 r daily. There was no histologic evidence of irradiation damage in 16 organs and tissues examined, including the blood. Atrophy of testes, ear lesions and chronic pyelonephrosis were observed in animals raised at 5° C. both irradiated and not. ***Copy seen:*** DNLM.

51372. GRIFFITHS, THOMAS M. Role of a retreating ice margin in the formation of glacial features. (Association of American Geographers. Annals, June 1957. v. 47, no. 2, p. 162–63.)

Abstract of paper presented at 53rd annual meeting of the Association, Apr. 1–4, 1957, Cincinnati, Ohio. Study during 1954–1956 of marginal features associated with Greenland icecap: shear moraines, ice cliffs, marginal streams, ice-dammed lakes, etc. They may serve as keys to many features of the continental glaciated landscape. Features formed during glacial "retreat" are numerous and most likely to survive. ***Copy seen:*** DLC.

GRIFFITHS, THOMAS M., *see* International Geographical Congress, 1952. Proceedings. *1957*. No. 51939.

51373. GRIGGS, ROBERT FISKE, 1881– , *and* **D. READY.** Growth of liverworts from Katmai in nitrogen-free media. (American journal of botany, May 1934, v 21, no. 5, p. 265–77, illus.) 6 refs.

"The cultures decisively confirm the opinion reached from field observation that the liverworts, especially *Cephaloziella*, can grow on media lower in combined nitrogen than any ordinary plants . . . This capacity explains the extensive liverwort carpets on the ash flats of Katmai . . . The more conservative conclusion is that their growth in "nitrogen-free" media was accomplished by the utilization of nitrogenous impurities present in concentrations below the thresholds of the tests available." ***Copy seen:*** DLC.

51374. GRIGGS, ROBERT FISKE, 1881– . Growth of liverworts from Katmai on "nitrogen-free" sand. (American journal of botany, May 1937 v. 24, no. 5, p. 295–98, illus.) 10 refs.

Liverworts were grown in pure culture on "nitrogen-free" sand for three years. For half of that period cultures to which 4 ppm. NH_4NO_3 had been added grew no better than "nitrogen-free" cultures; but latterly the "nitrogen free" cultures became pale and unhealthy. At the end of three years, 4 ppm. NH_4NO_3 was added to them and they promptly revived. There was no evidence of nitrogen fixation. These liverworts apparently subsisted in the "nitrogen-free" cultures on nitrogenous impurities so small in amount as to lie below the threshold of the chemical tests available for detecting nitrates, nitrites, and ammonia.

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51375. GRIGORASH, Z. K. Opredelenie vremeni rasprostraneniîa volny tsunami do beregov Kamchatki i Kuril'skikh ostrovov. (Akademiîa nauk SSSR. Morskoĭ gidrofizicheskiĭ institut. Trudy, 1957. t. 11, p. 28–35, 8 maps.) 6 refs. Text in Russian. ***Title tr.:*** Determination of the time for tsunami waves to spread to the coast of Kamchatka and Kuril Islands.

Presents several maps made in 1955 to help determine time required for tsunami to travel from epicenter to coast. The data of tsunami phenomena for last thirty years were examined; the method is explained. The Americans and Japanese used a slightly different method in constructing similar maps after tsunami occurrence on the Hawaiian coast in April 1946. ***Copy seen:*** DLC.

51376. GRIGOR'EV, V. N., *and* **M. A. SEMIKHATOV.** K voprosu o vozraste i proiskhozhdenii tak nazyvaemykh "tillitov" severnoĭ chasti Eniseĭskogo kriîazha. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Nov. 1958, no. 11, p. 44–58, illus., table, map.) 23 refs. Text in Russian. ***Title tr.:*** On the question of age and origin of the so-called "tillites" in the northern part of Yenisey Ridge.

Reports on author's 1957 field studies in Chapa, Suktal'ma, Chivida and Vorogovka River valleys. New geologic data show that tillites of clay boulders are mixed with argillites, silt-stones, dolomites, and are substantially changed by ground waters. Cross-section of this stratum is examined, its thickness, distribution and mineral composition described. These so-called tillites are considered argillites of the Lower Cambrian and not Upper Proterozoic as reported by others. The stratum is distinguished as the independent Chivida series.

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51377. GRIGOR'EVA, V. G. O ponizhenii temperatury zamerzaniîa vody v dispersnykh gruntakh. (*In:* Materialy po laboratornym issledovaniîam merzlykh gruntov, sbornik 3, 1957. p. 177–94, tables, graphs.) 26 refs. Text in Russian. ***Title tr.:*** Depression of the freezing point of water in dispersed soils.

"The effects of capillarity on f.p. depression in clay soils were studied in the laboratory. The experimental procedure is described, and data obtained are tabulated and discussed. Freezing-point depression was chiefly associated with a double action of mineral particles, which oriented water molecules on their surface and bound them by ions in a diffuse layer. The effects of the surface tension of water in the ground capillaries and of the number of the capillaries on the f.p. were insignificant. The effects of ions in the diffuse layer appeared only at temperatures of −0.5° or −0.6° C. or higher. Disorientation of water molecules in samples by electrolyte admixtures increased the content of easily frozen loosely bound water."—SIPRE. ***Copy seen:*** DLC.

51378. GRIMBERG, A. M. Avtomat otbiraet almazy. (Nauka i zhizn', Sept. 1957. god 24, p. 51, illus.) Text in Russian. ***Title tr.:*** An automat selects diamonds.

Describes an ARL–1 apparatus designed by V. V. Finnė, an engineer of the All-Union Geological Research Institute, and used successfully in the diamond fields of Yakutia. It separates from diamantiferous crushed rock, the small pieces containing diamonds; it is based on the photoelectric effect of the luminescence of the diamonds under X-rays.

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GRIMES, A. E., *see* Bender, T. A., *and others.* Bibliography . . . climate of Greenland. *1957.* No. 49646.

51379. GRINBERG, A. A., *and* **V. D. FEDOROV.** Gemodinamika i dykhanie pri gipotermii v ėksperimente. (Ėksperimental'naîa khirurgiîa, Sept.–Oct. 1958. god 3, no. 5, p. 56.) Text in Russian. ***Title tr.:*** Hemodynamics and respiration in experimental hypothermia.

Notes on dogs made moderately hypothermic by physical or pharmaceutical means. Pulse, arterial pressure, venous pressure, ECG, respiratory frequency are summarized and effects of surgical intervention under hypothermia described. ***Copy seen:*** DNLM.

51380. GRINILEV, L. Aėrogeofizicheskai͡a stant͡sii͡a. (Nauka i zhizn', Dec. 1957. god 24, no. 12, p. 47, illus.) Text in Russian. ***Title tr.:*** Aerogeophysical station.

Describes "ASG–38," a device for aerial prospecting by detecting radioactive and magnetic anomalies. The device weighs 160 kg., is sensitive enough to distinguish radiation of thorium from uranium; with it, 45 anomalies were located in 1956 in the Yakutia diamantiferous regions, which proved to be kimberlite pipes. ***Copy seen:*** DLC.

51381. GRINKO, E. P., *and* **V. D. ALIMOV.** Nekotorye voprosy o tipe sudna dli͡a lova sel'di i okuni͡a v Severnoĭ Atlantike bez plavuchikh baz; v pori͡adke obsuzhdeni͡ia. (Rybnoe khozi͡aĭstvo, Apr. 1958. god 34, no. 4, p. 21–25, tables.) Text in Russian. ***Title tr.:*** Some problems on the type of vessels without mother ships for the catch of herring and perch in the North Atlantic; a discussion.

Large vessels are required for catching and processing herring and perch in the northern Atlantic. A plan is put forward to convert for this purpose, boats of the BMRT type hitherto used in the cod industry. Estimates, fishing-time tables, comparisons with catches from mother ships, rearrangements on the vessels, etc., are discussed. ***Copy seen:*** DLC.

GRISCOM, ANDREW, *see* Schytt, V. Glaciological investigations . . . Thule . . . *1957*. No. 54640.

GRISHIN, K. D., *see* Ĭablochkin, N. N., *and* K. D. Grishin. Ėlektropodogrev rastvora . . . *1957*. No. 51879.

GRØNBJERG, A., *see* Flagstad, C. O., *and* A. Grønbjerg. Det elektriske maskineri . . . *1955*. No. 50923.

51382. GRØNLIE, ARNE. Litt on Trollheimen under siste istid. (Norsk geologisk tidsskrift, 1953. bd. 32, hefte 2–4, p. 168–90, illus., map.) 9 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Note on the Trollheimen Mts. during the last glaciation.

Examination of topography, bedrock types, soil weathering, erratics, and ice scouring in the Trollheimen locality, approx. 63° N. 9°30′ E., lead to the conclusion that ice of the continental glacier did not overtop the local peaks. Local glaciation occurred above the continental ice flow which was influenced by relief. Near the summits, where snow was blown off, where the slope was too steep for snow to collect, and where southerly exposure permitted warm summer temperatures, there were ice-free areas, nunataks, where hardy plants could have survived the last glaciation. Local finds of higher plants are identified. Recent studies of the region are reviewed. ***Copy seen:*** DGS.

51383. GRÖNLUND, MAURITZ, 1851-1910. En äventyrlig tingsresa. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok, 1958, p. 107–113, illus., port.) Text in Swedish. ***Title tr.:*** An adventurous circuit.

Contains account of a court clerk's journey in March 1873 by reindeer sleigh between Karesuando (68°26′ N. 22°29′ E.) and Vittangi (approx. 67°40′ N. 21°40′ E.) in north Sweden. Accommodations, food, difficulties due to weather conditions, etc., are described. Hans Beskow introduces this account (p. 107–110) with a review of official functions in the Lapp regions, where centuries-old traditions were followed. Priests, judges, tax-collectors, merchants, etc. met at certain places and times of the year; procedure and conditions are described. The first churches were built during the 17th century and about the same time courthouses, etc. were erected at these meeting-places. ***Copy seen:*** SPRI.

51384. GRØNTVED, JOHANNES, 1882– . *Galium boreale* L., new to Greenland. (Botanisk tidsskrift, 1954. bd. 51, p. 98–102, illus.) 11 refs.

Describes: Galium boreale, from Tunugdliarfik Fjord, southwest Greenland, and gives a key to the varieties (Scandinavia, northern Russia, Alaska, and northern Canada) and four other species of *Galium* native to Greenland, some occurring in Alaska, Canada and northern Siberia. ***Copy seen:*** DA.

51385. GRØNTVED, JOHANNES, 1882– . Typhaceernes og Sparganiaceernes udbredelse i Danmark. (Botanisk tidsskrift, 1954. bd. 50, hefte 3, p. 209–229.) Text in Danish. Summary

in English. ***Title tr.:*** The distribution of the Typhaceae and Sparganiaceae within Denmark.

Study of the cat-tail and bur-reed families in and outside Denmark; includes three species extending to the far North: *Typha latifolia* (Kamchatka, and from Newfoundland to Alaska), *Sparganium simplex* (northern Siberia), *S. minimum* (from the Yenisey, 67° N., to Kamchatka, and in northern Norway). ***Copy seen:*** DA.

51386. GROMOV, B. V. Mikroflora skal'nykh porod i primitivnykh pochv nekotorykh severnykh raĭonov SSSR. (Mikrobiologiîa, Jan.-Feb. 1957. t. 26, vyp. 1, p. 52–59, tables.) 17 refs. Text in Russian. Summary in English. ***Title tr.:*** Microflora of rocks and of primitive soils in some northern districts of the U.S.S.R.

A study of these problems in the Khibiny mountains and neighboring areas. The processes of erosion and soil formation were found to be associated with the activity of a diverse microflora even under the severe conditions of the Khibiny. Even in the most primitive soil formations almost all principal groups of microorganisms were found. The distribution and frequency of these forms is discussed. ***Copy seen:*** DLC.

51387. GROMOV, B. V. Nablîudeniîa nad vodoroslîami primitivnykh pochv nekotorykh severnykh raĭonov SSSR. (Leningrad. Universitet. Uchenye zapiski, 1956. no. 216, ser. biologicheskikh nauk, vyp. 41, Mikrobiologiîa, p. 170–79, illus., tables.) 14 refs. Text in Russian. ***Title tr.:*** Observations of algae in primitive soils in some northern regions of the U.S.S.R.

Includes (p. 174–75) quantitative data and species of algal microflora in soil samples taken in 1954 near the summit of Vud''yavrchorr Mt. in the Khibiny tundra. ***Copy seen:*** DLC.

GROMOV, G. D., *see* Azbelev, V. V., *and others.* Opyt ucheta semgi . . . *1958.* No. 49455.

51388. GROMOV, L. V. Sledy starinnogo zaseleniîa na ostrove Vrangelîa. (Letopis' Severa, 1957. t. 2, p. 155–56, map.) 6 refs. Text in Russian. ***Title tr.:*** Traces of ancient habitation on Vrangel Island.

Describes remains of a log-reinforced dwelling discovered on Cape Fomy (70°55′ N. 178°45′ E.) by an Eskimo hunter and viewed by the author in 1937. The cabin, located on a mountain slope, 35–40 m. above sea-level, is similar in shape to the yurta-type huts of shore Chukchis and Eskimos, and contained a number of wooden artifacts typical for Chukchi coastal hunters: harpoon shaft, spear, shovel, etc., also a spear or harpoon point made of walrus tusk and a blue bead. The latter, a Russian trade item, precludes a dating prior to the middle 17th century. An, at least temporary, Eskimo or Chukchi occupancy of the island in the 17th or 18th centuries is suggested. A shipwreck origin of the finds is considered rather unlikely, though not impossible. No excavations were conducted at the site. ***Copy seen:*** DLC.

51389. GROMOV, VALERIAN INNOKENT'EVICH, 1896– . Nekotorye novye dannye o faune i geologii paleolita vostochnoĭ Evropy i Sibiri. (Gosudarstvennaîa akademiîa istorii material'noĭ kul'tury. Izvestiîa, 1935. vyp. 118, Paleolit SSSR, p. 246–70, tables, diagrs., map.) Refs. Text in Russian. ***Title tr.:*** Some new data on the fauna and geology of the paleolithic era in eastern Europe and Siberia.

Includes (p. 246–62) a description of the geological formations (diagrammed) and faunal remains (tabulated) in paleolithic sites on the Angara (Mal'ta) and upper Yenisey Rivers. The predominance of reindeer (*Rangifer tarandus*) bones is noted. ***Copy seen:*** DLC.

51390. GROMOV, VALERIAN INNOKENT'EVICH, 1896– . Osobennosti i svoeobrazie chetvertichnykh otlozheniĭ i skhema ikh stratigraficheskogo raschleneniîa. (*In:* Akademiîa nauk SSSR. Geologicheskiĭ institut. Kratkoe polevoe rukovodstvo, 1957, p. 7–9, fold. table.) Text in Russian. ***Title tr.:*** Features and origin of Quaternary deposits and a scheme of their stratigraphic division.

Some agreement on the stratigraphic division of Quaternary deposits is needed; paleontologic and biostratigraphic methods seem best suited for determining such. A division has been worked out, valid for the entire U.S.S.R., reconciling those hitherto used in different regions. Various Russian, German, and American stratigraphic divisions are shown (fold. table) in comparison. ***Copy seen:*** DLC.

51391. GROMOV, VALERIAN INNOKENT'EVICH, 1896– . Paleontologicheskoe i arkheologicheskoe obosnovanie

stratigrafii kontinental'nykh otlozheniĭ chetvertichnogo perioda na territorii SSSR. Moskva, Izd-vo Akademii nauk SSSR, 1948. 511 p. illus., tables incl. 2 fold. maps incl. 3 fold., cross-sections. (Akademiîa nauk SSSR. Institut geologicheskikh nauk. Trudy, 1948. vyp. 64, ser. geologicheskaîa, no. 17.) 674 refs. Text in Russian. ***Title tr.:*** The paleontological and archeological bases of the stratigraphy of continental deposits of the Quaternary period on the territory of the U.S.S.R.

Presents an extensive outline of the investigations and gives a new stratigraphic division (table no. 217). Some subarctic and arctic regions are treated: the paleolithic in the Ob basin (p. 294–302), Yenisey basin (p. 303–328), Angara and Lena basins (p. 362–73). Paleoclimate is treated comprehensively; distribution and life conditions of flora and fauna are discussed. Mammals in the Quaternary period, their various forms, distribution and ecological conditions are outlined. The existence of arctic faunal elements is evident at present only for the second part of the Pleistocene period.

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51392. GROMOV, VALERIAN INNOKENT'EVICH, 1896– . Velikoe oledenenie. (Nauka i zhizn', Feb. 1957. god 24, no. 2, p. 45–48, illus., col. plate, maps.) Text in Russian. ***Title tr.:*** The great glaciation.

Popular outline of the ice age, its extent, effects, causes; including glaciation of Scandinavia, Novaya Zemlya, the Ural and other northern areas of Europe, Asia, North America, and the geomorphic traces, still evident. ***Copy seen:*** DLC.

51393. GROS, C. M., *and* J. BLOCH. Influence de la température sur la survie d'un poisson, *Carassius carassius*, L., après irradiation totale (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 3, p. 602–604, illus.) 10 refs. Text in French. ***Title tr.:*** Influence of temperature upon the survival of the fish *Carassius carassius*, L., after total irradiation.

Account of experiments with crucian carp irradiated by X-rays and at temperatures of 3° to 25° C. Sojourn at low temperature made the fishes resistant to the injurious effects of radiation. This is explained by the reduced metabolism in cold environment. ***Copy seen:*** DNLM.

51394. GROSS, HUGO, 1888– . Die Fortschritte der Radiocarbon-Methode 1952–1956. (Eiszeitalter und Gegenwart, 1957. Bd. 8, p. 141–80, graphs, tables.) Approx. 130 refs. Text in German. Summary in English. ***Title tr.:*** The progress of the radiocarbon method 1952–1956.

Dating established by this method was first published in 1950. With improved techniques, its importance for late Quaternary geology, for paleontology, and prehistoric archeology, has been demonstrated: with range extended to 40,000–50,000 yrs., chronology of the last glaciation and the most ancient (Upper Paleolithic) cultural development of man can be established. Chronology of the last glaciation based on radiocarbon determination invalidates that based on solar radiation curve, but geochronology established by varve measurement for the last 11,000 yrs. is verified. In the tables of C_{14} dates, Alaska, Ellesmere, James Bay region, Labrador, northwest Greenland are represented.

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51395. GROSS, HUGO, 1888– . Das Rentier in der Vorgeschichte. (Orion, Mar. 1957. Jahrg. 12, no. 3, p. 240–43, illus.) Text in German. ***Title tr.:*** The reindeer in pre-history.

An outline of the reindeer culture of Europe with information on the animals' range as judged by prehistoric bone implements; the nature of these implements; race of reindeer which inhabitated Europe; use of its various parts (reconstructed from Eskimo life); its replacement by other animals and withdrawal northward. ***Copy seen:*** DLC.

GROSS, MILTON M., *see* Guttman, R., *and* M. M. Gross. Relationship . . . electrical and mechanical changes in muscle . . . cooling. *1956.* No. 51458.

GROSSMAN, N., *see* MacGregor, C. W., *and* N. Grossman. Dimensional effects in fracture. *1952.* No. 53008.

51396. GROTE, AUGUSTUS RADCLIFFE, 1841–1903. The North American species of *Mamestra*, Ochs. (Canadian entomologist, June 1881. v. 13, no. 6, p. 126–30.)

Species recorded in this genus of lepidopters are listed with occasional critical notes and distributional data. *M. grandis* native to Greenland, and three occurring in Labrador, are included.

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51397. GROTH, ERLING. Banken og byen; Sandefjords sparebank, 1857–1957. Sandefjord, 1957. 351 p. illus., plates. Text in Norwegian. ***Title tr.:*** The bank and the city; Sandefjord's savings bank, 1857–1957.

This centennial jubilee volume gives a financial history of the southern Norwegian seaport, base of the whaling industry. Local conditions are assessed throughout in terms of international monetary fluctuations. Before the bank was established, the seaport was already building, outfitting, and manning whaling ships, at first in northern, especially arctic, waters, and later on a worldwide basis. This industry gave Sandefjord exceptional status in Norway, e.g., in the period of unemployment, 1876–1885, when its manpower was generally occupied, and in the mid-1920's when bank records show a steady financial situation in the whaling town. Growth of the whaling industry and of Norway's commercial fleet are shown by changes in types of ships and modernization of whale catching, processing, and transport at sea, also of related industries at the seaport. ***Copy seen:*** DLC.

51398. GROTH, KJELL. Suppression of evaporation from snow-fields. (Tellus, May 1957. v. 9, no. 2, p. 159–63, illus., tables.) 3 refs.

Increasing use of available water resources raises interest in artificial control of the geophysical water balance to make more water available. A more effective water economy may be attained by suppressing evaporation. Experiments were carried on in Stora Lulevatten in spring 1955, and later in the writer's laboratory to suppress evaporation from ice and snow by monomolecular films of fatty alcohols with and without an admixture of pigment. A mixture of octadecanol and hexadecanol combined with red iron oxide suppressed evaporation under laboratory conditions, and in the field the pigment positively affected the spreading power of the mixture. Data are tabulated on test conditions, relative evaporation from snow variously treated, maximum efficiency of the test substances, and the penetration of the substances into snow.

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51399. GROTHE, WALTER. Zur Vorgeschichte des Geophysikalischen Jahres: 1, die Internationalen Polarjahre. (Kosmos, Aug. 1957. Jahrg. 53, Heft 8, p. 394–97, illus., text map.) Text in German. ***Title tr.:*** Antecedents of the Geophysical Year: 1, the International Polar Years.

An international polar conference at Hamburg in 1879, initiated by Hans von Wilczek and Karl Weyprecht, led to the establishment of the first polar year in 1882–83. Weyprecht and Georg von Neymayer, head of the German naval observatory at Hamburg, had concluded that future polar research must be carried out on an international basis, and their views obtained general acceptance. Stations in the Arctic (12) and in the Antarctic (two) were established (cf. map). The Second International Polar Year, during which 200 arctic stations (86 Russian) were occupied, was initiated by the German naval observatory in Hamburg (Deutsche Seewarte), and 40 nations took part in the program, German scientists participating in foreign groups only. Fields of observations in both years are outlined. ***Copy seen:*** DLC.

51400. GROTHE, WALTER. Zur Vorgeschichte des Geophysikalischen Jahres: 2, die sieben Holländer auf Jan Mayen. (Kosmos, Sept. 1957. Jahrg. 53, Heft 9, p. 430–34, illus., map.) Ref. Text in German. ***Title tr.:*** Antecedents of the Geophysical Year: 2, the seven Dutchmen on Jan Mayen.

Contains excerpts from the diary of A. M. Carman on a Dutch expedition wintering 1633/34 on the north coast of Jan Mayen. The party (Outgert Jacobson, leader), was sent out by the Greenland Company of Amsterdam to observe wind, ice, and weather conditions, also "special features on which the astronomers disagree." Due to insufficient provisioning, scarcity of game (except occasional bears) and lack of vegetation, all died from scurvy and starvation. Last entry in the diary is of Apr. 30, 1634, five weeks before the relief ship arrived. ***Copy seen:*** DLC.

51401. GROTHE, WALTER. Zur Vorgeschichte des Geophysikalischen Jahres: 3, die Katastrophe im "Land of Desolation." (Kosmos, Nov. 1957. Jahrg. 53, Heft 11, p. 523–31, illus., map.) 3 refs. Text in German. ***Title tr.:*** Antecedents of the Geophysical Year: 3, the catastrophe in the "Land of Desolation."

Recounts experiences of the U.S. International Polar Year party under Lt. Greely from their second (1882–83)

wintering on northern Ellesmere at Fort Conger (81°44′ N. 64°45′ W.), after the relief vessel failed to reach them; their voyage southward along the eastern coast of Ellesmere in July 1883 as far as Eskimo Point (Sept. 29); hardships of the third wintering, Greely's efforts to maintain morale, despite hunger, scurvy, etc. Seven survivors of the 25-man party were rescued by the *Thetis* (Capt. Schley) June 23, 1884.

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51402. GROUT, ABEL JOEL, 1867–1947. A revision of the North American Isotheciaceae and Brachythecia. (Torrey Botanical Club. Memoirs, July 30, 1897. v. 6, no. 2, p. 131–210.)

Contains keys and a systematic annotated list of 15 species of the family Isotheciaceae and 38 of the genus *Brachythecium*, with synonyms, descriptions, type localities, habitats, illustrations, and exsiccati. At least five of these mosses occur in Greenland, the Aleutians, Alaska and northern Canada.

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51403. GROUT, ABEL JOEL, 1867–1947. A revision of the North American species of *Scleropodium*. (Torrey Botanical Club. Bulletin, Oct. 1899. v. 26, no. 10, p. 531–40.)

Contains a key and synopsis of six species of this bryophyte, including *S. caespitosum* and *S. colpophyllum* from Alaska. ***Copy seen:*** DLC.

51404. GROVES, JAMES WALTON, 1906– , *and others*. Notes on fungi from northern Canada, III. Amanitaceae, Hygrophoraceae, Rhodophyllaceae, and Paxillaceae. (Canadian field-naturalist, July–Sept. 1958. v. 72, no. 3, p. 133–38.) 11 refs. In sequence to No. 35063, 40164. *Other authors:* J. C. Thomson *and* M. Pantidou.

Contains an annotated systematic list of 17 fungi, with synonyms, taxonomic data, distributional notes and lists of specimens examined. At least ten of the species are recorded in Alaska, Yukon Territory, Labrador, northern Quebec and Baffin Island. ***Copy seen:*** DA.

GROZDILOV, A. L., *see* Tkachenko, B. V., *and others*. Geologicheskoe stroenie . . . *1957*. No. 55460.

51405. GRUN, PAUL. Cytogenetic studies of *Poa*, I; chromosome numbers and morphology of interspecific hybrids. (American journal of botany, Oct. 1954. v. 41, no. 8, p. 671–78, 18 illus., 2 tables.) 34 refs.

Contains a study of polyploid bluegrasses, in which interspecific hybrids occur at two levels, a "triploid" level that results from fertilization of unreduced (apomictic) eggs, and a "diploid" level resulting from the fertilization of reduced (sexual) eggs. The majority of the hybrids are diploid. The morphology of hybrid plants may be ascribed to: a combination of the species characters, influence of differences between the ecological races of the parent species, and effect of differences in chromosome number among the gametes producing the hybrids. This study is based partly on material from Swedish Lapland (*P. pratensis* ssp. *alpigena*).

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51406. GRUN, PAUL. Cytogenetic studies of *Poa*, II; the pairing of chromosomes in species and interspecific hybrids. (American journal of botany, Jan. 1955. v. 42, no. 1, p. 11–18, 3 illus., 2 tables.) 19 refs.

Chromosome pairing in *Poa* "reveals a pattern of regularity that is apparently superimposed on one of irregularity." Reports of various scientists on pairing of chromosomes in *P. pratensis* (northern Scandinavia), *P. alpina* and *P. laxa* indicate that well over 90% of the cells contain univalents, but when this irregularity is expressed as univalent frequency per cell, the range is only from 0 to 7 in different plants of these species. Thus the degree of irregularity of each cell is slight. Two exceptions to this normality are the various subspecies of *P. arctica* and the hybrid *P. alpina* var. *vivipara* x *P. arctica*, studied by Nygren (No. 24762), native to northern Scandinavia. Pt. III of this study does not contain arctic material.

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51407. GRUNDSTRÖM, HARALD, 1885– . Sarakkagröt-nornegröt-barselgröt-lystenbit; some parallels. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 203–207.) Refs. in text.

Discusses the ritual porridge-like food consumed by women during pregnancy or after childbirth in honor of the Lappish mother-goddess, Sarakka, and compares it with those used in the cult of the Germanic Norns. ***Copy seen:*** DSI.

GRUNDSTRÖM, HARALD, 1885– , *see also* Steggos, J. E. Lapska sånger . . . *1958*. No. 55141.

GRUNKE, W., *see* Heidelmann, G., *and others.* Zur Pathogenese . . . der Kälteurtikaria. *1957.* No. 51651.

51408. GRUPP, G., *and* S. JANSSEN. Untersuchungen über die Wärmebildung der Niere. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 267, Heft 1, p. 58–72, illus. tables.) 13 refs. Text in German. ***Title tr.:*** Investigations on heat production of the kidney.

Account of investigations into the kidney of dogs. Heat production amounted to 0.04–0.47 cal./gm./min. and was largely independent of the blood current; heat turnover on the other hand was dependent on it. Posterior hypophyseal hormone temporarily reduced heat production, content and turnover.

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GRUPP, G., *see also* Janssen, S., *and* G. Grupp. Untersuchungen über die Temperaturverteilung . . . *1957.* No. 52048.

51409. GRUSHEVSKIĬ, I. I. Opyt primeneniia vodolaznykh rabot pri izuchenii almazonosnogo allûviia reki Omonos. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ bûlleten', 1958. vyp. 7, p. 67–68.) Text in Russian. ***Title tr.:*** An attempt to apply diving operations to investigation of diamond-bearing alluvial deposits in the Omonos River.

Reports work on the bottom of the Omonos River, tributary to the Olenek (approx. 69°40′ N. 119° E.) as tried for the first time by the Institute of Geology of the Arctic. The oxygen apparatus, ISAM–48, enables the diver to remain underwater at 20 m. depth for 1½–2 h rs The diving suit is described. This work was done at the place where the kimberlite pipe "Leningrad" outcrops. The procedure for taking samples and observations is noted. ***Copy seen:*** DGS.

51410. GRYC, GEORGE, 1919– , *and others.* Geology of northeastern Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1753.) Abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958. *Other authors:* W. P. Brosge *and* H. N. Reiser.

Describes area between the Sagavanirktok River (approx. 148° W.) and 141° W., and from approx. 68° N. to the arctic coast. The exposed sedimentary rocks range from Silurian through Quaternary, with the exception of Pennsylvanian. Igneous rocks make up a minor part of the area. Mineralized rocks have been reported, but major mineral possibilities are not yet known. The belt of sedimentary rocks favorable for petroleum accumulations extends along the foothills and coastal plain, which are probably underlain in part by possible reservoir beds of Devonian, Mississippian, Cretaceous, and Tertiary age. The Shaviovik and Marsh Creek anticlines are closed structures; other similar structures are believed to be present. ***Copy seen:*** DGS.

GRYC, GEORGE, 1919– , *see also* Miller, D. J., *and others.* Geology . . . petroleum provinces . . . *1957.* No. 53294.

GRYC, GEORGE, 1919– , *see also* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

51411. GUBER, D. Igry dalekogo kraia. (Fizkul'tura i sport, 1957. god 27, no. 11, p. 20–21, illus.) Text in Russian. ***Title tr.:*** Sports of a far-away region.

Describes the reindeer-lassoing, skiing, rifle shooting, reindeer- and dog-sledding and wrestling contests, soccer, volley- and basketball games, popular among the Chukchis, Lamuts, Eskimos and Yukaghirs of the Chukotskiy National District, Kamchatskaya Oblast'. An ingenious method of preparing an athletic field used by villagers of Ostrovnoye on the Malyy Anyuy is noted: a herd of reindeer is driven over the snow-covered river and the snow, thus compacted, is left to freeze overnight.

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GUBLER, E. V., *see* Akimov, G. A., *and others.* Vliianie glubokogo obshchego okhlazhdeniia . . . *1957.* No. 49194.

51412. GUDKOVICH, ZALMAN MARKOVICH. K izucheniiû nevetrovoĭ sostavliaûshcheĭ dreĭfa l'dov. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 19–27, table, graph, map, diagr.) 8 refs. Text in Russian. ***Title tr.:*** The non-wind component of ice drift.

Factors influencing drift in the Arctic Basin are analyzed and the non-wind drift speed at a given point is calculated as a function of the free surface inclination and a constant derived from the total effect of gravity, coriolis force and the resisting force, ice mass and density, and other, nearly constant forces. The theoretical calculations agree well with

observational data: wind drift accounts for approx. one-third of the total drift. ***Copy seen:*** DLC.

51413. GÜNTHER, ALBERT, 1830–1914. Account of the fishes collected by Capt. Feilden between 78° and 83° N. lat., during the Arctic Expedition 1875–76. (Zoological Society of London. Proceedings, 1877. p. 293–95, illus.)

Notes on seven species, with a detailed description and color plate of a new one, *Salmo arcturus*, sp. n. Specimens of this char were collected in Victor Lake (82°34′ N.) and in water pools on Floeberg Beach, northeast Ellesmere. They attain 12″ in length. ***Copy seen:*** DLC.

51414. GÜNTHER, ALBERT, 1830–1914. Report on a collection of fishes made by Mr. C. Hart during the late Arctic Expedition. (Zoological Society of London. Proceedings, 1877. p. 475–77, illus.)

Notes on five marine species from Franklin Pierce Bay and two freshwater forms from lakes in Discovery Harbour, northeast Ellesmere where Hart, naturalist aboard the *Discovery*, wintered 1875–76. One of the latter, *Salmo naresii*, n. sp. is described in detail and reproduced in color. It is a small form reaching 10 inches in length. ***Copy seen:*** DLC.

51415. GUERNE, JULES, de *and* J. RICHARD. Sur la faune des eaux douces du Groenland. (Académie des Sciences, Paris. Comptes rendus, 1889. t. 108, p. 630–32.) 3 refs. Text in French. ***Title tr.:*** On the fauna of the fresh waters of Greenland.

A list of crustaceans, rotifers and an insect, collected in summer 1888 by Charles Rabot in fresh-water pools of southwest Greenland (Disko-Julianehaab). Location of find, earlier records, geographic distribution, etc., are noted. ***Copy seen:*** DLC.

GUERNSEY, FRANCES S., *see* Leopold, A. C., *and* F. S. Guernsey. Flower initiation in Alaska pea, 1 . . . auxin. *1953.* No. 52759.

GUERNSEY, FRANCES S., *see* Leopold, A. C., *and* F. S. Guernsey. Flower initiation . . . Alaska pea II, chemical vernalization. *1954.* No. 52760.

GUEST, MAURICE MASON, 1906– , *see* O'Brien, L. J., *and others*. Functional reactivation . . . hypothermic heart . . . arrest. *1957.* No. 53693.

51416. GUILCHER, ANDRÉ J. Progrès récents dans la connaissance de la mer polaire arctique. (Annales de géographie, July–Aug. 1957. année 66, no. 356, p. 351–57, text map, cross-section.) 27 refs. Text in French. ***Title tr.:*** Recent progress in the knowledge of the Arctic Ocean.

Survey of the literature and results of expeditions into the Arctic Basin from about 1950 to 1956, noting American work in the Beaufort and Chukchi Seas during Skijump I and II (1950–1951) and Russian discoveries by High Latitude Expeditions and drifting stations. Deals with structure and bathymetry of the Basin, the Lomonosov Ridge; bottom sediments and water temperature, and contrasts between the Atlantic and Pacific sectors; dating of sediments by their radioactivity; types of zooplankton present. ***Copy seen:*** DGS.

GUILER, E. R., *see* Davies, J. L., *and* E. R. Guiler. A newborn piked whale . . . *1958.* No. 50453.

51417. GUIMOND, ROGER. "Operation Ungava, 1957." (Precambrian, Sept. 1957. v. 30, no. 9, p. 16–21, 28–34, 17 illus., text map.)

Reports operations of some 30 companies in the "nickel belt" extending across Ungava Peninsula from Cape Smith (60°44′ N. 78°30′ W.) to Wakeham Bay (61°35′ N. 71°50′ W.). Sulfide deposits discoveries had been made by Murray Watts, Toronto geologist, in the early 1930's. From a base established in early spring 1957 at Esker Lake near center of the belt, aerial mapping and electromagnetic surveys were carried on by Spartan Air Services over a 5,000 sq. mi. area. Reports were analyzed at Esker Lake, and information conveyed by radio and aircraft to mining company field men; 7,000 ft. were drilled by late Sept.; assays showed values of 2.77 to 4% copper, 3 to 7.62% nickel. Airlift of supplies, construction of base, with ice (later 3,500 ft. land) air strip, beacon, radio equipment, prefab. housing, etc. and round-the-clock aircraft operations are described.

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51418. GUKEVICH, E. V. Vyklûchenie krovoobrashcheniîa golovnogo mozga v usloviîakh gipotermii. (Éksperimental'naîa khirurgiîa, Jan.–Feb. 1958. god 3, no. 1, p. 30–35.) 6 refs. Text in Russian. Summary in English. ***Title tr.:*** Arrest of cerebral circulation under hypothermia.

Account of experiments with rabbits aimed at determining time limits of circulatory arrest during hypothermia. Clamping of aorta and pulmonary artery for 10 minutes at 25°–26° C., resulted in 50% deaths; with clamping of the carotid and cerebral arteries at 26°–27° C. circulatory arrest was well tolerated for 15–18 minutes, first fatalities appearing at 20 minutes. ***Copy seen:*** DNLM.

51419. GUL'BINSKAÎA, MARIANNA. U markovskikh olenevodov. (Na severe dal'nem, 1955, vyp. 2, p. 120–30.) Text in Russian. ***Title tr.:*** With the Markovo reindeer breeders.

Describes trip of a traveling moving-picture show to the reindeer kolkhoz at Markovo in Chukotka, Apr. 1954(?): the journey by reindeer sled and the tundra landscape; the collective farm and its organization in teams (brigady); reactions of the Chukchi audience to the moving pictures. ***Copy seen:*** DLC.

GULLY, RAYMOND J., *see* Halberg, F., *and others.* 24-hour rhythms . . . temperature . . . eosinophils . . . hemidecortication . . . *1958.* No. 51510.

GUNDOBIN, A. A., *see* Él'del'kind, L. Sh., *and* A. A. Gundobin. Modernizatsiîa . . . "Aleut." *1957.* No. 50716.

51420. GUNNARSSON, OLOV. Andrées männens ishavsgåta. (Nautisk tidskrift, Feb. 1955. årg. 48, nr. 2, p. 39–41, 46, illus.) Text in Swedish. ***Title tr.:*** The mystery of Andrée and his men.

Recalls the Norwegian sealer *Bratvaag*'s discovering on Kvitøya (80° N. 32°30′ E.) in 1930, the remains of Andrée's 1897 balloon expedition. Examination of the relics (author participating) yielded little information on the final stage of the tragedy.

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51421. GUNTER, R., *and others.* Physiologic changes in acute anoxia with anesthesia and hypothermia. (Journal of applied physiology, July 1958. v. 13, no. 1, p. 57–60.) 9 refs. *Other authors:* R. D. Walter, P. B. Sabawala, *and* B. Konigsmark.

Observations on cats under this experimental set-up showed that hypothermia offers significant protection against the effects of anoxia. This protective effect was enhanced if no anesthetic had been administered earlier. ***Copy seen:*** DLC.

51422. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA. K faune Amphipoda Barentsova i Belogo morei. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa morei SSSR, 1934. vyp. 20, p. 87–89, illus.) Text in Russian. Summary in English. ***Title tr.:*** The amphipod fauna of the Barents and White Seas.

A list of 11 zoogeographically interesting or rare amphipods, with data on location of find(s), occurrence in depth, geographic distribution, etc.

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51423. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA. K faune Amphipoda i Isopoda iuzhnoĭ chasti Karskogo moriîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa morei SSSR, 1935. vyp. 21, p. 65–87, illus. tables, map.) Text in Russian. Summary in English. ***Title tr.:*** The amphipod and isopod fauna of the southern Kara Sea.

A study of these crustaceans collected in the summer 1931 from the ice-breaker *Rusanov.* Ninety-four forms are described, with notes on location and depth of finds, bottom, etc. Zoogeographically the material is divided into six groups. Their distribution in the regions of the area is discussed.

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51424. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA, *and* **P. V. USHAKOV.** K faune Chernoĭ guby na Novoĭ Zemle. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa morei SSSR, 1928. vyp. 6, p. 5–72, illus., tables, maps.) 12 refs. Text in Russian. Summary in German. ***Title tr.:*** The fauna of Chernaya Bay on Novaya Zemlya.

Investigations of State Hydrographic Institute 1925, and others on the southwest coast 1923–1927, and the topography of this bay (70°41′ N. 54°40′ E.), are outlined. The nature of the bottom and hydrology of the bay, animal distribution and faunistic nature of the neighboring sea, of the channel and central bay, also fauna of the shore pools and of those further inland are described. Trawling and dredging reports from the stations investigated are presented with list of animals found. The closed part of the bay showed signs of stagnation and so did some pools. The fauna is

largely arctic with some boreal and warm-water elements.

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51425. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA. K faune Crustacea-Malacostraca Ob'-Eniseĭskogo zaliva i Obskoĭ guby. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1933. vyp. 18, p. 75–90, illus., tables, map.) 9 refs. Text in Russian. Summary in English. ***Title tr.:*** The Crustacea-Malacostraca fauna of the Ob-Yenisey Bay and the Ob Gulf.

A description of 25 species with identification keys and comparisons with identical species in adjacent regions. Location, occurrence and geographic distribution are also discussed. Four regions are distinguished in the area, ranging in salinity from 33°/₀₀ to 10°/₀₀ or less. Each has its specific forms, the more common of them being listed. Their distribution at present and in geological times is discussed.

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51426. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA. K faune Crustacea morîa Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1932. vyp. 15, p. 157–87, illus., tables, maps.) 38 refs. Text in Russian. Summary in English. ***Title tr.:*** The crustacean fauna of the Laptev Sea.

A study of material collected in 1926 and 1927 by the Hydrographic party of the Academy of Sciences' Yakut Expedition. Fifteen species of amphipods, three isopods and two schizopods are described. Two species, *Pseudalibrotus birulai* n. sp. and *Haploops sibirica* n. sp. are new. Morphology and taxonomy, location of finds, temperature and nature of bottom, closely related forms, and geographic distribution are dealt with.

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51427. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA. K faune ravnonogikh rakov, Isopoda, Tikhogo okeana, 1; novye vidy Valvifera i Flabellifera. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR. 1933. vyp. 17, p. 87–106, illus., tables.) Text in Russian. Summary in English. ***Title tr.:*** The fauna of isopod crustaceans of the Pacific, 1; new species of Valvifera and Flabellifera.

A contribution based on material collected by State Hydrographic and Pacific Fisheries Institutes' expeditions to the Bering Sea and the Seas of Okhotsk and Japan. Seventeen new forms are described, including morphology, morphometry and anatomy, size, color, location of find, geographic distribution, etc.

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51428. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA. K faune ravnonogikh rakov, Isopoda, Tikhogo okeana, 2; novye vidy Gnathiidea i Asellota. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1933. vyp. 19, p. 79–91, illus.) Text in Russian. Summary in English. ***Title tr.:*** The fauna of isopod crustaceans of the Pacific 2; new species of Gnathiidea and Asellota.

Descriptions of 13 new forms, including seven new species; morphology and anatomy, size, color, sexual differences, location of finds, geographic distribution, etc., are given. ***Copy seen:*** DLC

51429. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA. K faune ravnonogikh rakov, Isopoda, Tikhogo okeana 3; novye vidy v sborakh Tikhookeanskoĭ ėkspediîtsii Gos. gidrobiologicheskogo instituta 1932 g. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1935. vyp. 22, p. 25–35, illus., tables.) Text in Russian. Summary in English. ***Title tr.:*** The fauna of isopod crustaceans of the Pacific, 3; new species in the collection of the Pacific expedition of the State Hydrological Institute of 1932.

Description of three new species and four new varieties from the Bering, Okhotsk and Japanese Seas; also a list of isopods hitherto recorded from these areas. Descriptions include morphometry and anatomy, location of find; taxonomic status, etc. ***Copy seen:*** DLC.

51430. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA. Kratkie rezul'taty gidrobiologicheskikh issledovaniĭ Mezenskogo zaliva letom 1952 goda. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniîu Belogo morîa, 1957. vyp. 1, p. 252–81, tables, map.) 64 refs. Text in Russian. ***Title tr.:*** Brief account of hydrobiological investigations of the Gulf of Mezen during summer 1952.

Divisions of the White Sea, including the Gulf of Mezen, bottom invertebrates and fishes, physical conditions and their ecological effects are outlined. Zoogeo-

graphic nature and origin of the fauna, their marine zones and principal biocenoses are considered. Mezen is compared with other bays of the White Sea; its littoral is dealt with also.

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51431. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA, *and* **P. V. USHAKOV.** Litoral' vostochnogo Murmana. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1929. vyp. 10, p. 5–40, tables, map) 20 refs. Text in Russian. Summary in German. ***Title tr.:*** The littoral of the eastern Murman.

A detailed description of the areas investigated: Teriberka, Porchnikha Bay, Rynda and Zolotaya and their fauna. In the first area, the littoral of Lodeynaya Bay was found to be very rich, that of the others the more depleted the more they are exposed to wave action. Salinity varied from 34–30°/₀₀ to 0 in the river mouths. The effects of sea action upon animal distribution, horizontal and vertical, and upon the forms of some animals is also discussed as well as the effects of the nature of the bottom.

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51432. GUR'ÎANOVA, EVPRAKSIÎA FEDOROVNA, *and others.* Litoral' zapadnogo Murmana. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1930. vyp. 11, p. 47–104, illus., tables, maps.) 23 refs. Text in Russian. Summary in English. *Other authors:* I. G. Zaks *and* P. V. Ushakov. ***Title tr.:*** The littoral of the western Murman.

Account of the tidal zone of the northwest coast of Kola Peninsula, its flora and fauna. The hydrographic and ice conditions as well as the nature of the bottom in the area studied are dealt with. Detailed descriptions follow of representative sections of the area and their bionomics. Six ecological types are distinguished and described, largely on the basis of salinity and effects of wave action. Two of the types comprise "little brooks" and pools of the tidal zone, characterized by strong fluctuations in temperature and salinity and by a specific fauna and flora.

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51433. GURINA, N. N. Nekotorye novye dannye o zaselenii Severa evropeĭskoĭ chasti SSSR. (Sovetskaîa arkheologiîa, 1957, no. 2, p. 115–20, illus.) Ref. Text in Russian. ***Title tr.:*** Some new data on the settlement of the north European part of the U.S.S.R.

Deals with a collection of 235 flint artifacts, flakes and potsherds found at a new archeological site on the upper reaches of a tributary of the lower Pechora, approx. 30 km. north of Nar'yan-Mar (67°40′ N. 53°05′ E.) and deposited with the Leningrad department of the Institute of Material Culture in 1955. The stone artifacts (arrow and spear heads, burins, knives and lamellar blades) mostly of high-quality light-colored flint and some hundred sherds of large (to 60 cm. diam.) egg-shaped, comb-and-cord decorated pottery vessels are described. The holecomb pottery was brought from the south by neolithic tribes who penetrated into the Bol'shezemel'skaya Tundra region along tributaries of the Severnaya Dvina and Pechora and perhaps advanced eastward along the White and Barents seacoasts. This lower Pechora pottery is closest to that found in sites immediately preceding the White Sea culture, but the slightly advanced flint material points to a somewhat later stage. The new site is dated tentatively in the first centuries of the second millenium B.C., on the basis of M.E. Foss' time scale (No. 29078), though Foss, lacking these newest finds, dated the first settling of the Bol'shezemel'skaya Tundra region to the late second—early first millenium B.C.

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51434. GURINA, N. N. O rabote sektora paleolita LOIIMK AN SSSR v 1956. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniîa, 1958. vyp. 71, p. 137–40.) Text in Russian. ***Title tr.:*** 1956 activities of the paleolithic sector of the Leningrad Department of the Institute of Material Culture of the Academy of Sciences of U.S.S.R.

Lists the members (9) and describes the sector's activities: preparation of monographs, including A. P. Okladnikov's Stone age of the Far East and N. N. Gurina's Oldest history of the northwestern part of European U.S.S.R.; fieldwork, including A. P. Okladnikov's Angara expedition; papers read at sessions and plenary meeting.

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51435. GURTNER, OTHMAR. Glacier ice; Alpine glaciers and Greenland research. (*In:* Mountain world, 1956/57.

v. 11, p. 27–44, text map, 2 plates, diagrs., cross-sections.)

Current views on the mechanics and regime of glaciers are summarized. The transition of snow to ice, ice properties, external factors involved in the movement of glaciers, and conditions determining the ice regime are described. Other topics considered include: the relation between glaciers and climatic fluctuations, causes for the asynchronous behavior of glaciers, the role of moraines as indicators of glacier flow, ice erosion, and a comparison of alpine glaciers with icecaps. The results of recent icecap investigations on the structure and stratification of glacier ice, including modifications with motion, are summarized; and the glaciological program of the IGY, to be carried out by the International Glaciological Expedition to Greenland is outlined.

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51436. GURVICH, G. S. Raspredelenie zhivotnykh na litorali i sublitorali Bab'ego morîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa morei SSSR, 1934. vyp. 20, p. 15–32, tables, maps.) 26 refs. Text in Russian. Summary in German. ***Title tr.:*** Distribution of animals in the littoral and sublittoral of the "Bab'ye More."

Contains information on the location of this water body (between the Kandalaksha and Rugozerskaya Bays, 18 km. east of Kovda); its shape, dimensions and area; currents, bathymetry, physical conditions, distribution of plants and animals in the littoral; zonation in the sublittoral. ***Copy seen:*** DLC.

51437. GURVICH, I. S. Byt i kul'tura olenevodcheskikh kolkhozov Nizhne-Kolymskogo raĭona. (*In*: Akademiîa nauk SSSR. ĪAkutskiĭ filial. Doklady 1954, p. 62–79, tables.) Text in Russian. ***Title tr.:*** Living and cultural conditions in the reindeer-breeding collective farms in the Nizhne-Kolymsk District. Paper delivered to 5th session of Yakut Branch of Academy of Sciences in June 1952.

Sketches activities of the collective farms "Turvaurgin," "Olenevod" and "Sutanîa-Udiran" (later. : kolkhoz imeni Stalina) with their centers at Kolymskaya, Tuustakh-Sen and Andryushkino. Their organization, national composition (percentage of Chukchis, Tungus, Yukaghirs, Yakuts, and Russians), rise of income, based up to 90% on reindeer breeding and exceeding now one million rubles/farm annually, are discussed. Herdsmen and their dogs, pastures and seasonal migration of herds, the îaranga and its advantages as a nomad's dwelling in the treeless tundra; also other types of dwellings, furniture, implements and clothing, etc., are described. Workers' income ranges from 10 to 40 thousand rubles a year. Fisheries and hunting are auxiliary occupations. Educational activities and acculturation are mentioned.

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51438. GURVICH, I. S., *and* **I. V. PUKHOV.** Ė. K. Pekarskiĭ; k stoletiîu so dnîa rozhdeniîa. (Sovetskaîa ėtnografiîa, 1958, no. 6, p. 54–60.) Approx. 50 refs. Text in Russian. ***Title tr.:*** Ė. K. Pekarskiĭ; the centenary of his birth.

Biographical sketch with tribute to and review of his work in the fields of ethnography, folklore and linguistics of the Evenki (Tungus), Yukaghirs, Chukchis, Koryaks, and especially the Yakuts. His publications are listed in footnotes.

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51439. GURVICH, I. S. Ėkspediţionnaîa rabota Instituta îazyka, literatury, istorii i iskusstva ĪAkutskogo filiala Akademii nauk SSSR. (Sovetskaîa ėtnografiîa, 1951, no. 1, p. 194.) Text in Russian. ***Title tr.:*** Expeditionary work of the Institute of language, literature, history and art of the Yakut Branch of the Academy of Sciences U.S.S.R.

Preliminary report on the summer 1950 studies of the present-day culture of Yakut kolkhoz peasants by the Institute's complex expedition to the Ust'-Aldan and Amga districts (60°–65° N. 125°–135° E.). Soviet - period tales, songs and music were recorded, national dances and games studied and some historical and linguistic research conducted. ***Copy seen:*** DLC.

51440. GURVICH, I. S. Ėtnograficheskaîa poezdka v Koriîakskiĭ naţional'nyĭ okrug. (Sovetskaîa ėtnografiîa, 1957. no. 6, p. 43–58, 13 illus., maps.) 5 refs. Text in Russian. ***Title tr.:*** Ethnographic trip to the Koryak National District.

A report on author's investigations, Oct. 1956–Mar. 1957, of the present-day economy, customs and culture of the indigenous population of this district, and adjacent Kamchatka and north to Cape Dezhnev. The trip, undertaken for the Institute of Ethnography's Sector of the Peoples of the Far North, involved travel by dog team (1040 km.), reindeer

(180 km.), boat (120 km.) and airplane. The distribution of the Koryaks, Lamuts (Tungus) and Kamchadals within the district and their main settlements are described and mapped. The kolkhozes and sovkhozes, their economies (fishing and sea-mammal hunting or reindeer herding), growth of fish processing and canning industries are dealt with. Housing (ſaranga, chum and prefabricated houses imported from Khabarovskiy Kray), home furnishings (scarcity of furniture and preference for ſaranga-type furnishings) are noted. Clothing (Koryak national costume favored by most natives), educational, cultural and health services, etc., are discussed. The problem of Koryak education is stressed. The absence of a common Koryak language (nine different dialects are spoken) makes Russian mandatory as the language of instruction in schools, though children, at enrollment, speak only their own dialect. Mixed marriages are infrequent, though intermarriage between Koryaks, Evens and Russians are more common than between the shore and reindeer-herding Koryaks. ***Copy seen:*** DLC.

51441. GURVICH, I. S. ÎÛkagiry chuvanskogo roda v seredine xviii v. (Akademiîa nauk SSSR. Institut ėtnografii. Trudy, 1957. nov. ser. t. 35, Sibirskiĭ ėtnograficheskiĭ sbornik, pt. 2, p. 246–62, tables.) 4 refs. Text in Russian. ***Title tr.:*** The Yukaghirs of the Chuvan clan in the middle 18th century.

Describes and cites in full a property damage claim to the Russian administration compiled in 1754 by the Chuvantsy after their defeat and virtual annihilation by a combined force of Chukchis and Koryaks. The register of 25 claimants and their effects sheds an interesting light on the property valuation of livestock, weapons, utensils, ornaments, clothing, tents, sleds, etc. Their designation as "Yukaghirs of the Chuvan clan" tends to support the theory that the Chuvantsy are a Yukaghir tribe and not a separate ethnic group. ***Copy seen:*** DLC.

51442. GURVICH, I. S. K voprosu ob ėvolûtſii îasachnogo sbora v ÎÂkutii. (*In:* Akademiîa nauk SSSR. ÎÂkutskiĭ filial. Doklady 1954. p. 16–36, tables.) Over 50 refs. Text in Russian. ***Title tr.:*** Evolution of fur tax levies in Yakutia.

Paper delivered to 6th session of the Yakut Branch of Academy of Sciences, Oct. 1953.

Outlines development of this tax, a kind of tribute levy upon the indigenous population from the establishment of Yakut Province (voevodstvo) in 1638. Collections in 1657–58 amounted to 8,264 sable and 2,677 red fox skins, or 2.5 sable and 0.5 fox per taxpayer. With depletion of stocks, growing poverty of the population and tax collectors' abuses, the quantity of valuable furs declined and squirrel or even cash was accepted. Individual payments were replaced by a collective payment from the administrative unit or clan. The fur tax, nevertheless, was rarely paid in full and the government had to waive arrears from time to time. Data are given on number of taxpayers and amount of tax, based chiefly on unpublished materials; changing economic conditions and internal relations of various groups of the population in Yakutia are discussed. ***Copy seen:*** DLC.

51443. GURVICH, I. S. Kosmogonicheskie predstavleniîa i perezhitki totemicheskogo kul'ta u naseleniîa Olenekskogo raîona. (Sovetskaîa ėtnografiîa, 1948, no. 3, p. 128–31.) Text in Russian. ***Title tr.:*** Cosmogonic conceptions and the survival of totemistic cults among the population of Olenek district.

An outline of the principal creation myths based on verbal accounts of reindeer hunting and herding Yakuts of the upper Olenek River region. The basic concept of dualism (good and evil spirits) in the creation of the world and the role of totem animals in the creation of men and animals are discussed. The survival of totemism in shaman practices is noted. ***Copy seen:*** DLC.

GURVICH, I. S., *see also* Akademiîa nauk SSSR. ÎÂkutskiĭ filial. Istoriîa ÎÂkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957.* No. 49168.

GURVICH, I. S., *see also* Ganſskaîa, O. A. Sessii . . . issledovaniĭ 1957 g. *1958.* No. 51080.

GURVICH, I. S., *see also* Grach, A. D. Sessiîa . . . arkheologicheskikh i ėtnograficheskikh issledovaniĭ . . . *1957.* No. 51318.

GURVICH, I. S., *see also* Okladnikov, A. P., *and* I. S. Gurvich. Drevnie poseleniîa . . . Indigirki. *1957.* No. 53730.

51444. GUSEV, A. I. Amerikanskiĭ seryĭ orekh (*fuglans cinerea* L. *fossilis*) v drevnechetvertichnykh otlozheniîkh del'ty r. Leny. (Leningrad. Vsesoſûznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ

institut. Materialy, nov. seriîa, Chetvertichnaîa geologiîa i geomorfologiîa, 1956, vyp. 1, p. 178–84, illus., map.) 7 refs. Text in Russian. ***Title tr.:*** American gray walnut (*fuglans cinerea* L. *fossilis*) in the early Quaternary deposits of the Lena River delta.

Cross-sections of early Quaternary deposits of one of the Lena delta islands are studied and the walnut-bearing stratum is described in detail. Besides *fuglans cinerea* several other fossil plants are indicated: *Picea wollossowiczi*, *P. obovata*, *Pinus monticola*, and *Larix sibirica*. Paleogeography and climate of this region during the early Quaternary are discussed. The present walnut region of the United States is reviewed and mapped. The Lena delta finds are the northernmost for walnut fossils, and are of paleogeographic importance.

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51445. GUSEV, A. I. K stratigrafii chetvertichnykh otlozheniĭ zapadnoĭ chasti Primorskoĭ ravniny. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik po geologii Arktiki, vyp. 5, p. 79–86, illus., diagr.) 6 refs. Text in Russian. ***Title tr.:*** On the stratigraphy of Quaternary deposits of the western part of the Maritime plain.

Reports development and stratigraphic characteristics of Quaternary deposits based on author's 1934–35 and 1949–53 field studies in the Lena delta, Kharaulakh Mts. and in the tundras of the Lena-Yana interfluves. Three series of Quaternary deposits: early, middle-recent and contemporary, are distinguished; their distribution, composition, and floral and faunal characteristics, and the climatic changes during their development are outlined. The Quaternary deposits of the Lena delta are elucidated by a typical cross-section from Sardaakh Island.

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51446. GUSEV, A. I. Ledîanye katakomby. (Vokrug sveta, Feb. 1958, no. 2, p. 36, illus.) Text in Russian. ***Title tr.:*** Ice catacombs.

Describes ice caves examined on the banks of the lower Lena; they are 4–5 m. wide and nearly 100 m. long; their origin is explained by interaction of the river water and permafrost of the bank.

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51447. GUSEV, A. I. Mamontovyĭ gorizont. (Leningrad. Vsesoûznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Materialy, nov. seriîa, Chetvertichnaîa geologiîa i geomorfologiîa, 1956, vyp. 1, p. 169–77; illus., cross-sections.) 18 refs. Text in Russian. ***Title tr.:*** Mammoth horizon.

Outlines material composition and the fossil flora and fauna of the so-called mammoth horizon identified in friable accumulated deposits of the Laptev and East Siberian coastal plains. Features of the occurrence of this horizon, its preservation by permafrost, the composition of turf and peat within it are described. Characteristic clues for search for this horizon elsewhere are summarized. Climatic conditions at the time of the mammoth's appearance and later as it died out are considered.

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GUSEV, A. I., *see also* Gedroîts, N. A., *and* A. I. Gusev. Gorîuchie iskopaemye . . . *1957*. No. 51109.

51448. GUSHCHENKO, N. F. Iz opyta shtukaturnykh rabot v zimnee vremîa. (Transportnoe stroitel'stvo, Mar. 1958. god 8, no. 3, p. 14–16.) Text in Russian. ***Title tr.:*** Experience in plastering during winter.

Plastering without additives is permissible at air temperatures above +5° C. With addition of 5–7% calcium chloride, or 4–5% sodium chloride or 4–6% aluminum chloride, plastering is possible at temperatures above −15° C. These additives, however, have oxidizing effects on metal parts of the wall, producing dark spots. More favorable results can be obtained with addition of a potassium solution (K_2CO_3) with a concentration of 6–7 kg. per 100 liters of water at a temperature of 40° C. Plastering must be carried on with thin layers (3–4 mm.) at 30-minute intervals.

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51449. GUSHCHIN, IVAN VASIL'EVICH, *and* **A. I. AFANAS'EV.** Chukotskiĭ natsional'nyĭ okrug; kratkiĭ istoriko-geograficheskiĭ ocherk. Magadan, Oblastnoe izd-vo, 1956. 99 p. illus., fold. map. 16 refs. Text in Russian. ***Title tr.:*** Chukchi National District; a brief historical and geographical outline.

The Chukchi National District, over 720,000 sq. km. in area, in the far northeast of the U.S.S.R., was founded on Dec. 10, 1930. Till 1951, it formed part of Kamchatskaya Oblast'; in 1951–53, it was included in Khabarovsk Province,

and since 1953 it has been a part of Magadan Province. Boundaries, geomorphology, hydrology, coasts, vegetation, fauna, mineral resources and population of the District are sketched. Progress of collectivization since 1928, activities of 46 collective farms, development of industry, the importance of reindeer breeding with herds of over 400,000 (p. 40–44), hunting and trapping of furbearers, fishing, and the beginnings of agriculture and stock-breeding are described. Each of the six administrative regions (raion) of the district (Anadyrskiy, Markovskiy, Vostochnyye Tundry, Chaunskiy, Iultinskiy including Vrangel Island, and Chukotskiy) is described in turn: occupations of the people, settlements, schools, collective and state farms (p. 55–86). The general economic development of the area and progress of acculturation of Chukchis and Eskimos are stressed in conclusion (p. 87–97). Discovery and exploration of the area are reviewed (p. 15–22). Fold. map, 125 km.: 1 in., shows the District boundaries, its regions and main settlements.

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51450. GUSTAFSON, G. A. Annual review, underground mining, the trends in 1956. Alaska. (Mining engineering, Feb. 1957. v. 9, no. 2, p. 197.)

Brief notes on active mines in Alaska.

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51451. GUSTAFSON, JOHN KYLE, 1906– , *and* A. E. MOSS. O papel do geólogo no desenvolvimento dos distritos ferríferos Labrador-Quebec. (Engenharia, mineração e metalurgia, Rio de Janeiro, July–Aug. 1953. v. 18, no. 107, p. 237–44, 2 text maps, 3 diagrs., tables.) 6 refs. Text in Portuguese. ***Title tr.:*** The role of the geologist in the development of the iron deposits of Labrador-Quebec.

Translation of No. 29482.

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51452. GUSTAFSSON, KARL ÅKE, 1908– . Polyploidy, life form and vegetative reproduction. Hereditas, 1948. bd. 34, häfte 1–2, p. 1–22.) 19 refs.

Some fundamental aspects of natural polyploidy are discussed and a phylogenetical picture of the phanerogam species in their various aspects of transformation is sketched, on the basis chiefly of Scandinavian material. The conclusion is offered, that: arctic floras contain a high proportion of polyploids; this is not due to the direct effects of extreme temperatures on cell formation, but to changes in the life-form system, reacting to the climate by an increase in vegetative disposal, bulbilifery and agamospermy. These changes facilitate the establishment of apomixis and polyploidy. The sexual representatives are about as polyploid as average Scandinavian mountain species. ***Copy seen:*** DLC.

51453. GUSTAFSSON, KARL ÅKE, 1908– . The relationship of *Calamagrostis neglecta* and *lapponica* in Siberia, as interpreted by Nilsson-Ehle. (Hereditas, 1946. bd. 32, häfte 3–4, p. 550–51.) 2 refs.

Abstract of Ehle's manuscript "Den subarktiska Lenafloran," based on collections in the Lena basin made during the Swedish Expedition in search of Andrée, 1898–99. The form from "Tigija" resembles *C. neglecta* and occupies a middle position between *C. lapponica* and *neglecta*. All pollen grains lack contents, justifying a hybrid interpretation, except that in *C. lapponica* itself the pollen is useless. If these two forms are not hybrids but true middle forms, *C. lapponica* and *neglecta* should be treated as varieties of the same species." See also No. 53686. ***Copy seen:*** DLC.

51454. GUSTAFSSON, KARL ÅKE, 1908– . Studies on the mechanism of parthenogenesis. (Hereditas, 1935. bd. 21, häfte 1, p. 1–112, 167 illus., 12 tables.) 131 refs.

Contains results of examination of male and female meiosis of various *Taraxacum*, *Archieracium*, *Erigeron* and *Marsilia*. The zygoid parthenogenesis is thought to consist of three processes: the primary pairing is decreased or omitted; the zygoid chromosome numbers arise through restitution nuclei, pseudo-homotypic metaphases and so-called somatic divisions; the egg-cell develops without any fusion of nuclei and cells. The origin of restitution nuclei is correlated with the univalence of the chromosomes but not caused by it. A pseudo-homotypic metaphase arises, when the stretching of the spindle is omitted and the univalents gather in the equator to divide. The so-called somatic division is probably nothing but a degeneration phenomenon (an ageing of the cell) and is accompanied by certain cytological peculiarities. The study is based partly on some species of *Taraxacum* and *Archieracium* native to Lapland. ***Copy seen:*** DLC.

51455. GUSTAFSSON, KARL ÅKE, 1908– . Zytologische und experimentelle Studien in der Gattung *Taraxacum*. (Hereditas, 1932. bd. 16, häfte 1–2, p. 41–62, 55 illus.) 44 refs. Text in German. Summary in English. ***Title tr.:*** Cytological and experimental studies in the genus *Taraxacum*.

Contains results of castration experiments in a number of forms of the group *vulgaria, erythrosperma, obliqua, spectabilia* and *ceratophora*. The always positive results show that sexual biotypes must occur very infrequently if they exist at all. The group *vulgaria* is triploid and occasionally tetraploid, so is *erythrosperma*; *palustria* is tetraploid, *obliqua* is triploid, *spectabilia* is tetraploid and occasionally pentaploid, *ceratophora* is triploid and tetraploid, and *arctica* is probably hexaploid. In *Taraxacum*, the formation of new forms by means of gene- and blockmutations associated with primary crossings as the cause of polyploidy seems to be the most plausible explanation. The study is based partly on material from Pite Lappmark (groups *vulgaria* and *spectabilia*) and from Greenland (*T. arcticum*).

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GUSTAFSSON, KARL ÅKE, 1908– , *see also* Simak, M., *and* K. Å. Gustafsson. Experimentell . . . tallfröets grobarhet. *1957*. No. 54890.

51456. GUTKIN, E. S. Dikkit v boksitakh Severoural'skogo basseĭna. (Vsesoŭznoe mineralogicheskoe obshchestvo. Zapiski, 1958, ser. 2, chast' 87, vyp. 5, p. 614–17, illus., tables.) 4 refs. Text in Russian. ***Title tr.:*** Dickite in bauxites of the Northern Ural basin.

Describes this rather uncommon mineral as found in Severnyy mine no. 6 (bauxites). Scattered cuptals are studied on a microscopic slide and their pseudohexagonal forms described. Chemical composition, X-ray diffraction, optical properties, cleavage, angle of extinction, orientation diagram and other features of this monoclinic mineral are summarized. ***Copy seen:*** DGS.

51457. GUTSUNAEV, V. K. Snizit' ves mashin dlia dobychi torfa. (Mekhanizatsiia trudoemkikh i tiazhelykh rabot, Jan. 1958. god 12, no. 1, p. 28–30.) Text in Russian. ***Title tr.:*** Reducing the weight of peat production machines.

Practical considerations are discussed for the proposed revision of general construction designs to reduce machine weight. Permissible load on dry ground should be limited to 0.32 kg./cm.^{2} and for operation on soft marshland to 0.17 kg./cm.^{2} Hydro-transmission and electromagnetic coupling may be preferable to a general transmission. ***Copy seen:*** DLC.

51458. GUTTMAN, RITA, 1912– , *and* **M. M. GROSS.** Relationship between electrical and mechanical changes in muscle caused by cooling. (Journal of cellular and comparative physiology, Dec. 1956. v. 48, no. 3, p. 421–33, illus.) 15 refs.

Account of experiments with retractor muscles of the mussel *Mytilus edulis*. Electrical potentials and mechanical changes were studied following rapid and slow cooling and treatment with hypertonic KCl solution. Conditions during rewarming were also studied with and without excess KCl.

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51459. GUTTMANN, L., *and others.* Thermoregulation in spinal man. (Journal of physiology, Aug. 1958. v. 142, no. 3, p. 406–419, illus., tables.) 16 refs. *Other authors:* J. Silver *and* C. H. Wyndham.

A study of six patients with transversal spinal cord lesions, and a control. At neutral air temperature (27° C.), no difference was noted between patients and control. In cool air the latter and the patient with T8 lesion behaved similarly, the other subjects cooled rapidly, rectal temperature falling to 35.5° C. in two hours. The causes of this behavior and conditions in warm environment are also discussed.

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51460. GUYAN, WALTER ULRICH, 1911– . Zwischen Nordsee und Eismeer; zehn Jahrtausende skandinavischer Landschaft. Bern, Kümmerly & Frey, 1954. 175 p. illus., maps (1 fold. col.). Text in German. ***Title tr.:*** Between the North Sea and the Arctic Ocean, the Scandinavian landscape over ten millenia.

The geographical history of Fennoscandia is chronologically reviewed. After development of the natural post-Glacial landscape, climate, and vegetation, the area was invaded by a pre-historic people whose culture is known from archeological studies. Stone and early iron age cultures were followed by agrarian developments associated with folk wanderings from Europe. Life in the Viking age, commer-

cial, religious, and political progress, and typical regional occupations are summarized as bases for the present cultural landscape. Conditions in the Arctic are represented throughout the text.

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51461. GUZEK, JAN W. Wyłączenie światła dziennego a gruczoły dokrewne; tarczyca. (Patologia polska, 1956. rok 7, no. 4, p. 345–57, illus. tables.) 38 refs. Text in Polish. Summary in English. ***Title tr.:*** Exclusion of daylight and the endocrines: the thyroid.

A study of thyroids of rats and guinea pigs kept in complete darkness for six months and 12 months (rats only). In all groups a heightening of the thyroid epithelium and increase in nuclear size were observed. Decrease of vesicular size or complete obliteration were noted in some animals. All these changes are characteristic of the hyperactive gland.

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51462. GVOZDEĬSKIĬ, NIKOLAĬ ANDREEVICH. Issledovaniîa i otkrytiîa Sovetskikh geografov. (Priroda, Oct. 1957, no. 10, p. 38–48, 11 illus., fold. map.) Text in Russian. ***Title tr.:*** Explorations and discoveries of Soviet geographers.

Reviews arctic (among other) explorations, with notes on Ushakov's expedition to Severnaya Zemlya (1930–32), the discovery of Vize Island (1930), Shmidt's expedition to the North Pole in 1937 and the first drifting station "North Pole," the recent high latitude expeditions and discovery of the Lomonosov Range across the Arctic Basin. Activities of several Siberian expeditions are mentioned, including S. V. Obruchev's discovery of the Cherskiy Range, the mapping and description of the Kolyma-Indigirka region, discovery of large glaciers in the Suntar-Khayata Range, explorations of the Lena-Vilyuy depression; work in Asian U.S.S.R.: Transbaykalia, Sakhalin, Kuril Islands and Kamchatka is also noted. In the northern European section, Soviet geographers have added much to knowledge of the Northern Ural, where many new peaks and glaciers have been discovered, and of the White Sea region, and Kola Peninsula (expeditions of A. E. Fersman). ***Copy seen:*** DLC.

51463. GVOZDEĬSKIĬ, NIKOLAĬ ANDREEVICH. Preobrazhennaîa karta. (Nauka i zhizn', July 1957. god 24, no. 7, p. 19–24, illus.) Text in Russian. ***Title tr.:*** The transformed map.

Stresses changes of the map of U.S.S.R. due to the Soviet geographical explorations and discoveries, with mention of, among others: the Vetrenyy Poyas mountain range along Onezhskaya Bay of the White Sea 30–40 km. from its south coast; 40 small glaciers in the Polar Ural; the Cherskiy Range in the Kolyma and Indigirka basin; Suntar-Khayata Range with its 114 glaciers; the Lomonosov submarine range in the Arctic Basin.

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51464. GVOZDEĬSKIĬ, NIKOLAĬ ANDREEVICH. Sorok let issledovaniĭ i otkrytiĭ. Moskva, Gos. izd-vo geogr. lit-ry, 1957. 208 p. illus., ports., maps (2 fold.) 85 refs. Text in Russian. ***Title tr:.*** Forty years' explorations and discoveries.

Based on No. 35099, the material of which is brought up to date by a brief account of the Soviet High Latitudes Expeditions, drifting stations "North Pole 2–6," and discovery of the submarine Lomonosov Range (p. 40–60); also (p. 116–19) the research vessel *Vitîaz'* work in the Kuril-Kamchatka Trench area. ***Copy seen:*** DLC.

51465. GYNTHER, BENT. Så ta'r vi på lejrskole. (Atuagagdliutit: Grønlandsposten, June 13, 1957. Ukiut 97-iat, nr. 12, p. 3–5, 17, illus.) Text in Danish and Eskimo. ***Title tr.:*** Off we go to camp school.

Recounts a successful experiment carried out in the summer of 1956 when a class of pupils with their teachers from the school at Sukkertoppen (65°24′N. 52°48′W., West Greenland) spent ten days at an abandoned settlement nearby; daily life at the camp is described.

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HAALAND, HELMER, *see* Lunde, G., *and others.* Jodinnholdet i norsk fisk . . *1928.* No. 52954.

51466. HAAR, K. V. Elektricitetsvaerker i Grønlands kolonier. (Elektroteknikeren, 1950. årg. 46, nr. 16, p. 469–88, illus., map, graphs.) Text in Danish. ***Title tr.:*** Electric-power plants in the Greenland settlements.

Describes the construction during 1947–1949 of six identical 180-kw. power plants in Godthåb, Julianehåb, Umanak, Upernavik, Holsteinsborg and Egedesminde. Similar plants are planned for Fredriks-

håb, Sukkertoppen and Jakobshavn in 1950. A general description of the settlements and the distribution of electricity in each of them is given. Drawings of buildings and machinery are included.

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51467. HAARLØV, NIELS, 1919– . Fra Mørkefjord til København i 1940. (Grønland, Aug. 1957, nr. 8, p. 295–308, map, illus.) Text in Danish. ***Title tr.:*** From Mørkefjord to Copenhagen in 1940.

Describes in detail a dog-sledge trip in East Greenland from Mørkefjord (76°56′ N. 20°18′–20′ W.) to Scoresbysund (70°28′ N. 21°58′ W.) in May–July 1940. Difficult travel conditions due to poor snow cover and lack of ice at that advanced season are stressed. Writer had been a member of the Dansk Nordøstgrønlands Expedition (leaders Eigil Knuth and Ebbe Munck) of 1938–1939.

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51468. HAAS, MARY R., 1910– . A new linguistic relationship in North America: Algonkian and the Gulf languages. (Southwestern journal of anthropology, Autumn 1958. v. 14, no. 3, p. 231–64, map, tables.) Approx. 90 refs.

Presents evidence of a genetic relationship between the Algonkian and Gulf of Mexico languages. The necessity of reconstructing Indian proto-languages is stressed. ***Copy seen:*** DLC.

51469. HACHEY, HENRY BENEDICT, 1901– . Canadian oceanography 1954–1957. Ottawa, Queen's Printer, 1957. 19 p. National report for Canada prepared for the International Union of Geodesy and Geophysics, Association of Physical Oceanography, Eleventh General Assembly, Toronto, 1957.

Developments in Canadian oceanography since 1954 are outlined, noting problems created by the long coast line and environmental factors, research and surveys in the Atlantic, Arctic, Pacific, and progress on sea ice research; agencies engaged in oceanographic work are reported. Oceanographic papers (90) by Canadians published 1954–57, are listed.

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51470. HACHEY, HENRY BENEDICT, 1901– , ***and others.*** Oceanographic features of submarine topography. (Royal Society of Canada. Transactions, June 1956. ser. 3, v. 50, p. 67–81, 4 text maps, 6 diagrs.) 13 refs. ***Other authors:*** L. Lauzier ***and*** W. B. Bailey.

Configuration of the sea floor off the North Atlantic and arctic coasts of Canada is delineated and discussed. Submarine topography of the Canadian Arctic and neighboring seas is described, and illus. by a text map; general circulation and vertical distribution of temperature and salinity are also described, with cross sections and a map. Relation of submarine topography and sea floor geology to physical, chemical, and biological oceanography is outlined.

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51471. HACKMAN, WALTER. Bemerkungen über einige *Chylizosoma*-Arten, Dipt. Scatophagidae. (Notulae entomologicae, 1957. v. 37, no. 3, p. 65–66, 4 illus.) Text in German. ***Title tr.:*** Notes on some *Chylizosoma* species, Dipt. Scatophagidae.

Contains taxonomic notes on some dung-flies: *Chylizosoma paridis* (living on *Paris, Polygonatum; Majanthemum*), and *C. vittatum* (*Paris, Polygonatum, Majanthemum* and *Epipactis palustris*); another mining species, *C. medium*, is cited for comparison. *C. vittatum* is recorded in Kamchatka Peninsula. ***Copy seen:*** DA.

51472. HACKMAN, WALTER. Phalangida (Opiliones) from Newfoundland. Helsingfors, 1956. 9 p. 3 maps. (Finska vetenskaps-societeten. Commentationes biologicae, t. 15, no. 17.) 13 refs.

The first known occurrences of harvestmen or daddy longlegs in Newfoundland are reported; seven species were collected by E. Palmén and C. H. Lindroth on the Finnish-Swedish biological expedition in 1949. Identification, distribution, habitat, possible relation to cultural sites, and probable means of dispersal are discussed. Of the seven, *Mitopus morio* F. and *Phalangium opilio* L. are holarctic; *Oediellus pictus* Wood, *Liobunum bicolor* Wood, and *L. calar* Wood are nearctic.

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51473. HACKMAN, WALTER. The Scatophagidae (Dipt.) of eastern Fennoscandia. Helsingforsiae, 1956. 67 p. 165 illus., 4 text maps. (*In:* Societas pro fauna et flora fennica. Fauna fennica, II.) 29 refs.

Contains discussion of the key characters used for the classification of the dung-fly family: male hypopygium, the shape of the forceps and cerci, and pregenital ventral lamellae. Keys to genera and species, are followed by descriptions of one genus and four new

species, new synonymy, a check-list and find records of 87 species, 18 new for this area. Observations are added on the ecology and behavior of some species. With a few exceptions all the species are native to Swedish, Finnish and Russian (Kola Peninsula) Lapland and the Kuusamo region. ***Copy seen:*** DLC.

51474. HACQUEBARD, PIET ALBERTUS, 1918– , *and* M. S. BARSS. A Carboniferous spore assemblage, in coal from the South Nahanni River area, Northwest Territories. Ottawa, Queen's Printer, 1957. 63 p. 6 plates, 2 text maps, table, diagrs. (Canada. Geological Survey. Bulletin 40.) 24 refs. Abstract previously listed as No. 40196.

Geological exploration by several oil companies confirmed the existence of coal, and field relations indicated the presence of Carboniferous beds in the South Nahanni River area (61°06′ N. 123°59′ W.). A sample from a 4-ft.-thick coal seam, collected by John Patton of the University of Alberta, was examined. Data on location and stratigraphy of sample area are given. Results of chemical and petrographic analysis are described; a detailed analysis of the spore assemblage, of value to both the coal and oil industries, is provided, with a comparative index, which shows the South Nahanni assemblage more similar to that reported from northern U.S.S.R. than from the United States. Systematic descriptions of genera and species are also given, nearly all illus. by photos or diagrams. The South Nahanni River coal is the first definite indication of terrestrial deposition during the Carboniferous period in Western Canada. It is suggested that a "northern" floral province may have extended from northwestern Canada to northern Russia through the arctic regions.

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51475. HADDY, FRANCIS JOHN, 1922– , *and others*. Effect of change in air temperature upon systemic small and large vessel resistance. (Circulation research, Jan. 1957. v. 5, no. 1, p. 58–63, illus., table.) 4 refs. *Other authors:* M. Fleishman *and* J. B. Scott, *Jr.*

Account of direct resistance measurements in the foreleg of dogs. Reduction of ambient temperature to 0° C. was followed by a rise in total resistance due mainly to small-vessel constriction. The large vessels also constrict, due probably to changing levels of epinephrine, norepinephrine, or both.

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HADFIELD, R. G., *see* Serebreny, S. M., *and others*. Study of jet stream . . . *1957*. No. 54697.

51476. HAEGER, KNUT, *and others*. Electrocardiographic studies on fibrillating and nonfibrillating hypothermic dogs with or without previous treatment with acetylcholine or procaine amide. (American heart journal, Jan. 1957. v. 53, no. 1, p. 31–39, illus., tables.) 20 refs. *Other authors:* B. Johansson *and* B. Sjöström.

Account of investigation on electrocardiographic changes in hypothermic dogs treated with Prostigmine-acetylcholine combination, or with procaine amide, whilst an untreated group served as control. The ECG changes were fundamentally the same at the beginning as at the end of cooling in the treated groups; however, some changes were noted "which probably may be attributed to hypothermia itself." No sign was detected which could be taken as a warning of impending ventricular fibrillation. ***Copy seen:*** DNLM.

51477. HAEGER, KNUT, *and* B. SJÖSTRÖM. Procaine amide and some other drugs in the prevention and treatment of ventricular fibrillation in the hypothermic state in rabbits and dogs. (Acta chirurgica scandinavica, 1957. v. 113, fasc. 2, p. 167–84, illus., tables.) 67 refs.

Account of investigation on the antifibrillary action of five drugs. Of these only Pronestyl (procaine amide) had a marked reducing effect on ventricular fibrillation induced by hypothermia. It also reduced hypothermia produced in these animals by other means. In rabbits, Pronestyl arrested ventricular fibrillation and converted it to cardiac arrest or sinus rhythm. ***Copy seen:*** DNLM.

51478. HÄGGBLOM, ANDERS. Ishav och glaciärer; med m/s Aranda till Nordostlandet, Spetsbergen. (Nordenskiöldsamfundet. Tidskrift 1957. årg. 17, p. 71–83, illus., map.) Text in Swedish. ***Title tr.:*** Arctic Ocean and glaciers; on the m/v *Aranda* to Nordaustlandet, Spitsbergen.

Contains a detailed account of the oceanographic work (methods, equipment, daily routine, etc.) carried out

aboard the Finnish research ship *Aranda* in the Barents Sea in summer 1957 (leader, Ilmo Hela). The vessel was transporting equipment and personnel for the Swedish-Finnish-Swiss expedition to Kinnvika (80°03′ N. 18°18′ E.) on Nordaustlandet (No. 52832). The author's four-man party (an American, a Swedish, two Finnish glaciologists) were going to set up research for a glaciological expedition in the summer 1958 under Valter Schytt. This preliminary work is described. ***Copy seen:*** NN.

51479. HÄGGE, ERIC. Resa i återuppbyggt land. (Jorden runt, Apr. 1957. årg. 29, nr. 4, p. 151–64, illus.) Text in Swedish. ***Title tr.:*** Travel in reconstructed country.

Tourist's impressions of northern Norway under post-war reconstruction: Bodø, Tromsø, Hammerfest, Honningsvåg, Alta; housing, industry (fishery), etc. ***Copy seen:*** DLC.

51480. HÄGGSTRÖM, BÖRJE. Bestämning av vattenhalten i några nordsvenska råhumustäcken. (Svenska skogsvårdsföreningen. Tidskrift, 1950. årg. 48, nr. 2, p. 215–27, illus., table, graphs.) 13 refs. Text in Swedish. Summary in German. ***Title tr.:*** Determination of water content in some raw-humus covers in northern Sweden.

Samples from the raw-humus layer were taken at two-day intervals, June 8–July 19, from 12 plots at Lycksele. Vegetation, forest and soil types, and thickness of the humus and bleached-earth layers for each plot are presented in tabular form. Moisture content is graphed with rainfall and temperature data of the period. The water content on all plots was found considerably below the optimum for the breakdown of humus; the available moisture in the moist *Calluna/Vaccinium* types was barely enough, and in the dry types was not enough, for germination of pine and spruce; there was a good correlation between thickness of the bleached-earth layer and moisture content of the raw humus.

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51481. HAEKEL, JOSEF, 1907– . Bestattungsbräuche und Totenerrinnerungsmale bei den Indianern Nordwestamerikas. (Wiener völkerkundliche Mitteilungen, 1955. Jahrg. 3, no. 1, p. 22–30.) 25 refs. Text in German. Summary in English. ***Title tr.:*** Burial customs and memorial feasts of the northwest American Indians.

Includes a review and interpretation of the burial rites of the Tlingit, Haida, Tsimshian and Kwakiutl Indians. Special attention is given to dances with animal masks, burial potlatches, totem and memorial poles, and to the part played by chieftains and shamans. A connection is suggested bstween masked dances and myths of origin. ***Copy seen:*** DSI.

51482. HAEKEL, JOSEF, 1907– . Zum Problem der Konstanz und des Wandels in den Kulturen Norwestamerikas. (International Congress of Americanists, 31st, *São Paulo*, 1954. Proceedings, 1955, v. 1, p. 15–26.) 33 refs. Text in German. ***Title tr.:*** The problem of constancy and change in the cultures of northwest America.

Discusses the chronology of the settlement of the Pacific Coast and states a case for an originally inland culture center. Ecological, economic, linguistic aspects and factors of social organization of coastal tribes (including the Tlingit, Haida and Kwakiutl) are analyzed. The formation of the typical coastal culture is ascribed to Kwakiutl forebears around 900 B.C. The era of the first century B.C. to first century A.D. is suggested for the start of the southern (coast-Salish) and northern (Tlingit) cultures.

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51483. HAEKEL, JOSEF, 1907– . Zur Frage alter Kulturbeziehungen zwischen Alaska, Kalifornien und dem Pueblo-Gebiet. (International Congress of Americanists, 32nd. *Copenhagen*, 1956. Proceedings, 1958. p. 88–96.) 34 refs. Text in German. ***Title tr.:*** On the problem of old culture relationships between Alaska, California and the Pueblo region.

Discusses the construction, manifold use, origin and diffusion of the Alaskan Eskimo men's house, *kashim*. A domed semi-subterranean structure used for male initiation and other secret rites, it served also as sweatbath, dormitory, work shop. Author speculates on its east-Asiatic origin, possible presence in the Old Bering Sea and Ipiutak cultures, and quasi-certain existence during the prehistoric stage of the Thule culture. Its use by the Greenlandic Eskimos around 1100 A.D. is noted; a dating of 400–200 B.C. is proposed for its appearance in Alaska and 300 A.D. for its southward advance. The possibility is seen of a parallel spread of certain Eskimo initia-

tion rites and mortuary beliefs to the California and Pueblo Indians.

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HAESTRUP, JØRGEN, *see* Strehle, A., *and* J. Haestrup. Fra Grønland til Svalbard. *1947.* No. 55193.

51484. HÄYRÉN, ERNST FREDRIK, 1878– . Die Mikrovegetation an den Wuchsplätzen von *Buxbaumia aphylla* und von *Siphula ceratites;* ein Beitrag zur Kenntnis der Luftalgen. Helsingfors, 1944. 11 p. (Finska vetenskaps-societeten. Commentationes biologicae, v. 9, no. 7.) 13 refs. Text in German. ***Title tr.:*** Microvegetation in the growths of *Buxbaumia aphylla* and *Siphula ceratites;* a contribution to the knowledge of aerial algae.

Includes data on 18 localities of the lichen *Siphula ceratites* in the Pechenga region of Russian Lapland, with lists of other cryptogams. This lichen associates usually with algae of the genus *Stigonema* which form the ground cover. The algae bind the soil particles, and are followed by *Siphula* and other cryptogams. These micro-associations thrive in the humid climate of Pechenga, northern Norway, and probably other arctic regions. ***Copy seen:*** DLC.

51485. HAFTORN, SVEIN. Grenseforskyvninger i den nordnorske fuglefauna og andre resultater fra en reise i 1955. (Norske videnskabers selskab, Trondheim. Museet. Årbok, 1956–57, p. 15–47, 2 illus., 10 text maps.) 56 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Extensions of limit in the avifauna of North Norway; results from a journey in 1955.

Distribution of some thirty birds in Nordland, Troms and Finnmark is studied, and comparisons made with data collected 30–100 years ago. As expected, several species proved to have extended their ranges northward or to have increased in number within their previous ranges, especially *Emberiza citrinella, Fringilla coelebs, Carduelis spinus, Parus major, Muscicapa hypoleuca* and *Garrulus glandarius.*

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51486. HAFTORN, SVEIN. Kjøttmeisas, *Parus m. major* L., innvandring og nåvaerende utbredelse i Nord-Norge. (Norske videnskabers selskab, Trondheim. Forhandlinger, 1957. bd. 30, no. 3, p. 14–21, 3 illus.) 29 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Immigration and present distribution of the great tit, *Parus m. major* L., in North Norway.

Rare in Troms and Finnmark before 1940, this bird was relatively commonly distributed in suitable places in North Norway through 1955; it was found breeding up to 70°30′ N. and later at 71°05′ N. Its increase has probably taken place since 1930, and its occurrence is related to changes in the winter: mild winters probably favor the bird.

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51487. HAFTORN, SVEIN. Populasjonsendringer, spesielt geografiske forskyvninger, i den norske avifauna de siste 100 år. (Stavanger, Norway. Museet. Sterna, Sept. 1958. bd. 3, hefte 3, p. 105–137, 7 illus., 3 tables.) 68 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Population changes, especially geographical changes, in the Norwegian avifauna during the last 100 years.

Contains data on regional changes in distribution, horizontal or vertical, and long-term numerical changes in stock. Some old breeding birds have extended northwards, e.g., *Emberiza citrinella, Passer domesticus, Fringilla coelebs,* etc. *Vanellus vanellus, Numenius arquata,* and *Ardea cinerea* have partly extended their coastal distribution above the Arctic Circle and all show a clear tendency to spread inland. Species with diminishing distribution in Norway are reviewed in table 3. ***Copy seen:*** DI.

51488. HAGBERG, NILS. Storskogsbrukets karteringsmetoder med begagnande av flygbilder. (Svenska skogsvårdsföreningen. Tidskrift, 1956. årg. 54, nr. 3, p. 223–64, illus., tables, maps.) 10 refs. Text in Swedish. ***Title tr.:*** Forestry mapping methods with use of aerial photographs.

Air photographs were used experimentally for forestry in Sweden about 1930. In the large forest and upland areas of the North, they have come into general use for map revision, field studies, and to some extent as map substitutes. Overlapping single camera vertical photographs at scale 1:20,000 are most useful. Various combinations of office and field annotations and of map and photographic supplements are discussed. Series of single prints and stereo pairs are preferred to mosaics. Scale and interpretation difficulties in irregular terrain require

refinement and solution. Lower costs and time saving are found with air photographs, and their use is increasing, though the older foresters often prefer maps.

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51489. HAGEN, INGVAR. The common crossbill, *Loxia curvirostra* L., in North-East Greenland. (Nytt magasin for zoologi, 1956. v. 4, p. 107–108.) 8 refs. *Pub. also* as: Contrib. no. 63, Zoological Museum, University of Oslo.

Contains a study of the skin of a female-colored crossbill taken at Cape Herschel, 74°14′ N. 20° W. about July 1, 1953. The specimen is defective and exact determination was impossible: it is either *L. curvirostra pusilla* coming from northwest America, or a *L. c. curvirostra* coming from Europe or Siberia, the latter seems more probable. This is the fourth known record of crossbill in Greenland.

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51490. HAGERUP, OLAF, 1889– . Autogamy in some drooping *Bicornes* flowers. (Botanisk tidsskrift, 1954. bd. 51, p. 103–116, 16 illus.) 10 refs.

Flowers and biology of 14 *Bicornes* plants, including *Vaccinium uliginosum* var. *microphyllum* forming enormous growth on the east coast of Greenland (71° N.) and *Cassiope tetragona* (Greenland 71° N.) are described. Only further investigations can establish whether drooping *Bicornes* are normally autogamous. ***Copy seen:*** DA.

51491. HAGERUP, OLAF, 1889– . Lidt om mallemukken: stormfuglen, *Fulmaris glacialis*. (Grønland, Feb. 1958, nr. 2, p. 50–57, illus.) Text in Danish. ***Title tr.:*** Notes on the fulmar (*Fulmarus glacialis*).

Contains general biological notes with emphasis on flying technique and feeding habits; author's study of the latter on 50 birds in Davis Strait (64° N.) in 1925 disclosed the most important item in the diet as plankton. ***Copy seen:*** DLC.

51492. HAGERUP, OLAF, 1889– . Notes on some boreal polyploids. (Hereditas, 1944. bd. 30, häfte 1–2, p. 152–60, 21 illus.) 12 refs.

Contains cyto-geographical and cyto-ecological data on 20 species of flowering plants. *Linnaea americana* (n=2x8) differs very little from the European *L. borealis* in external morphological features, but the two species differ ecologically. In Greenland, *L. americana* grows in some few places in a low scrub of arctic bushes (*Empetrum, Salix glauca* and *Vaccinium uliginosas*) and is found as far north as Disko (70° N.), where it thrives and flowers profusely. Altogether it is somewhat larger and more robust than *L. borealis*.

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51493. HAGERUP, OLAF, 1889– Studies on polyploid ecotypes in *Vaccinium uliginosum* L. (Hereditas, 1933. bd. 18, häfte 1–2, p. 122–28, 2 illus.) 10 refs.

Contains results of the study of two forms, *V. u.* f. *genuina* (n=24) from East Greenland (66°30′–71° N.) and *V. u.* f. *microphila* (n=12) from the same region. The polyploid forms with the greatest number of chromosomes are considered the most resistant in unfavorable climates. But it is not always so, as in the case of these bilberries, the arctic form is diploid. Polyploid forms may be ecologically changed to grow in other climates and formations where the diploid form will not thrive. Environment may play a considerable part in the formation of new species. ***Copy seen:*** DLC.

51494. HAGERUP, OLAF, 1889– . Studies on the significance of polyploidy, III; *Deschampsia* and *Aira*. (Hereditas, 1939. bd. 25, häfte 2, p. 185–92, 10 illus.) 10 refs.

Contains data on seven species of the grass *Deschampsia*, of which only one, *D. setacea* (Denmark), is diploid and has n=7. Five species, viz *D. flexuosa, caespitosa, arctica* (East Greenland, 75° N.), and *bottnica* are tetraploid (n=2x7). The species which have the widest ecological and geographical range and are best equipped in the struggle for life, are to be found among the tetraploids. Pts. I and II of these studies do not contain arctic material.

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51495. HAGERUP, OLAF, 1889– . Studies on the significance of polyploidy, IV; *Oxycoccus*. (Hereditas, 1940. bd. 26, häfte 3–4, p. 399–410, 25 illus.) 7 refs.

Contains cytological data on this genus of small shrubs which has several closely related forms, whose chromosome numbers constitute a polyploid series, viz: n=12, n=24, and n=36. *O. microcarpus* (n=12) is a circumpolar species found farthest north in Europe, Asia, North America, which also differs ecologically

from *O. quadripetalus* var. *microphyllus* (n=2x12) of West Greenland, 66° N. The newly discovered *O. gigas* (=*O. quadripetalus* x *O. microcarpus*?) found in Sjaelland, Denmark (n=3x12) is hexaploid. Accordingly, the polyploid series attains its optimum at tetraploidy. With higher chromosome number, sexual reproduction ceases. ***Copy seen:*** DLC.

51496. HAGERUP-SVENDSEN, K. Trafikflygning över polarområdena. (Ett år i luften, flygets årsbok 1955, p. 245–58, 15 illus.) Text in Swedish. ***Title tr.:*** Civil air service over the polar regions.

Describes the first commercial flights over the polar regions carried out by Scandinavian Airlines System in 1952, and other polar flights, also the navigational requirements for flying in the Arctic. ***Copy seen:*** DLC.

51497. HAGFORS, TOR. Results of scatter measurements at 36 Mc/s over a 1,200 km. path. (*In:* Polar Atmosphere Symposium, *Oslo*, 1956. v. 2, *pub.* 1957, p. 205–209, diagrs.) 5 refs.

Some results of research by the Norwegian Defence Research Establishment on ionospheric scatter propagation over a path from southern to northern Norway are reported. Diurnal signal variation, the angular dependence of scattering cross section, the frequency dependence of scattering cross section, the frequency dependence of transmission loss, and the signal fine structure are discussed. A more or less pronounced max. in the field strength occurred in all cases at midday; for all months a min. occurred in the early evening. Particular properties of the signal found in this research may be useful for communication purposes in the Arctic. Future research requires a more detailed correlation between ionospheric condition at the control point and the scatter signal transmission loss.

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51498. HAGLUND, DONN KEITH, 1926– . Brattahlid, an ancient Greenland sagastead. (American-Scandinavian review, Sept. 1957. v. 45, no. 3, p. 237–46, illus., maps.) 5 refs.

Brattahlid (now Kagsiarsuk, 61°09′ N. 45°30′ W. in the Julianehåb Distrikt) was established by Eric the Red in 986 as one of many Norse farms belonging to the settlers of Eystribygd. It included a plain of about 650 yards north-south along the Tunugdliarfik Fjord, extending 450 yards inland, and another, somewhat larger, but less fertile to the south. Eric's original home consisted of one large room, 50 by 15 ft., to which were added, over the centuries, four additional rooms and a well house. Ruins of 66 individual structures have been found, but only those of one, the larger of the two churches, have been protected. The history of the settlement, which lasted until the middle of the 15th century, is briefly reviewed. ***Copy seen:*** DLC.

51499. HAGLUND, DONN KEITH, 1926– . Greenland tourist promotion begun. (Arctic, 1957. v. 10, no. 1, p. 59.)

Notes organization in 1956 of the Turistforeningen for Grønland, its purpose: funds for construction of hotels, boats, etc., and for publicity, etc.; its membership: 1100, Greenlanders and Danes; future plans are discussed.

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51500. HAGLUND, DONN KEITH, 1926- . Relocation of the Thule, Greenland, Eskimo settlement. (Association of American Geographers. Annals, Sept. 1958, v. 48, no. 3, p. 267.)

Abstract of paper presented at the 54th annual meeting of the Association, Los Angeles, Aug. 18–22, 1958. Some four hundred natives of eleven settlements in the Thule area are to be relocated due to construction of the American air base at the site of Thule village. The relocation was already started in 1954, with a hundred Eskimos resettled on the north shore of Inglefield Bay.

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51501. HAGLUND, GUSTAF E., *d.* 1955. Two new Taraxaca from Novaya Zemlya. *T. gracilipes* n. sp. and *T. lyngeanum* n. sp. (Nytt magasin for botanikk, 1957. v. 5, p. 7–11, 3 illus.) 6 refs.

These two new species of *Taraxacum* were described in Latin by the author before his death in 1955. They were collected by Prof. B. Lynge while on the Norwegian Expedition to Novaya Zemlya in 1921; some additional specimens were obtained by Dr. H. Steffen in 1926. English translations of Latin diagnoses are added by the editor.

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51502. HAGSAND, ERIK. Nordkalottmötet för jordbruksforskare år 1955. (Nordisk jordbrugsforskning, 1956. årg. 38, häfte 1, p. 3–5.) Text in Swedish. ***Title tr.:*** The North Fennoscandian

meeting for argicultural research workers 1955.

The Nordisk Jordbrugsforskning's Swedish sectional meeting at Umeå in Aug. 1955 is reviewed. Cooperation in agricultural research and its reportage was the subject of conference. A field party visited the research station under construction at Apukka, Finland, 66°35′ N., where winter wheat, rape, and other crops are grown and bogland is under cultivation. Soil temperature studies at the Pelso frost research station are mentioned. ***Copy seen:*** DA.

51503. HAHN, P., *and others.* The development of thermoregulation, 1; the development of thermoregulatory mechanisms in young rats. (Physiologia bohemoslovenica, 1956. v. 5, fasc. 3, p. 283–90, illus., table.) 13 refs. *Other authors:* J. Křeček *and* J. Křečková.

In a cold environment, rectal temperature fell quicker in 14 day-old rats than in those of 18 days; on second exposure to cold this difference was less pronounced. Relation between O_2-consumption and rectal temperature was the same in animals of identical age exposed to cold, but O_2-consumption decreased with advancing age. ***Copy seen:*** DNLM.

51504. HAHN, P. The development of thermoregulation, 2; the participation of the thyroid gland in the development of thermoregulation in rats. (Physiologia bohemoslovenica, 1956. v. 5, fasc. 3, p. 291–97, illus., table.) 18 refs.

Report on the effects of thyroidectomy, performed on the fourth and fifth day of life, upon thermoregulation. No effect was observed on the 14th day of life but on the 18th day, rate of fall in rectal temperature upon cold-exposure was significantly higher than in controls. O_2-consumption, in cold environment and for a given rectal temperature, is lower from the 18th day onwards, than in normal rats. It is concluded that the thyroid affects a newly developing mechanism of chemical thermoregulation which emerges after the 14th day of life.

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51505. HAHN, P. The development of thermoregulation, 3; the significance of fur in the development of thermoregulation in rats. (Physiologia bohemoslovenica, 1956. v. 5, fasc. 4, p. 428–31, illus., table.) 5 refs. *Also pub.* in Czech in: Československá fyziologie, 1956. ročnik 5, no. 4, p. 440–43.

Report on investigation of thermoregulatory responses to cold in clipped animals of various ages. It was found that physical thermoregulation (pilomotor mechanisms) develop between the 14th and 18th day of life with additional development (of vascular mechanisms) after the 18th day. ***Copy seen:*** DNLM.

51506. HAHN, P. The development of thermoregulation, 4; carbohydrate metabolism and thermoregulation in infant rats. (Physiologia bohemoslovenica, 1956. v. 5, fasc. 4, p. 432–36, tables.) 10 refs. *Also pub.* in Czech in: Československá fyziologie, 1956. ročnik 5, no. 4, p. 444–48.

In animals older than 18 days, liver and muscle glycogen decreased upon cold-exposure. After 24 hrs. of starvation preceding cold exposure, liver glycogen fell in all age groups, but muscle glycogen only in animals over 14 days old. Starvation for 24 or 72 hrs. did not affect thermoregulation to cold.

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51507. HAHN P., *and* **O. KOLDOVSKÝ.** Significance of the adrenal glands during the post-natal development of thermoregulation in the rat. (Nature, *London,* Mar. 22, 1958. v. 181, no. 4612, p. 847.) 6 refs.

Account of experiments with adrenalectomized, five-day old rats exposed to 30° C. It was found that their rectal temperature dropped significantly lower than that of controls. Administration of cortisone abolished the effect of adrenalectomy. ***Copy seen:*** DLC.

51508. HAHR, G. Älgskadegörelse på tallungskog. (Svenska skogsvårdsföreningen. Tidskrift, 1950. årg. 48, nr. 1, p. 24–44, illus., tables, graphs.) Text in Swedish. ***Title tr.:*** Elk damage to young pine forest.

Reports a winter (1948–49) investigation made at Bergslagen in central Sweden to determine the relationship between elk density and damage to young pine forests. Data on month-to-month weight of a young elk kept in a ¼ hectare enclosure, and its average daily consumption of pine, juniper, and birch shoots, are tabulated. From these and estimated-weight tables of freely grazing elk, the daily winter consumption of an elk over one year old is estimated to be 9–10 kg. pine, 8–9 kg. birch, and 0.5 kg. juniper shoots, or 900 kg. pine/elk/year. On two pine plots examined in spring 1949 for

elk damage, about 60% of the young trees were likely to survive. Browsing by elks is generally on 6–15-year-old trees, and is confined to shoots of the last two years, up to 4–5 mm. diam. Data on weight of branches within these limits per hectare, and on the damage (expressed as percentage of the original number of plants) for different densities of elk population are graphed. A density of not more than 3 elks/1,000 hectares, yielding 12% damage, is recommended as a suitable compromise between the different interests of forestry, hunting and wildlife conservation.

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51509. HAKULINEN, RAINAR. *Solorina octospora* (Arn.) Arn., eine für Finnland neue Flechtenart. (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Tiedonannot (Archivum), 1957. v. 12, no. 1, p. 39–40.) Ref. Text in German. ***Title tr.:*** *Solorina octospora* (Arn.) Arn., a lichen species new to Finland.

Contains a description of *Solorina octospora* native to Finland, Novaya Zemlya, Vestspitsbergen, Greenland, Ellesmere Island and Baffin Island.

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51510. HALBERG, FRANZ, *and others.* 24-hour rhythms in rectal temperature and blood eosinophils after hemidecortication of human subjects. (Journal of applied physiology, May 1958. v. 12, no. 3, p. 381–84, illus., table.) 11 refs. *Other authors:* L. A. French *and* R. J. Gully.

Report on study of three males and three females at intervals of 3–20 months after operation. In all cases 24-hr. rhythms were detected, the temperature rhythm being made regular. The cerebral cortex on one side, whether left or right, thus seems non-essential to the maintenance of temperature or eosinophil rhythms.

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HALBERG, FRANZ, *see also* Chaudhry, A. P., *and others.* Daily rhythms in rectal temperature . . . mitoses . . . *1958.* No. 50191.

HALE, HENRY B., *see* Criscuolo, D. *and others.* Oxygen transport . . . rats . . . *1958.* No. 50383.

HALE, HENRY B., *see* Mefferd, R. B., *and* H. B. Hale. Effect of altitude, cold and heat on metabolic . . . *1958.* No. 53207.

HALE, HENRY B., *see* Mefferd, R. B., *and* H. B. Hale. Effects of abrupt temperature changes on excretion . . . *1958.* No. 53208.

HALE, HENRY B., *see* Mefferd, R. B., *and* H. B. Hale. Effects of altitude, cold, and heat . . . metabolic relationships . . . *1957.* No. 53209.

HALE, HENRY B., *see* Mefferd, R. B., *and* H. B. Hale. Effects of thermal conditions on metabolic responses . . . altitude. *1958.* No. 53210.

HALE, HENRY B., *see* Mefferd, R. B., *and others.* Metabolic responses of adapted rats . . . stress. *1957.* No. 53211.

HALE, HENRY B., *see* Mefferd, R. B., *and* H. B. Hale. Temperature . . . metabolic responses in cold- and heat-acclimated rats. *1958.* No. 53212.

51511. HALE, MASON E., Jr. Studies on the chemistry and distribution of North American lichens, 10–13. (Bryologist, Mar. 1958. v. 61, no. 1, p. 81–85, illus., maps.) 3 refs.

Deals with four species, two of them, *Lobaria linita* and *L. oregana* occurring in Alaska. Maps for each species illustrate details of distribution. Characteristic chemicals found in each are noted.

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HALEY, JAMES F., *see* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958.* No. 50694.

51512. HALL, EUGENE RAYMOND, 1902– . Arctic to Tropics in America. (*In:* International Congress of Zoology, 14th, Copenhagen, 1953. Proceedings, 1956. p. 125.)

The number of species of land mammals, seems to be directly proportionate to the number of habitats: in the tropical life-zone there are approximately six times as many habitats and as many species of land mammals as in the arctic one; but the number of individual land mammals is approximately the same in each of the six major life-zones.

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HALL, F. G., *see* Zechman, F. W., *and others.* Effect . . . cooling the cervical vagi . . . breathing. *1958.* No. 56177.

HALL, G. E., *see* Armstrong, H. G., *and others.* The physiological effects of breathing cold . . air. *1958.* No. 49382.

51513. HALL, JOHN F., Jr., *and others.* Body cooling in wet and dry clothing. (Journal of applied physiology, July 1958. v. 13, no 1, p. 121–28, illus., tables.) 7 refs. *Other authors:* A. P. Kearney, J. W. Polte and S. Quillette.

A study of subjects immersed clothed in very cold water (0° C.) then exposed to ambient temperatures of +4.4° to −28.9° C. Water absorbed in an immersion period of 15–120 sec. amounted to 9–10 lb. Mean metabolic increase due to wet clothes was 54.7%. Mean body-cooling rates were significantly higher than in dry-clothed controls. Predictive curves are presented for human tolerance for exposure to various temperatures, in dry or wet clothing.

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HALL, M. S., *see* Glaser, E. M., *and others.* Adaptation to localized warming and cooling. *1958.* No. 51219.

51514. HALL, SHERIDAN L. The true distance and azimuth computer for polar navigation. (Navigation, Winter 1957–58. v. 5, no. 8, p. 385–89, illus.)

Describes a simple, accurate, and time-saving device which adopts the Polar Gnomic Projection. One side of the computer is a circular slide rule which employs log sine scales and yields accurate great circle distances. The other side consists of a graphic indicator which converts measured, or map, azimuth to true course, and true bearing to plotting angle. A modified true course indicator, using only the geographic coordinates of departure and destination in computing true course, has been introduced. This indicator, as well as the distance indicator, is not restricted to any one projection, and can be used ndependent of the chart. The use of the computer is described in a sample problem. ***Copy seen:*** DLC.

51515. HALL, WILLIAM C. The strategic story of Alaska. (Military engineer, Nov.–Dec. 1957. v. 49, no. 332, p. 444–48, illus., maps.) Ref.

Reviews Alaska's development from the time of discovery to the present, emphasizing its role in two world wars and its increased importance in missile warfare and defense. ***Copy seen:*** DLC.

51516. HALLAHAN, WILLIAM J. A new concept in cold-weather military housing. (Contractors and engineers, Oct. 1958. v. 55, no. 10, p. 68–70, illus.)

Describes a six-story, 700-man dormitory constructed for the U.S. Air Force at Goose Bay, Labrador. The fireproof elevator building with a reinforced-concrete structural framework and extruded aluminum exterior walls is connected through tunnels with the mess hall and kitchen, offices, etc., housed in a single-story outside building. Thermal insulation is provided by double-glazed windows and a three in. layer of cellular glass, enclosing the entire structural frame. ***Copy seen:*** DLC.

51517. HALLAM, A. A Cambro-Ordovician fauna from the Hecla Hoek succession of Ny Friesland, Spitzbergen. (Geological magazine, Jan.–Feb. 1958. v. 95, no. 1, p. 71–76.) 12 refs.

Contains a short description of fossils collected in 1956 from near the top of this series. It is concluded that "the Oslobreen dolomites are at least partly Lower Cambrian while the middle and most of the lower Oslobreen limestones are Lower Ordovician." Comparisons are made with fauna in southern Spitsbergen, Bjørnøya and East Greenland.

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51518. HALLER, JOHN, 1927– . Die Strukturelemente Ostgrönlands zwischen 74° und 78° N. København, C. A. Reitzel, 1956. 27 p. illus., plates, maps incl. 2 fold. (Meddelelser om Grønland, bd. 154, nr. 2.) 41 refs. Text in German. Summary in English. ***Title tr.:*** The elements of the structure of East Greenland between 74° and 78° N.

Discusses principles of tectonics of the Caledonian mountain range, especially in the area (75°–78° N.) between the central and marginal zones of the orogeny. Previously unexplored, this area was surveyed by the author in summer 1955 during the Danish Expedition to East Greenland led by L. Koch. Pre-Caledonian structures, including the Archaean Carlsberg Massif and the Britannia Sø series, and Caledonian structures representing the main and late phases of the orogeny are mapped and described.

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51519. HALLER, JOHN, 1927– . Der "zentrale metamorphe Komplex" von NE-Grönland, Teil II; die geologische Karte der Staunings Alper und des Forsblads Fjordes. København, C. A. Reitzel, 1958. 153 p. illus., plates, maps incl. 1 fold., diagrs., tables, cross sections incl. 1 fold. (Meddelelser om Grønland,

bd. 154, nr. 3.) 85 refs. Text in German. Summary in English.
Title tr.: The "central metamorphic complex" of northeast Greenland, part 2; the geological map of the Staunings Alper and Forsblads Fjord.

Discusses in detail the stratigraphy, petrography and tectonics of the area mapped and investigated in 1954–56 by the author during the Danish Expedition to East Greenland. During the Caledonian orogeny, large sections of the sediments were progressively transformed, and all stages of this "stockwerk" folding are represented: late- to post-orogenic granite; syn-orogenic granites and migmatites; gneisses of sedimentary origin; amphibolites and related basic rocks; and late- to post-orogenic lamprophyres. Three granitic intrusions observed in the Staunings Alper massif are described and, the assumption made that the "younger granites are the direct palingenetic products of the older generation", which assumption is extended to the East Greenland Caledonide area as a whole.
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51520. HALLETT, J., *and* **B. J. MASON.** Influence of organic vapours on the crystal habit of ice. (Nature, London, Feb. 15, 1958. v. 181, no. 4607, p. 467–69, illus., table.) 5 refs.

Ice crystals grown from vapor in laboratory or atmospheric conditions showed remarkable variations in crystallization, depending on temperature; variation of supersaturation produced no systematic effects. However, presence of traces of organic vapors, e.g., alcohol vapors, profoundly influenced the growth habits of ice crystals. This is believed to be due to changes in surface structure of the crystals.
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HALLGREN, GUNNAR, *see* Wiklander, L., *and others.* Studies on gyttja soils . . . *1950.* No. 56035.

51521. HAMBERG, AXEL, 1863–1933. Alkavare Lappkapell en kulturbild. (Svenska turistföreningen. Årsskrift, 1926. p. 263–72, illus., col. plate.) Text in Swedish. ***Title tr.:*** Alkavare Lappish chapel, a culture picture.

On the west slope of the Sarek massif in northern Sweden is a deserted Lappish chapel, 137 years old. The region was occupied from 1657 to 1702 by Lappish silver and lead miners. The chapel's stone walls remain intact but the wooden roof is in ruins. Construction, cost, and pastoral visits, etc., are quoted from records. Routes of travel are reviewed.
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51522. HAMBERG, AXEL, 1863–1933. Ett regn- och myggtätt tält med god luftväxling. (Svenska turistföreningen. Årsskrift, 1925. p. 335–37, illus.) Text in Swedish. ***Title tr.:*** A rain-tight and mosquito-proof tent with good ventilation.

A tent especially designed for light transport in the Swedish mountains is described: 200 by 220 cm. and 180 cm. high inside, 8 kg. in weight including ropes and stakes. It has floor attached, a black gauze door and rear window for ventilation. Over this, a second tent is pitched to prevent leakage during long rains. ***Copy seen:*** DGS.

HAMBERG, AXEL, 1863–1933, *see also* Hjulström, F., *and others.* Mikkaglaciären . . . *1957.* No. 51733.

51523. HAMELIN, LOUIS EDMOND. Projet de coordination des recherches periglaciaires dans l'est Canadien. (Cahiers de géographie de Québec, Oct. 1957. année 2, no. 3, p. 141–42.) Text in French. Summary in English. ***Title tr.:*** Project for coordination of periglacial research in eastern Canada.

Notes possible areas of Canadian participation in a three-year program of the Commission on Periglacial Morphology (International Geographical Union), announced in Sept. 1957. Suggestions include: inventory of periglacial relief forms in eastern Canada; bibliography on periglacial phenomena in this area; English-French terminology; preparation of substantial works for presentation at the International Geographical Congress in Stockholm, 1960; facilitation of teaching and research. ***Copy seen:*** DLC.

51524. HAMELIN, LOUIS EDMOND. Les tourbières réticulées du Québec-Labrador subarctique: interprétation morpho-climatique. (Cahiers de géographie de Québec, Oct. 1957. année 2, no. 3, p. 87–106, 3 illus., diagr., graph, table.) Approx. 50 refs. Text in French. Summary in English. ***Title tr.:*** String-bogs of subarctic Quebec-Labrador: morpho-climatic interpretation.

String-bogs are essentially marshy zones of ponds separated by strips of vegetation, the whole presenting a rectilinear or concentric pattern. They are

found in Quebec-Labrador 50°–55° N., are related to an optimum thickness of peat, and occur far south of permafrost limits in regions where snow maintains great depth. Formation of the bogs approx. 4000 B.C.–1600 A.D. is traced briefly; a combination of formative processes is suggested: sub-aquatic solifluction, gathering of isolated vegetation-covered hillocks, tearing of the plant covering by internal balls of ice, shifting of malleable peaty material, differential formation of ice in the ponds, snow action. Similar bogs are found in other parts of Canada, Alaska, Scandinavia and U.S.S.R. A brief review of the literature is given. ***Copy seen:*** DLC.

51525. HAMILTON, ALVIN G., 1912– . A new era in the Canadian North. (Western miner and oil review, Oct. 1958. v. 31, no. 10, p. 80–83.)

Discusses recent mineral discoveries in the Yukon (asbestos), Baffin Island and Belcher Island (iron), Great Slave Lake area (lead-zinc), etc.; and outlines federal plans for development roads: Flat Creek to Fort McPherson (later to be extended to the arctic coast); from Mackenzie Highway around the west end of Great Slave Lake to Yellowknife, from this road a branch to Sawmill Bay (later to be extended to the arctic coast). Possibilities of submarine shipping from the north coast are discussed. ***Copy seen:*** DGS.

51526. HAMILTON, ALVIN G., 1912– . The year in Yukon. (Western miner and oil review, Apr. 1958. v. 31, no. 4, p. 98–99, illus., table.)

Summarizes exploration and development activities in the Dawson, Mayo, and Whitehorse mining districts in 1957. Preliminary figures on gold, silver, lead, zinc, cadmium, and coal production are tabulated and compared with the 1956 statistics. Discovery of a second asbestos deposit 50 mi. northwest of Dawson, on a tributary of the Fortymile River, is noted. ***Copy seen:*** DGS.

HAMILTON, ANGUS C., *see* Showler, J. G., *and* A. C. Hamilton. Shoran trilateration in the Arctic Islands. *1958.* No. 54820.

51527. HAMILTON, JOHN, 1827–1897. Notes on Coleoptera, no. 10–11. (Canadian entomologist, 1892. v. 24, no. 7, 12, p. 157–63, 293–300.)

Contains an annotated list of 33 beetles, with descriptive notes, critical remarks and data on distribution. *Brontes truncatus* from Alaska (p. 159) and *Corymbites lobatus*, Unalaska, Kodiak, Kenai Peninsula and Sitka (p. 296), are included. ***Copy seen:*** DLC.

51528. HAMILTON, RICHARD A. The British North Greenland Expedition, 1952–54; scientific results. (Nature, London, Apr. 12, 1958. v. 181, no. 4615, p. 1030–32.) 42 refs.

Work carried out in Dronning Louises Land (76°46′ N. 24°15′ W.) and on the northern inland ice is outlined by the expedition's chief scientist: aerial surveying, altitude of the ice surface, auroral observations, gravity determinations, glaciology, and physiology of men and dogs. Scientists involved in the work and their findings are listed. Incidence of trichinosis in the expedition's dogs was studied; insects, fish, and plants were collected. ***Copy seen:*** DLC.

51529. HAMILTON, RICHARD A., *and* **G. ROLLITT.** Climatological tables for the site of the expedition's base at Britannia Sø and the station on the inland ice, "Northice." København, C. A. Reitzel, 1957. 83 p. 3 illus., 19 tables. (Meddelelser om Grønland, bd. 158, nr. 2.)

Contains climatological tables compiled from the Expedition's meteorological observations taken over a period of about 20 months at the two stations. The meteorological equipment employed and station topography are described briefly. Monthly mean data of the following elements are tabulated: wind speed, temperature, max. and min. temperatures, relative humidity and vapor pressure, barometric pressure, and cloudiness. Extreme data are also given for temperature, pressure, relative humidity and vapor pressure. The total precipitation and the number of days with rain, snow, and gale are also given. Frequency tables are included showing diurnal variations of wind, cloud amount and, visibility, the variation of wind speed with direction, the frequency of max. temperatures, min. temperatures, and wind chill, and the variation of the state of the ground. ***Copy seen:*** DLC.

51530. HAMILTON, RICHARD A. The determination of temperature gradients over the Greenland ice sheet by optical methods. (Royal Society of Edinburgh. Proceedings, 1956–57. v. 64, pt. 4, p. 381–97, 6 tables.) 4 refs.

The experimental work was conducted during June–July 1953 at Northice at 78°04′ N. 38°27′ W. altitude 2,341 m. The temperature gradient was determined by measuring the optical refractive index of the air. Refraction was measured by observing the apparent vertical angle of each of a set of targets at distances up to 4 km. from the theodolite. The methods of calculation and selected data are given. The standard error of measurement was about .015° C./m. It is believed that the method can be sufficiently improved to measure to an accuracy of 0.1° C./m. over a range of 100 m. ***Copy seen:*** DLC.

51531. HAMILTON, RICHARD A., *and* **G. ROLLITT.** Meteorological observations at "Northice", Greenland. København, C. A. Reitzel, 1957. 45 p. tables. (Meddelelser om Grønland, Bd. 158, nr. 3.)

Contains the meteorological data obtained at the Expedition's inland ice station located at 78°04′ N. 38°29′ W. altitude 2,343 m. The surface data are given in International Code form for the period Nov. 1952–July 1954, and brief explanation of this code is included. Elements observed were: amount, kind and height of clouds; direction and velocity of wind; horizontal visibility; current and past weather; station level pressure in mb.; air temperature; precipitation; also special phenomena such as drift snow. Pilot balloon data are also tabulated for selected days during the period Mar.–Oct. 1953 and May–July 1954. ***Copy seen:*** DGS.

51532. HAMILTON, RICHARD A., *and* **H. H. LAMB.** Meteorological Office discussion: synoptic meteorology of the polar regions. (Meteorological magazine, May 1957. v. 86, no. 1019, p. 130–38, 2 text charts.) 18 refs.

Synopsis of discussion held in London, Dec. 17, 1956, led by the authors. Subjects included meteorological characteristics of arctic regions and main features of the annual heat budget; characteristics of Antarctica and comparisons between Arctic and Antarctic; change in frequency of gales at Jan Mayen; effect of water channels in arctic pack-ice on the general atmospheric circulation; katabatic winds in Greenland and depressions crossing the inland ice; observational network in the Southern Hemisphere.
Copy seen: DWB.

51533. HAMILTON, RICHARD A. The meteorology of North Greenland during the midsummer period. (Royal Meteorological Society. Quarterly journal, Apr. 1958. v. 84, no. 360, p. 142–58, illus., tables.) 6 refs.

The meteorology of North Greenland is related to the general synoptic situation in the area. Hobbs (No. 29657) thought that Greenland weather was mainly controlled by the glacial anticyclone; Dorsey (No. 28793) showed that in southern Greenland, weather on the icecap was considerably affected by cyclonic disturbances and their associated fronts. While the glacial anticyclone is well developed in northern Greenland, that area is also subject to the passage of fronts and depressions, and, at Northice at least, the weather is the result of both cyclonic and anticyclonic systems. Synoptic situations of special interest, are illustrated by 700 mb. charts. Comparison of the 1953 and 1954 observations at Northice and at Britannia Sø, indicates that at the former station, and perhaps at the latter, the weather described may be regarded as representative of midsummer period in an average year.
Copy seen: DGS.

51534. HAMILTON, RICHARD A. The meteorology of North Greenland during the midwinter period. (Royal Meteorological Society. Quarterly journal, Oct. 1958. v. 84, no. 362, p. 355–74, 12 text maps, 2 diagrs., 10 tables.) 8 refs.

Study of: circulation at the surface and at 700 mb., air temperature, pressure, precipitation and winds, based upon data from "Northice" and Britannia Sø, for the periods Dec. 1, 1952–Jan. 31, 1953 and Dec. 1, 1953–Jan. 31, 1954. General airflow over North Greenland in midwinter is southwesterly, but near the surface of the ice sheet katabatic winds flow towards the coast. Predominantly fine weather is interrupted by the passage of depressions, but little precipitation falls. Inversions normally prevail over the ice sheet, creating temperature differences up to 25° C. Height and intensity of drift snow, wind speed, and visibility are closely related. Comparison of mean pressures and precipitation totals for the period under review with corresponding data for other stations for other years suggests that the two Januarys studied were normal months, but the two Decembers were abnormal.
Copy seen: DWB.

51535. HAMMEL, HAROLD THEODORE, 1921– , *and others.* Heat production and heat loss in the dog at 8°–36° C. environmental temperature. (American journal of physiology, July 1958. v. 194, no. 1, p. 99–108, illus., table.) 20 refs. *Other authors:* C. H. Wyndham *and* J. D. Hardy.

Account of observations on three dogs acclimatized to 27° C. with critical temperatures of 23° to 25° C. The only physiological responses to cold observed were a moderate decrease in total heat content and an increase in heat production. Tissue conductance and cooling constant of the fur did not fall below the levels observed throughout the neutral zone. ***Copy seen:*** DLC.

51536. HAMMEL, HAROLD THEODORE, 1921– . Infrared emissivities of some arctic fauna. Ladd Air Force Base, Alaska, May 1957. 6 p. table. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–25.) 7 refs.

A study of total infrared emissivities from pelts of ten arctic animals (marten, sea otter, beaver, fox, wolf, lynx, bobcat, hare, caribou, ptarmigan). They were found to be 1.0 for every species, i.e., similar to emissivities "of a perfect black body radiator." ***Copy seen:*** CaMAI.

51537. HAMMEL, HAROLD THEODORE, 1921– , *and* J. D. HARDY. Shivering only variable source of heat in intact unacclimatized dogs upon exposure to cold. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 54.)

Dogs kept at low temperatures (8° to 18° C.) shivered intermittently. When shivering ceased, metabolic rate (O_2-consumption) returned to levels obtained in a neutral thermal environment. This indicates that additional heat produced by unacclimatized dogs in cold environment is the product of muscular activity. ***Copy seen:*** DLC.

HAMMEL, HAROLD THEODORE, 1921– , *see also* Murgatroyd, D., ***and others.*** Reaction to hot and cold . . . stimuli . . . dogs . . . *1957.* No. 53458.

HAMMEL, HAROLD THEODORE, 1921– , *see also* Scholander, P. F., ***and others.*** Cold adaptation . . . aborigines. *1958.* No. 54619.

HAMMEL, HAROLD THEODORE, 1921– , *see also* Scholander, P. F. ***and others.*** Metabolic acclimation to cold in man. *1957.* No. 54621.

HAMMEL, HAROLD THEODORE, 1921– , *see also* Scholander, P. F., ***and others.*** Metabolic acclimation to cold in man. *1958.* No. 54622.

51538. HAMMERICH, LOUIS LEONOR, 1892– . The origin of the Eskimo. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958, p. 640–44.)

Applies glottochronology to locate the homeland of the Eskimos and determine the Eskimo origin of the ancient Dorset and Thule population. The heterogeneous character of Western Eskimo dialects and the uniformity of the Eastern favors the assumption of a Western origin of the Eskimos. The division of an assumed basis-language into Aleut and Eskimo, indubitably antedating the dialectal East-West separation, is considered as an added criterion for drawing "the probable center of origin of the people speaking Eskimo westwards, into the neighborhood of the Aleuts." The absence of a marked foreign layer in the present dialects of the Thule and Dorset areas is regarded as proof that the old Thule and Dorset people did speak Eskimo. ***Copy seen:*** DSI.

51539. HAMMERICH, LOUIS LEONOR, 1892– . The Russian stratum in Alaskan Eskimo. (Word, 1954. v. 10, no. 4: Slavic word, no. 3, p. 401–428.) 22 refs.

Lists and analyzes, giving Russian roots and English equivalents, about 180 Russian loan-words used in Western Eskimo: mainly concepts of religion and material culture. Approximating the extent of Russian colonization, the loan-words decrease in number towards the north, are strongest in the southwest, on Nunivak, Kodiak Islands, etc., and on the Asiatic mainland. The phonetic adaptation of Russian words to the sound patterns of different Eskimo dialects is discussed, the continued use of Russian in church services noted and the history of Russian colonization of Alaska sketched. Favorably reviewed by G. A. Menovshchikov in *Voprosy ĭazykoznaniĭa*, 1956, no. 2, p. 124–26.

Copy seen: DLC.

51540. HAMMERICH, LOUIS LEONOR, 1892– . The Western Eskimo dialects. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958, p. 632–39.) Refs. in text.

Defines the territorial expansion of Western Eskimo in Alaska and Chukotka; and stresses divergence among the dialects; those of West Alaskan and Asiatic Eskimos are compared. Asiatic Eskimo is considered of Western Eskimo stock, though certain archaic features of the former point to an early separation. The presence of Russian, Spanish and English loanwords in Alaskan dialects and the paucity of old Russian (as opposed to modern Soviet) loanwords in Asiatic Eskimo are discussed. The use of some old English loanwords in Asiatic Eskimo is noted and G. A. Menovshchikov is criticized for bias in tracing the origin of loanwords. ***Copy seen:*** DSI.

51541. HAND, CADET. The systematics, affinities, and hosts of the one-tentacled, commensal hydroid *Monobrachium*, with new distributional records. (Washington Academy of Sciences. Journal, Mar. 1957. v. 47, no. 3, p. 84–88, 2 illus.) 15 refs.

Contains a discussion of *M. parasitum* first described by Merezhkovskiĭ in 1877 from the White Sea (No. 11285) and later reported from Kara Sea, Solovetskiye Islands waters, West Greenland and Spitsbergen waters. It was discovered by the author in shallow waters of California (32°–34° N.).
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HANDLEY, CARROLL, *see* Moyer, J. H., *and others.* Hypothermia 2; the effect of agents . . . sympathetic nervous system . . . *1957.* No. 53430.

HANDLEY, CARROLL, *see* Moyer, J. H., *and others.* Hypothermia 3; the effect . . . renal . . . ischemia. *1957.* No. 53431.

HANDY, R. L., *see* Carlson, P. R., *and others.* Geology and mechanical stabilization of Cenozoic sediments . . . *1958.* No. 50134.

HANDY, R. L., *see* Lindholm, G. F., *and others.* Geologic and engineering properties of silts . . . *1957.* No. 52840.

HANDY, R. L., *see* O'Sullivan, J. B., *and others.* Geology . . . soil materials . . . *1958.* No. 53805.

51542. HANNA, FRED M. High latitude survey. (Aircraft, June 1958. v. 20, no. 6, p. 14+, illus.)

Describes the 40,000 sq. mi. Baffin Land survey in 1957 by the Photographic Survey Corp. The survey involved shoran-monitored photography for purely mapping control to be used in conjunction with subsequent complete coverage photography. Base was established at Foxe Inlet on Melville Peninsula; 85,000 gal. of aviation fuel were shipped in, supplies to the shoran stations (7) were airlifted by a DC–3. Preparations, establishment of fixed stations, and surveying procedures are described; a B–17 aircraft, equipped with shoran and an Airborne Profile Recorder, carried out the survey. ***Copy seen:*** DLC.

51543. HANNA, G. DALLAS, 1887– , *and* Mrs. **G. D. HANNA.** Miniatures of the Arctic. (Pacific discovery, May–June 1958. v. 11, no. 3, p. 12–13, illus.)

Contains photographs of tiny Alaskan arctic plants: *Marchantia, Lychnis, Salix, Papaver, Androsace, Saxifraga, Ranunculus,* and *Pedicularis;* measurements are given of the plants and, in some cases, of their flowers. ***Copy seen:*** DLC.

51544. HANNA, G. DALLAS, 1887– . Recollections of early oil exploration in Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1905.)

Contains abstract of a paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957, describing comparatively favorable explorations up to 1938; of 64 wells drilled in the Katalla field, 21 were commercial producers. ***Copy seen:*** DGS.

51545. HANNA, G. DALLAS, 1887– . Some land shells from the Aleutian Islands, Alaska. (Nautilus, Apr. 1925. v. 38, no. 4, p. 122–25.)

Lists 13 land molluscs with notes on the distribution and habitats, collected by E. C. Van Dyke (1907) and the author (1913–1920) in the vicinity of Unalaska.
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51546. HANNON, JOHN P. Cardiac metabolism and function during hypothermia. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 66.)

Report on study of aerobic metabolism of ventricular rat tissue during hypothermia *in vitro,* compared with conditions during cooling *in vivo.* A breaking point at 21° C. was observed in both groups. Conditions above and below this point are described. ***Copy seen:*** DNLM.

51547. HANNON, JOHN P., *and others.* Effect of cold acclimatization on plasma electrolyte levels. (Journal of applied

physiology, Sept. 1958. v. 13, no. 2, p. 239–40, table.) 9 refs. *Other authors:* A. M. Larson *and* D. W. Young.

Report on a comparative assay of plasma from cold acclimatized (5° C.) and control (26° C.) rats. Significant increases were found in the levels of sodium and magnesium of the cold adapted group; no change in K, Ca, Chloride, or phosphate. ***Copy seen:*** DNLM.

51548. HANNON, JOHN P., *and* B. G. COVINO. Effect of hypothermia on the cellular respiration of ventricular tissue. (American journal of physiology, Jan. 1958. v. 192, no. 1, p. 121–25, tables.) 20 refs.

The Qo_2 of ventricular slices from hypothermic rats was significantly higher than in controls; no difference in the rate of oxidation was found when homogenates were used, except when no substrate was used or when pyruvate was added as test substrate. This and further experiments with pyruvate and malate suggest that hypothermia does not have an irreversible adverse effect on the tricarboxylic acid and associated systems, but may alter membrane permeability and/or accumulation of reduced intracellular intermediates. ***Copy seen:*** DNLM.

51549. HANNON, JOHN P. Effect of prolonged cold exposure on *in vitro* respiration and anaerobic glycolysis of rat liver. (American journal of physiology, Feb. 1958. v. 192, no. 2, p. 253–57, illus.) 9 refs.

Report on investigations of material from animals exposed to $5 \pm 1°$ C. for two to nine weeks. Cold exposure during the first four weeks was associated with increasing Qo_2 values, returning to normal after this period. Anaerobic glycolysis rate decreased progressively with the duration of cold exposure.

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51550. HANNON, JOHN P., *and* D. A. VAUGHAN. Effect of prolonged consumption of pemmican survival ration on some aspects of the intermediary metabolism of rat liver tissue. (American journal of physiology, May 1958. v. 193, no. 2, p. 449–54, tables.) 15 refs.

Three to five months of feeding of pemmican raised the endogenous metabolism of liver slices and homogenates. This is attributed to an increase in the amount of readily metabolizable substrate.

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51551. HANNON, JOHN P. The effect of temperature on heart rate, electrocardiogram, and certain myocardial oxidations of the rat. Ladd Air Force Base, Alaska, Mar. 1958. 18 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 58–3.) 14 refs.

Account of studies on rats made hypothermic by immersion in ice water and of *in vitro* studies of myocardial metabolic activity within the temperature range of 35° to 5° C. The assays indicate that the cardiac dysfunctions observed during hypothermia are attributable "to shifts in temperature kinetics of enzyme systems at 20°–21° C." ***Copy seen:*** CaMAI.

51552. HANNON, JOHN P. Effect of temperature on heart rate, electrocardiogram and certain myocardial oxidations of the rat. (Circulation research, Nov. 1958. v. 6, no. 6, p. 771–78, illus.) 15 refs.

Report on investigation of body temperature, heart rate and ECG in deeply hypothermic rats, supplemented by *in vitro* assays of myocardial metabolism at a temperature range of 5° to 35° C. The latter indicate that cardiac dysfunctions at low temperatures are attributable "to shifts in temperature kinetics of enzyme systems at 20° to 21° C."

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51553. HANNON, JOHN P. Respiration of rat liver homogenates following prolonged cold exposure. (Society for Experimental Biology and Medicine. Proceedings, Feb. 1958. v. 97, no. 2, p. 368–71, illus., table.) 6 refs.

Report of investigations on liver homogenates from rats exposed to cold for about one month. An increase in endogenous metabolism was observed as well as increased rates of respiration when citrate, isocitrate, alpha-ketoglutarate, succinate, fumarate, malate, glutamate, and beta-hydroxybutyrate were present as substrates, but not in the case of a lactate substrate. Differences in magnitude and pattern of oxydation were also noted following cold exposure.

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HANNON, JOHN P., *see also* Vaughan, D. A., *and others.* Associated effects of diet, environmental temperature . . . . *1958.* No. 55758.

51554. HANOK, M., *and others.* A comparison of instruments used to determine the suitability of elastomers for low temperature service; part I: hardness.

(Rubber age, Apr. 1957. v. 81, no. 1, p. 100–112, illus., tables, diagrs.) 35 refs. *Other authors:* C. K. Chatten, J. Z. Lichtman, *and* T. A. Werkenthin.

Describes investigations to determine the suitability of four spring-load and seven deadweight instruments in measuring hardness properties over the range +74° F. to −65° F. Fifty-eight conventional and special purpose compounds were used in the tests. By order of relative merit, the Shore Type A Durometer headed the spring-load type instrument group, while the Material Laboratory Indentometer, the British Admiralty Rubber Meter, the British Admiralty Penetrometer, and the Tinius Olsen Tester ranked first among the dead-weight instruments.

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51555. HANOK, M., *and others.* A comparison of instruments used to determine the suitability of elastomers for low temperature service; part II, stress decay. (Rubber age, Nov. 1957. v. 82, no. 2, p. 275–85, illus., tables, graphs.) 29 refs. *Other authors:* J. Z. Lichtman, C. K. Chatten, *and* G. Adler.

An order of relative merit was determined for six instruments (one tensile and five of the compression type) through tests at 74° F., 0° F., and −35° F. The instruments are described, and test results, involving 12 natural and synthetic rubber vulcanizates, are graphed. The Tensile Stress Decay Apparatus was found superior to the other instruments, with the Material Laboratory Strain Gage Apparatus ranking second.

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51556. HANSEN, ANDREAS M. Snegraensen i Norge. (Norske geografiske selskab. Årbok, 1901–1902, *pub.* 1902. v. 13, p. 59–73, illus., map.) Text in Norwegian. ***Title tr.:*** The snowline in Norway.

On the basis of conditions in Norway, the snowline is the elevation below which there is no perpetual snow, not a line above which there is continuous snow. Reevaluation of the term is required due to the anomalous conditions of climate and topography. In southern Norway, perpetual snow occurs only in patches in sheltered places on high peaks. In Finnmark these sheltered spots approach sea level and rich vegetation may grow in sunny spots nearby. The natural snowline, a belt several hundred meters wide, is described. ***Copy seen:*** DLC.

HANSEN, BERNARD LYLE, 1916– , *see* Bader, H., *and others.* Excavations and installations . . . *1957.* No. 49471.

51557. HANSEN, HENRY A., *and* **U. C. NELSON.** Brant of the Bering Sea: migration and mortality. (North American Wildlife Conference, 22nd. Transactions, 1957. p. 237–56, illus., tables, map.) 26 refs.

A study on the migration, inventory and mortality of the black brant, *Branta bernicla nigricans,* based on observations in Alaska and along the Pacific coast. Egg-laying, hatching, nesting losses and brood mortality were also studied. Band returns indicate a migration from the Yukon delta to the Alaska Peninsula, thence across the ocean to the Pacific coast states, with 85% of the population wintering in California and Mexico. Population decline was found to be due to excessive hunting mortality.

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51558. HANSEN, HENRY HARALD. Eskimo clothing. (American-Scandinavian review, winter 1958. v. 46, no. 4, p. 342–51, illus.)

Describes and illus. wearing apparel of the Iglulik, Copper, Labrador, Caribou, and Polar Eskimos belonging to the ethnographical collection of the Danish National Museum. The clothes were modeled by a group of young Greenlanders in Copenhagen. The choice, treatment, dyeing, cutting and sewing of pelts, patterns and fashions of winter and summer garments, etc., are discussed.

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HANSEN, HENRY PAUL, 1907– , *see* Biology Colloquium 1957. Arctic biology . . . *1957.* No. 49727.

51559. HANSEN, PAUL MARINUS, 1901– . Cod fry and small cod in coastal waters and on the offshore banks of West Greenland, 1955. (International Council for the Study of the Sea. Annales biologiques, 1955, *pub.* 1957. v. 12, p. 128–29, illus., tables, map.)

Information is presented on the numbers of larval cod collected per specified haul, and occurrence of small cod of age-group I, II, and III, their length frequency, fishing prediction, etc.

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51560. HANSEN, PAUL MARINUS, 1901– . Cod fry and small cod in coastal waters and on the offshore banks of West Greenland 1956. (International

Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 128–30, tables, maps.)

Information and data are presented on occurrence of cod eggs in these areas, from February to June; frequency of cod fry, and of small cod (I, II and III age-groups). Scarcity of both eggs and fry suggests a very poor 1956 year-class.

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51561. HANSEN, PAUL MARINUS, 1901– . Cod, Greenland stock; cod investigations in the coastal waters and on the offshore banks of West Greenland in 1955. (International Council for the Study of the Sea. Annales biologiques 1955, *pub.* 1957. v. 12, p. 131–36, illus., tables, maps.)

Contains information and data on the age composition of the offshore catches with length distribution of the different classes; similar data on the inshore and fjord fishes; comparative analyses of the value of the year-classes; tagging activities and their results; age determinations from otoliths, etc. ***Copy seen:*** DI.

51562. HANSEN, PAUL MARINUS, 1901– . Cod, Greenland stock; cod investigations in the coastal waters and on the offshore banks of West Greenland in 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 132–37, illus., tables, maps.)

Studies are reported on age composition and lengths of males and females at each age; movements as suggested by size analysis; tagging experiments with analysis of origin of recoveries and age composition of recaptured fish.

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51563. HANSEN, PAUL MARINUS, 1901– . Nekrolog: Direktør, dr. phil. Åge Vedel Tåning, 27. juli 1890–26. september 1958. (Grønland, Dec. 1958, nr. 12, p. 470–71, port.) Text in Danish. ***Title tr.:*** Obituary: Director Åge Vedel Tåning, Ph.D., July 27, 1890–Sept. 26, 1958.

Notes on the life and work of the director of Danmarks Fiskeri- og Havundersøgelser (Denmark's Fisheries and Sea Investigations), and his contributions to Greenland studies. ***Copy seen:*** DLC.

51564. HANSEN, PAUL MARINUS, 1901– . Redfish taken with the shrimp trawl in West Greenland fjords, 1952 to 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 51–52, tables.)

Study based on analyses of catches from Godthåb Fjord, dead fingerlings, and specimens found in cod stomachs. Redfish in this area grow by 2–3 cm. per year, a very slow growth-rate for this species.

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51565. HANSEN, PAUL MARINUS, 1901– . Spotted wolffish, *Anarhichas minor* and striped wolffish *Anarhichas lupus*. (International Council for the Study of the Sea. Annales biologiques, 1956, *pub.* 1958. v. 13, p. 53, illus.)

Report on experimental fishing of these species, increasingly important in Greenland fisheries since 1952. Length frequencies and weight/length relations are analyzed. ***Copy seen:*** DI.

51566. HANSEN, PAUL MARINUS, 1901– . Torskefiskeriet ved Vestgrønland og dets fremtidsudsigter. (Grønland, Apr. 1957, nr. 4, p. 121–30, illus., map.) Text in Danish. ***Title tr.:*** Cod fishing off West Greenland and its future possibilities.

Describes temperature and current conditions in West Greenland waters and biology of the Greenland cod. How the stocks will develop is impossible to foretell. Presence of warm water in quantity in 1956 and intermittent years of cod abundance are favorable signs. But more arctic species such as Greenland halibut have reappeared, in greater numbers and with wider distribution than before; cod has disappeared from its northernmost habitats, and tagged specimens have been taken in other areas; stocks have varied in recent years in Davis Strait, where the cod has been found nearer the surface for longer periods than before. ***Copy seen:*** DLC.

HANSEN, PAUL MARINUS, 1901– , *see also* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

HANSEN, PAUL MARINUS, 1901– , *see also* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

51567. HANSEN, POUL GUNST. Elektrisk frostsikring af de interimistiske vandledninger på byggepladser. (Electra, Oct. 1950. årg. 22, nr. 10, p. 192–94.) Text in Danish. ***Title tr.:*** Elec-

tric frost-protection of temporary water pipes on construction sites.

A cable loop inside the pipes, connected to an 8–16 volt transformer is recommended. 25 w/m pipe is considered sufficient to prevent freezing at −15° C., with lower effect values where continuous tapping is not required.

Copy seen: DLC.

51568. HANSEN, POUL GUNST. Vandforsyning til vinterbyggeriet. (Byggeindustrien, 1954. årg. 5, nr. 20, p. 357–62, 4 illus., tables.) Text in Danish. ***Title tr.:*** Water supply for winter construction.

Analysis of methods for maintaining water supply to new construction. Various frost-protective methods are discussed: electrical heating of pipes, emptying them when not in use or running water continuously, insulating the pipes, or combining any two methods.

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51569. HANSEN, POUL GUNST. Varmekilder til vinterbyggeri. (Ingeniør- og bygningsvaesen, Sept. 18, 1950. årg. 45, nr. 18, p. 5–10, illus.) Text in Danish. ***Title tr.:*** Sources of heat for winter construction.

Discusses advantages and disadvantages of hot-water heaters and steam boilers in use on Danish construction sites. High-pressure steam boilers are recommended for large operations and where work is carried on through severe frost periods. For calculation of required boiler capacity, the following equation is recommended: 2 x number of $m.^3$ concrete poured/hr. + 3 x number of steam hoses to be used = $m.^2$ surface to be heated. The boiler should be well insulated, mobile, and easy to bring to the required temperature.

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51570. HANSEN, RAY S. Earthwork crews lick new problems to push road onto Greenland Ice Cap. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 66–69, illus.)

Contains a description of construction methods used by the U.S. Army Corps of Engineers' First Engineer Arctic Task Force in laying a heavy-duty access road onto the icecap about 15 mi. from Thule Air Force Base. Borrow material scraped from the active layer of the glacial till along the coast was used for the base course. Care was taken to select fine-free material with less than 1% passing the No. 200 sieve. Similar material was also used to construct a road on the ice parallel with the icecap to study various methods of crossing melt streams.

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51571. HANSEN, RICHARD MADS, 1924– . Development of young varying lemmings, *Dicrostonyx.* (Arctic, 1957. v. 10, no. 2, p. 105–117, illus., table.) 20 refs.

An outline of growth and development of *Dicrostonyx groenlandicus rubricatus* from birth till the age of 40 days. Appearance of hair and teeth, motion, development of sense organs, weaning, appearance of defensive behavior and of sexual maturity are traced, and weight increase recorded. Observations were made on a laboratory colony established from specimens captured at Umiat, Alaska. ***Copy seen:*** DLC.

51572. HANSEN, RICHARD MADS, 1924– . Influence of daylight on activity of the varying lemming. (Journal of mammalogy, May 1957. v. 38, no. 2, p. 218–23, illus., table.) 11 refs.

Account of laboratory experiments made at constant temperature. Increased daylight length decreased the activity of the animals; the frequency of active periods remained approximately constant but their duration decreased. No significant nocturnal rhythms were observed during periods of alternating daylight and darkness. ***Copy seen:*** DI.

51573. HANSON, BERNOLD M. Middle Permian limestone on Pacific side of Alaskan Peninsula. (American Association of Petroleum Geologists. Bulletin, Oct. 1957. v. 41, no. 10, p. 2376–78, text map.) 2 refs.

Records the discovery in summer 1956 of a new fossiliferous limestone formation on a small island at the mouth of Puale Bay (approx. 57°45′ N. 155°30′ W.). Fossils indicate that its age is Middle Permian, probably lower Guadalupian and the formation is correlated with Permian rocks exposed in the Nushagak district 150 miles northeast.

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51574. HANSON, HAROLD CARSTEN, 1917– , ***and others.*** Coccidia, Protozoa: Eimeriidae, of North American wild geese and swans. (Canadian journal of zoology, Dec. 1957. v. 35, no. 6, p. 715–33, illus., tables.) 35 refs. *Other authors:* N. D. Levine *and* V. Ivens.

A survey of Coccidia from 362 birds, including subspecies and populations of six species. Ten species of these parasitic protozoans are described including two new ones: *Eimeria clarkei*, n. sp. and *E. farri*, n. sp. Incidence according to flyways, prevalence, and geographic distribution are also discussed.

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51575. HANSON, HAROLD CARSTEN, 1917– , *and others*. Filariae in a wintering flock of Canada geese. (Journal of wildlife management, Jan. 1956. v. 20, no. 1, p. 89–92, table.) 5 refs. *Other authors:* N. D. Levine, *and* S. Kantor.

Report on blood examination of 306 birds made in the winter of 1953–54 at the Horseshoe Lake Game Refuge, Illinois. Heavy infection with microfilariae of *Ornithofilaria*(?) sp. was found in all age groups. Microfilariae of *Sarconema eurycerca* were found in 9.5% of the yearlings and 4.5% of the adults. Survival experiments with the microfilariae are also reported.

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51576. HANSON, HAROLD CARSTEN, 1917– , *and* C. CURRIE. The kill of wild geese by the natives of the Hudson-James Bay region. (Arctic, 1957. v. 10, no. 4, p. 211–29, illus., tables.) 19 refs.

The economic plight of Indians and Eskimos in the Hudson-James Bay area is partly dependent on the numbers of wild geese nesting in or migrating through their territory. The information presented on kills indicates that the number taken by native hunters is within a safe limit of what the nesting populations of that area can withstand. Expansion of wintering grounds and inaccessibility of breeding grounds assure that wild geese will continue to be an important source of food for the northern natives. ***Copy seen:*** CaMAI.

HANSON, HERBERT CHRISTIAN, 1891– , *see* Churchill, E. D., *and* H. C. Hanson. The concept of climax in arctic . . . vegetation. *1958*. No. 50272.

51577. HANZELY, JOSEPH BERNARD. The respiratory metabolism of excised tissue of the arctic blackfish, *Dallia pectoralis* Bean, at various temperatures. Washington, D.C., 1957. 54 p. illus., tables. (Catholic University of America. Biological studies, no. 40.) 51 refs.

Account of investigations made at temperatures of 5°, 15° and 25° C. Brain, liver and muscle tissue was used. O_2-consumption and intermediate carbohydrate metabolism were examined. O_2-consumption was low even in comparison with other arctic fish, indicating cold adaptation down to the cellular level; study of dehydrogenase suggests cold adaptation at the enzyme level. The investigation was initiated at the Aeromedical Laboratory, Ladd Air Force Base, Alaska. ***Copy seen:*** CaMAI.

HARALDSSON, S. B., *see* Love, R. M., *and* S. B. Haraldsson. Thaw rigor and cell rupture. *1958*. No. 52925.

51578. HARANG, LEIV, 1902– . Height distribution of the red auroral line in polar aurorae. Oslo, H. Aschehoug, Jan. 1958. 9 p. illus., diagrs. (Norske videnskaps-akademi i Oslo. Geofysiske publikasjoner, v. 20, no. 5.) 5 refs.

Recordings of luminosity curves along vertical cross-sections were made at Tromsø (Φ=70° N.), Norway, by means of a photoelectric photometer of the lines 6300, 5577, and the band 4278. The intensity of 6300 shows a considerably slower decrease with height than the green line and the violet band. The character of the luminosity curves is demonstrated for various auroral forms. The effect is explained as due to a decrease in deactivation with height of the long-lived *D*-state of the O-atom.

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51579. HARANG, LEIV, 1902– . Results of ionospheric drift measurements in Norway. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 2, *pub.* 1957, p. 26–32, graphs.) Ref.

A summary is given of E-layer drift measurements made during a two-year period 1953–1955 at Kjeller (near Oslo). Examples of the records are illustrated, and seasonal and annual mean values are graphed. Values of drift are compared with similar recordings for Cambridge, England and Washington. A number of similarities in the curves are noted. Wind vector diagrams for Kjeller are also given. ***Copy seen:*** DLC.

51580. HARBRON, JOHN D. Aviaarktika's wings supply Russ arctic empire. (Canadian aviation, May 1958. v. 31, no. 5, p. 30–31, 74, illus.) Refs. in text.

Notes development of activities and methods, and reviews organizational aspects of Soviet aviation for transport

and exploration in the Arctic. Of Aviaarktika's fleet of IL–18's, IL–12's, IL–14's, AN–2's, and LAR–3 helicopters, the IL–12, Russian version of the DC–3, is (as in 1930) the most widely used. Value of a nearly perfected ice reconnaissance system along the Northern Sea Route, and of electrically heated, ice-free runways, is emphasized.

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51581. HARDENBERGH, ESTHER, *and* P. G. BAMBERG. Venous blood flow in the dog following cold injury. (American journal of physiology, Mar. 1957. v. 188, no. 3, p. 461–69, illus., tables.) 27 refs.

Account of venous blood flow in the dog's hind leg prior to (control) and during cold immersion (approx. −30° C. for 30 min.) and then, for several hours, after the leg had been removed and thawed. The response to injected vasoactive drugs was also studied. In most cases the legs froze; however, in some experiments this did not take place. Temperature, blood flow, reaction to vasoactive drugs, etc., were different in frozen and in not frozen limbs.

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HARDENBERGH, ESTHER, *see also* Dawson, D., *and* E. Hardenbergh. Effect of rapid rewarming . . . frozen . . . feet. *1958.* No. 50467.

HARDENBERGH, ESTHER, *see also* Roberts, J. B., *and* E. Hardenbergh. Effects of hypothermia on cold injury . . . *1958.* No. 54335.

HARDER, R. A. *see* Mavor, G. E., *and others.* Resuscitation . . . hypothermic heart . . . *1957.* No. 53191.

HARDEWIG, ALFRED, *see* Albers, C., *and others.* Blutgase in Hypothermie . . . *1958.* No. 49224.

HARDEWIG, ALFRED, *see* Albers, C., *and others.* Der intrapulmonale Gasaustausch . . . *1957.* No. 49225.

HARDEWIG, ALFRED, *see* Albers, C., *and others.* Der intrapulmonale Gasaustausch . . . *1958.* No. 49226.

HARDMAN, WILLIAM H., *see* International Pacific Halibut Commission. Regulation and investigation . . . Pacific halibut fishery in 1956. *1957.* No. 51944.

51582. HARDY, A. C. Norway's coastal trade. (Shipbuilding and shipping record, Feb. 28, 1957. v. 89, no. 9, p. 270–75, illus., map, tables, diagrs.)

Outlines route organization, traffic distribution, etc., of local and express, passenger and cargo services; describes types of ships used, including such of the 1,200 mi. express route Bergen-Kirkenes, which provides daily service to 35 ports. Specifications are tabulated for 12 of the 14 ships operating on this route; profile and deck plans are included for its most recent addition, the 2,200 gr. t. *Ragnvald Jarl.* Data are also tabulated on average particulars of the principal Norwegian domestic ship types. ***Copy seen:*** DLC.

51583. HARDY, JAMES DANIEL, 1904– , *and* L. ZITOVITZ. Influence of cold exposure on development of mild thermal burns in the rat. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 55.)

Rats with second degree burns were exposed for 2–15 days to an environment of 1°–4° C. "As compared with the control rats, the burns in the cooled rats showed marked inhibition of burn development." Four days' cold exposure seemed to have the maximal effect.

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HARDY, JAMES DANIEL, 1904– , *see also* Hammel, H. T., *and others.* Heat production . . . loss . . . 8°–36° C. . . . *1958.* No. 51535.

HARDY, JAMES DANIEL, 1904– , *see also* Hammel, H. T., *and* J. D. Hardy. Shivering . . . source of heat . . . dogs . . . cold. *1957.* No. 51537.

HARDY, JAMES DANIEL, 1904– , *see also* Murgatroyd, D., *and others.* Reaction to hot and cold . . . stimuli . . . dogs . . . *1957.* No. 53458.

HARDY, JAMES DANIEL, 1904– , *see also* Zitovitz, L., *and* J. D. Hardy. Influence . . . cold exposure . . . burns . . . rat. *1958.* No. 56232.

51584. HARE, FREDERICK KENNETH, 1919– , *and* S. ORVIG. The arctic circulation: a preliminary review. Montreal, June 30, 1958. xiv, 211 p., 83 maps, charts, diagrs., 12 tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 12. Contracts AF 19(604)–1141 and AF 19(604)–1868, supplement to final reports. Research sponsored by Geophysics Research Directorate, U.S. Air Force Cambridge Research Center,

Air Research and Development Command.) 129 refs. Draft of a study to be combined with another, on arctic analysis and forecasting, in preparation by R. J. Reed at University of Washington, to form a manual of arctic meteorology.

Descriptive review of the climatology of the atmospheric circulation over the Arctic and sub-Arctic, from sea level up to 30 km. The area is delimited on the basis of certain quasi-stationary geographical distributions (natural vegetation, permafrost, ice, etc.). General characteristics of the North Polar circulation are noted: its variable limits, its slow-moving, large cellular structure, presence of the circumpolar vortex, difference from antarctic circulation, the predominantly horizontal nature of disturbances, and the important part played by the stratosphere. Five aspects are treated in detail: the mean motion of the lower troposphere, the circumpolar vortex, the mean stratospheric circulation above 16 km. (100 mb.), climatology of synoptic systems, and non-adiabatic modifications of surface air in the Arctic. Disturbances are treated separately, as are special features of circulation and temperature, such as the arctic inversion and the role of Greenland. Textual information is summarized in pressure and temperature charts, meridional cross-sections, upper air soundings, vertical profiles, frequency charts, synoptic charts of special situations, and maps and tables of various arctic features.

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51585. HARE, FREDERICK KENNETH, 1919– . Arctic geography and climate. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, pub. 1958, p. 3–8, text map.) 8 refs.

Limits of the Arctic and sub-Arctic can be defined on the basis of five quasi-stationary geographical distributions that are in partial equilibrium with the present climate, viz: the zonation of natural vegetation; the occurrence of permafrost and patterned ground; the distribution of sea, lake, and river ice; the remains of continental glaciers; the circulation of Arctic and sub-Arctic water masses. These distributions are discussed briefly in relation to climate and delineated in combination upon a map.

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51586. HARE, FREDERICK KENNETH, 1919– . The quantitative representation of the north polar pressure field. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 137–50, maps, diagr.) 11 refs.

Two methods of obtaining analytical expressions for the surface and 500-mb. pressure fields over the north polar region are described briefly. One involves the fitting of the pressure to a series of orthogonal polynomial surfaces. The second involves the use of Fourier transforms in which the colatitude terms are expanded in orthogonal polynomials. The application of the methods is discussed. ***Copy seen:*** DLC.

51587. HARE, FREDERICK KENNETH, 1919– , *and others*. Specification of pressure fields and flow patterns in polar regions; theories and techniques. Montreal, Jan. 1957. 72 p. 3 maps, diagrs., 9 tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 5, Scientific report no. 3, Contr. AF 19 (604)–1141.) refs. *Other authors:* W. L. Godson, M. A. MacFarlane, *and* C. V. Wilson.

Three papers are presented, viz:

The quantitative specification of the north polar pressure field: mathematical techniques, by F. K. Hare (p. 1–21, 2 diagrs. 11 refs.). General description of methods of specification of pressure fields, reviews existing methods, especially as applied to polar areas; notes steps necessary in all methods, and describes method of orthogonal polynomials; preliminary results show this method to be economical and to give excellent results for polar areas.

The numerical representation of atmospheric flow patterns in polar areas, by W. L. Godson (p. 22–24. 3 refs.). *Discusses* a combination of functions particularly applicable to the polar regions; computation is more extensive than that for the simpler model described by Hare, and parameters required for specification are numerous. Physical interpretation is easier with this method. Consideration is also given to the use of machine methods for the solution of the equations for expansion coefficients.

Working procedure for specification of pressure surfaces, by M. A. MacFarlane and C. V. Wilson (p. 45–72, 2 text maps, diagrs., 17 tables). *Gives* computational details of the specification systems, described by Hare and Godson with examples. ***Copy seen:*** DWB.

51588. HARE, FREDERICK KENNETH, 1919– . Studies in arctic meteorology. Montreal, Mar. 1958. 60 p., 11 diagrs. incl. 1 fold., 12 maps, 2 tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology, no. 10.) 18 refs. Contract no. AF19(604)–1141. Final report.

Reviews the organization, personnel, objectives and work of the Group, established in Sept. 1954 under author's direction to investigate the atmospheric circulation over the high northern latitudes. Reports published and projected are listed. Research results summarized (p. 8–57) include: the introduction of two quantitative measures of arctic inversions; viz: a rational system of classification, and a measure of inversion intensity, by A. D. Belmont (No. 43941); further application of specification techniques to problems in synoptic climatology, by M. A. MacFarlane and C. V. Wilson, q.q.v.; the application of a two-level, baroclinic, prediction model to the arctic circulation, by M. A. Estoque (No. 50799); the prospects for dynamical prediction over the Arctic are better than in mid-latitudes, given an adequate station net work; an application of statistical techniques involved in specification to the dynamics of the arctic atmosphere, specifically the definition of persistence, by M. A. MacFarlane (No. 51239); an analysis of the synoptic regimes in the lower arctic troposphere, by C. V. Wilson (No. 56073); etc.

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51589. HARKEMA, REINARD, *and others. Trichobilharzia alaskensis,* a new species of avian schistosome from Alaska. (Journal of parasitology, Oct. 1957. v. 43, no. 5–2, p. 31–32.) *Other authors:* S. McKeever *and* D. A. Becker.

Account of morphological and anatomical features of this form as compared to related species. Pekin duckling infected with apharyngeal dermatitis producing cercariae of this species, yielded adult schistosomes in 10 to 17 days.

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51590. HARKER, PETER, 1920– , *and* **R. THORSTEINSSON.** Permian section on Grinnell Peninsula, Arctic Archipelago, Northwest Territories, Canada. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1577.)

Contains abstract of a paper presented at the Society meeting in St. Louis, Nov. 6–8, 1958, describing a fossiliferous section examined by R. Thorsteinsson; on northern Devon, 76°40′ N. 95° W., it consists of two formations separated by a slight disconformity.

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51591. HARLAND, WALTER BRIAN, 1917– . The Caledonian sequence in Ny Friesland, Spitsbergen. (Geological Society of London. Proceedings, Feb. 4, 1958. Session 1957–58, no. 1557, p. 30–33.)

The structure of the Ny Friesland sector (approx. 79°30′ N. 17° E.) is outlined for the first time and summarized in a map and sections, based mainly on the last ten years' observations. The structure reflects the formation of a geosyncline of Hecla Hoek rocks (late Precambrian to mid-Ordovician) and their deformation in the Ny Friesland orogeny, followed by Old Red Sandstone deposition and deformation in the Svalbard folding. Thus a mobile history (the Caledonian sequence) stretches from late Precambrian to Upper Devonian times, and reaches its climax in the Ny Friesland orogeny (between mid-Ordovician and late Silurian). The sequence is compared with that in other areas, particularly East Greenland. ***Copy seen:*** DGS.

HARLAND, WALTER BRIAN, 1917– , *see also* Forbes, C. L., *and others.* Palaeontological evidence . . . Vestspitsbergen. *1958.* No. 50944.

HARMON, HENRY A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

51592. HARMS, HANS. Motorfahrgastschiff "Meteor" für Det Bergenske Dampskibs-selskab. (Schiff und Hafen, Mar. 1955. Jahrg. 7, Heft 3, p. 148–50, illus., plates.) Text in German. ***Title tr.:*** The motor passenger-ship *Meteor* for Det Bergenske Dampskibs-selskab.

Describes with illus. deck plans, etc., a new 2,856 Br. reg. t. Norwegian ship, built for summer cruises to Spitsbergen and Nordkapp and for winter service on the Bergen-Kirkenes route. The *Meteor* (third of that name) is strengthened for ice navigation, has a 5,000-hp. diesel engine and is equipped to carry 500 passengers. ***Copy seen:*** DLC.

HARNER, R. N., *see* Chaudhry, A. P., *and others.* Daily rhythms in rectal temperature . . . mitoses . . . *1958.* No. 50191.

HAROUTUNIAN, LULU M., *see* Jude, J. R., *and others.* Differential cardiac warming . . . *1957.* No. 52113.

HAROUTUNIAN, LULU M., *see* Jude, J. R., *and others.* Hypothermic myocardial oxygenation. *1957.* No. 52114.

HAROUTUNIAN, LULU M., *see* Jude, J. R., *and others.* Hypothermic myocardial oxygenation. *1957.* No. 52115.

51593. HARP, ELMER, 1913– . Arctic. (American antiquity, Jan. 1957. v. 22, no. 3, p. 323.)

Reports on T. P. Bank's study in Japan on North Pacific culture transfer, his expedition to the Okhotsk Sea coast of Hokkaido. Certain similarities of Hokkaido material with Denbigh stone artifacts and affinities with ancient Aleut culture are noted. The theory of a possible spread to Hokkaido via Sakhalin of a north Siberian, strongly Eskimoid, pre-Ainu culture is suggested.

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51594. HARP, ELMER, 1913– . Arctic. (American antiquity, Apr. 1957. v. 22, no.4, pt. 1, p. 436–37.)

Reports on J. L. Giddings' excavation, in 1956, of a house pit on the Chukchi Sea side of Choris Peninsula (66°20′ N. 161°50′ W.,), estimated as 3,000–4,000 years old; R. S. MacNeish's field work at the Firth River site in Yukon Territory and his correlations of its occupational sequences to geological, faunal and archeological data are discussed. An Old Copper culture burial excavated by A. C. Spaulding in Michigan yielded finds claimed to support his hypothesis that Old Copper belonged to an ancient boreal forest culture forming part of the proto-Eskimo culture. ***Copy seen:*** DLC.

51595. HARP, ELMER, 1913– . Arctic. (American antiquity, July 1957. v. 23, no. 1, p. 97–98.)

Reports on 1956 field work and cites projects for 1957. Gordon H. Marsh surveyed a row of rectangular house pits at Aleksandrovsk on English Bay, South Alaska, and test-pitted an animal bone deposit near Manley Hot Springs on the Lower Tanana River. The latter yielded bones of an extinct form of bison but no trace of human habitation. A new site containing material that does not seem to fit any of the known American arctic complexes was discovered by John M. Campbell on the west bank of Contact Creek in Anaktuvuk Pass, Brooks Range. Wm. E. Taylor and Charles H. McNutt continued work at Native Point begun by Henry B. Collins, with emphasis on the study of architecture, artifacts and skeletal material of Sadlermiut Eskimos. Their culture, according to H. B. Collins, was probably initially Dorset later overlaid by strong Thule influences.

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51596. HARP, ELMER, 1913– . Arctic. (American antiquity, Jan. 1958. v. 23, no. 3, p. 330.)

John M. Campbell of Yale University completed his second excavation season in Anaktuvuk Pass, in the Brooks Range, northern Alaska, a site showing no definite links with any known complex in the American Arctic. The use of obsidian, a material not known to occur in arctic Alaska, and the continued significant occurrence of leaf-shaped projectile points with oblique flaking and diamond-shaped cross section are noted. Jørgen Meldgaard of the Danish National Museum excavating on Igloolik Island, off Melville Peninsula, investigated a series of house types of pre-Dorset occupation, in near contact with Dorset culture.

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51597. HARP, ELMER, 1913– . Arctic. (American antiquity, Apr. 1958. v. 23, no. 4, pt. 1, p. 452–53.)

Reports on the activities of the Human History Branch of the National Museum of Canada: Richard S. MacNeish surveying the Dawson - Lake Mayo - Lake Teslin - Alaskan border region of Yukon Territory located 97 sites attributed by him to five separate complexes; deeply buried unifacial tools were unearthed near the mouth of the Pelly River and pebble choppers from near Dawson. W. Taylor surveyed the area of Payne Bay, Payne Lake and Sugluk Inlet, Ungava Peninsula; Dorset houses and sites were observed and excavated; the most important, a burial on an island in the Payne estuary, yielded an Eskimoid skull and Dorset tools, thus linking concretely the Eskimo physical type with the Dorset culture. ***Copy seen:*** DLC.

51598. HARP, ELMER, 1913– . Prehistory in the Dismal Lake area, N.W.T., Canada. (Arctic, 1958. v. 11, no. 4, p. 219–49, illus., maps.) 39 refs.

Reports on the summer 1955 archeological survey of the Coronation Gulf area. Test diggings at three sites on Dismal Lake (1:a, 1:b, 2) and one at Kamut

Lake yielded numerous chipped and flaked stone implements (knives, scrapers, points, burins, etc.). The large proportion of microlithic artifacts at Dismal-2 and Kamut Lake sites is noted and "the ancestral role of microlithic technology" in the American Arctic stressed. The central position of the Dismal-Kamut Lake complexes and the technological relationship of the microlithic Dismal-2 complex to the western sites of Engigstciak (No. 46551), Anaktuvuk Pass and Cape Denbigh as well as east to the Sarqaq culture of West Greenland, Independence I & II in Pearyland (No. 52343) and the proto-Dorset T–1 site on Southampton Island (No. 44425, 50311) are discussed. Dismal-2 is related in some way to the Dorset culture, it shows traits of all stages from proto- to late Dorset. The ecology of the Dorset culture and its dual land- and sea-oriented economy are dealt with and the musk-ox considered an important game animal in the Dismal Lake area. In the "geographical funnel" of Alaska-northwest Canada, compounds of culture occur, attesting it an area where Old World impulses met, diffused and gave rise to New World complexes including the "Eskimo" traits found in archaic Indian cultures of the east coast from Labrador to Maryland. ***Copy seen:*** CaMAI.

51599. HARRINGTON, LYN. Crossroads of the duck world. (Nature magazine, Dec. 1958. v. 51, no. 10, p. 533–36, illus.)

Description of the Waterfowl Research Station at Delta Marsh, Manitoba, with its wide range of habitats. The aim of the station is "to study ducks at their source, to serve as clearing-house for information, and direct such knowledge to useful ends in field biology."

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51600. HARRIS, CHAUNCY DENNISON, 1914– . Geographic research and teaching institutions in the Soviet Union. (Erdkunde, Sept. 1958. Bd. 12, Heft 3, p. 214–21.)

Reports a trip in May–June 1957, visiting geographic institutions of the Academy of Sciences; of Moscow, Leningrad, and Kiev universities; and the Herzen and Lenin pedagogical institutes. Their organization, program, facilities, principal teachers, etc., are noted. The permafrost institute in Moscow (with research centers at Vorkuta, Yakutsk, Anadyr, Igarka and Chul'man), a geographic station on Novaya Zemlya, Moscow University's division of polar geography (with three professors and a staff of 11), a snow and ice project at Leningrad University are mentioned among other interests of his trip.

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51601. HARRIS, CHAUNCY DENNISON, 1914– . U.S.S.R. resources: 1, heavy industry. New York, American Geographical Society, 1955. 6 p. text map (Focus, Feb. 1955. v. 5, no. 6.) 6 refs.

Comparison of status of mineral and power resources of U.S.S.R. before the Five-Year plans with the 1950–54 situation. Included, in the far North (map) are: oil field near the Timan Mts., two hydroelectric stations on Kola Peninsula, coal mine near Vorkuta, two rail lines.

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HARRIS, G. W., *see* Fortier, C., *and others.* The effect of pituitary . . . section . . . stress . . . *1957.* No. 50952.

51602. HARRISON, A. E. Photogrammetry of glaciers. (Trend in engineering at the University of Washington, July 1957. v. 9, no. 3, p. 4–8, illus.)

A method for fast and accurate measurements of glaciers, using a TAF phototheodolite, is described. The camera has fixed focal length, four fiducial marks which define the aim of the camera and center of the picture, and a transit for aligning the aim with respect to a baseline. A 660-ft. baseline is used in measurements of the Coleman Glacier on Mt. Baker, Washington; photographs are taken annually at two fixed control points along this line. Results of the measurements are given.

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HARRISON, ARTHUR P., Jr., *see* Reeves, H. C., *and* A. P. Harrison. Effect of time and temperature upon survival of *Escherichia coli* . . . *1957.* No. 54268.

51603. HARRISON, JAMES MERRITT, 1915– . Ungava (Chubb) Crater and glaciation. (Royal Astronomical Society of Canada. Journal, Jan.–Feb. 1954. v. 48, no. 1, p. 16–20, illus.) 5 refs.

Challenges Meen's conclusion (cf. No. 24264, 30745, 36170) on the crater's time of formation. From aerial photographs and geological observations in July–Aug. 1953, 11 points are presented as evidence of its formation before the last advance of continental ice, and

probably by explosion of a large meteorite. Pre-glacial origin would also account for the fact that no meteorite fragments are found near the crater.

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HARRISON, JAMES MERRITT, 1915– , *see also* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

51604. HARRISON, JOHN R. Morphogenesis of chick embryo *in vitro* after exposure to lowered temperature *in ovo.* (Physiological zoology, July 1957. v. 30, no. 3, p. 187–97, illus., tables.) 13 refs.

Account of the effects of exposure to 25° C. for 10–14 days, with tissue culture applied to study the effects. A correlation was found to exist between retention of developmental potency and degree of degeneration of the streak. The drop in potency occurred between the eleventh and twelfth days of exposure.

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51605. HARRISON, TOM, *and* **G. JAMUH.** Pigmy sperm whale, *Kogia breviceps,* in Borneo. (Nature, *London,* Aug. 23, 1958. v. 182, no. 4634, p. 543.)

Report on adult and embryo of this species recorded from southwest Sarawak, two of seven earlier embryos having been recorded from European waters. Examples of Bryde's whale (*Balaenoptera brydei*) were also located in these parts of the world. ***Copy seen:*** DNLM.

HARRISON, WILLIAM L., *see* Weiss, S. J., *and others.* Preliminary study of snow values . . . *1956.* No. 55981.

51606. HÁRSING, LÁSZLÓ, *and others.* The effect of hypothermia on ischaemic changes in the kidney. (Acta physiologica, 1956. t. 10, fasc. 2–4, p. 429–36, tables.) 18 refs. *Other authors:* H. Jellinek, G. Köver, K. László, P. Véghelyi *and* S. Fonyódy.

Hypothermic dogs survived a four-hour compression of the renal artery, while five out of six normothermic animals died of uremia five to nine days after similar intervention. In five of the cooled animals, plasma NPN did not rise above normal levels, while in one there was only a transient increase. Hypothermia, by reducing the tissue's O_2-demand during ischemia, prevents irreversible lesion of the tubular epithelium. ***Copy seen:*** DNLM.

HART, HENRY CHICHESTER, *see* Fries, T. M. On the lichens collected . . . 1875–76. *1880.* No. 50994.

51607. HART, JACKSON SANFORD, 1916– . Climatic and temperature-induced changes in the energetics of homeotherms. (Revue canadienne de biologie, June 1957. v. 16, no. 2, p. 133–74, illus., tables.) 127 refs.

Review article dealing with temperature-induced changes, changes produced by climate (seasons) and a comparison between them. These two main problems are further analyzed with the view of ascertaining the effects of acclimation on cold resistance and its limits; metabolic changes and changes in body insulation caused by low environmental temperature. The effects of developmental history, of other environmental factors, etc. upon reaction to cold are also discussed.

Copy seen: DLC.

51608. HART, JACKSON SANFORD, 1916– . The influence of thermal acclimation on limitation of running activity by cold in deer mice. (Canadian journal of zoology, Apr. 1953. v. 31, no. 2, p. 117–20, illus.) 8 refs.

Of two groups of mice, one acclimated to cold (10° C.) showed a minimal running capacity at −20° C. and a maximal between −5° and +20° C. In both groups the lower limit for activity was reduced 10° C. when acclimation temperature was lowered by 20°.

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51609. HART, JACKSON SANFORD, 1916– . Metabolic alterations during chronic exposure to cold. (Federation proceedings. Symposium on metabolic aspects of adaptation of warm-blooded animals to cold environment, Dec. 1958. v. 17, no. 4, p. 1045–54, illus., table.) 107 refs.

A review of "metabolic acclimation" in a variety of laboratory animals, with emphasis on the cellular responses to cold. Alterations in general and in tissue metabolism, mechanisms of heat production, hormonal control and intermediary metabolism, are discussed. Increased oxidation of fats, carbohydrates and possibly proteins during exposure to cold is indicated. ***Copy seen:*** DLC.

51610. HART, JACKSON SANFORD, 1916– . Rate of gain and loss of cold resistance in mice. (Canadian journal of zoology, Apr. 1953. v. 31, no. 2, p. 112–16, illus.) 14 refs.

Resistance time at −17° C. was 67 min. in mice acclimated to 30° C., and 1,730 min. in the group acclimated to 10° C. When the two groups were shifted to opposite acclimation temperatures, change of resistance time was greatest in the first two weeks and became equal in both groups after two weeks.

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51611. HART, JACKSON SANFORD, 1916– . The relation between thermal history and cold resistance in certain species of rodents. (Canadian journal of zoology, Apr. 1953. v. 31, no. 2, p. 80–98, illus., tables.) 24 refs.

Of the animals studied, rats were more resistant to cold than deer mice, and deer mice more resistant than white mice. Time to death at given temperature (resistance time) declined and temperature producing death increased accordingly in the same order. Sex and body weight affected cold-resistance only slightly.

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51612. HART, JACKSON SANFORD, 1916– . Seasonal changes in insulation of the fur. (Canadian journal of zoology, Feb. 1956. v. 34, no. 1, p. 53–57, illus., table.) 13 refs.

Report on investigation of nine arctic and north temperature species. Relative seasonal changes varied between 12 and 52% of the winter value. The largest mammals with thickest furs showed the greatest absolute changes, suggesting that in smaller mammals changes in heat production may be operative in seasonal acclimation. ***Copy seen:*** DLC.

HART, JACKSON SANFORD, 1916– , *see also* Depocas, F., *and others.* Energy metabolism . . . rat after acclimation . . . *1957.* No. 50510.

HART, JACKSON SANFORD, 1916– , *see also* Depocas, F., *and others.* Studies on glucose metabolism . . . *1957.* No. 50511.

HART, JACKSON SANFORD, 1916– , *see also* Irving, L., *and* J. S. Hart. The metabolism and insulation of seals . . . cold water. *1957.* No. 51958.

HART, JACKSON SANFORD, 1916– , *see also* Scholander, P. F., *and others.* Cold adaptation . . . aborigines. *1958.* No. 54619.

51613. HARTWIG, WERNER. Ein Beitrag zum Studium der Wirtschaft der Nanaier (Golden). (Leipzig. Museum für Völkerkunde. Jahrbuch 1955. Bd. 14, *pub.* 1956. p. 74–98, illus.) 15 refs. Text in German. ***Title tr.:*** A contribution to the study of the economy of the Nanayans (Golds).

Deals with an unpublished manuscript by Fritz Dorries, a German entomologist who spent 22 years (1874–1896) in Siberia studying butterflies also collecting data on the aboriginals. Discovered among the museum's ethnographic holdings, the manuscript sketches the material culture of the settled fishers of the Amur region, the "Gillan"- and "Hrsin"-Golds. Their fishing and hunting gear and technique, clothing (originally of fish skin), dwellings (semi-subterranean winter-houses, bark-covered summer huts, thatched storage structures on stilts), means of transportation (dugouts, bark canoes, dog-drawn sledges), etc. are described and compared with those of other taiga-hunters and fishers of northeastern Siberia.

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51614. HARVEY, RODNEY BRYCE, 1922– . Function of blood-perfused kidney at low temperatures. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 56.)

Isolated, cooled kidney showed greater reabsorption of H_2O and Na and a lower perfusion pressure than the kidneys of the "perfusor." Reabsorption of specific substances was affected in different manners. There were also changes in renal vascular resistance, filtration fraction and renal weight.

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51615. HARVEY, RODNEY BRYCE, 1922– . Water reabsorption by perfused dog kidney at low temperature. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 67.)

The blood-perfused dog kidney was found to reabsorb a large fraction of water at temperatures below 20° C., when O_2-consumption and CO_2-production became extremely small. The nature of this water transport is investigated and discussed.

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51616. HASEMEN, LEONARD. A monograph of the North American Psychodidae, including ten new species and an aquatic psychodid from Florida. (American Entomological Society. Transactions, 1907. v. 33, no. 4, p. 299–333, plates 5–8.) 9 refs.

Contains a discussion of the family, keys, and an annotated list of 39 species of these moth-like flies, nine described as new to science, the others with diagnoses and data on distribution and habitat; *Pericoma triloba* and *P. sitchena* are from Sitka, *Psychoda cinerea*, is native to Alaska. ***Copy seen:*** DA.

51617. HASHISH, S. E. S. The effects of low temperatures and heparin on potassium exchangeability in rat diaphragm. (Acta physiologica scandinavica, 1958. v. 43, fasc. 3–4, p. 189–99, illus. table.) 31 refs.

A study of conditions *in vitro* revealing the existence of muscle potassium in a bound form. Cooling the muscle to 5° C. caused a net potassium loss and sodium gain. The bound potassium fraction was mobilized when temperature increased or heparin was added.

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51618. HASSERT, KURT, 1868–1947. Die Polarforschung; Geschichte der Entdeckungsreisen zum Nord- und Südpol. München, Wilhelm Goldmann Verlag, 1956. 290 p. maps. Over 200 refs. Text in German. ***Title tr.:*** Polar exploration; history of voyages of discovery to the North and South Pole.

Revised and considerably enlarged, posthumous edition of No. 6747. The story of arctic explorations is extended to the Soviet drifting stations set up in 1954. Notes with references to sources and list of literature are given p. 262–77; an index of approx. 1,500 geographical and personal names and three text maps (two referring to arctic explorations) are added. A brief biography of the author is included in the preface.

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51619. HASTINGS, ANDREW D., *and* S. J. FALKOWSKI. Climatic analogs of Fort Greely and Fort Churchill in the Northern Hemisphere. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1906.)

Abstracts paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957. Describes study reported by S. J. Falkowski (No. 50836).

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51620. HASTINGS, ANDREW D. Climatic information sources for Greenland. Natick, Mass., Jan. 1957. 27 p. text map. (U.S. Quartermaster Research and Development Center. *Natick, Mass.* Environmental Protection Research Division, Research study report RER–11.) 275 refs.

Lists 275 selected references to meteorological data and/or a discussion of some phase of the climatology. The references were obtained principally from the *Arctic bibliography, Meteorological abstracts and bibliography,* and the *SIPRE bibliography.* A regional key is appended. Locations of climatic stations and routes of the major icecap expeditions are mapped, and weather stations are listed with dates of operation, elevation, and geographical coordinates in preface.

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HASTINGS, ANDREW D., *see also* Falkowski, S. J., *and* A. D. Hastings. Windchill . . . Northern Hemisphere. *1958.* No. 50838.

HATCHER, MARIE T., *see* American Geographical Society. Geographic study of mountain glaciation. *1958.* No. 49276.

51621. HATTERSLEY-SMITH, GEOFFREY F. The Ellesmere ice shelf and the ice islands. (Canadian geographer, 1957. no. 9, p. 65–70, 2 text maps.) 21 refs.

The origin of ice islands is discussed on the basis of recent investigations and air photographs, and the ice drifts, surface currents, and paths of T–1, T–2, and T–3, in the Arctic Basin are mapped. The drift of T–3, its structure, thickness, surface pattern, and rock material suggest that it could have originated only from the Ellesmere ice shelf, as also T–1 and T–2. Of the possible parts of the North Ellesmere coast from which the islands may have stemmed, Yelverton Bay seems the most likely. Rock material of T–3 may have originated from the shores of the Bay, while the ice may have come from one of the tidewater glaciers. Severnaya Zemlya is a possible source area of some of the smaller ice islands.

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51622. HATTERSLEY-SMITH, GEOFFREY F. Glaciological research in northern Ellesmere Island. (Canadian geographer, 1958. no. 12, p. 32–34.)

Describes 1957 work of the Canadian Defence Research Board's IGY expedition, making glaciological and meteorological studies on the icecap and on Gilman Glacier. Investigations on the balance between accumulation and ablation and movement indicate they are in a better state of balance than icecaps and

glaciers further south. The recent climatic amelioration appears to have had less effect in this than other parts of the arctic. ***Copy seen:*** DGS.

51623. HATTERSLEY-SMITH, GEOFFREY F., *and* F. S. GRANT. Glaciological work on "Operation Hazen," northern Ellesmere Island, 1957. (Canadian alpine journal, 1958. v. 41, p. 89–91.)

Operation Hazen 1957–58, part of the Canadian IGY program, established a base camp on the north shore of Lake Hazen Apr.–May 1957 and an advanced camp on Gilman Glacier (photo). Studies were made between the snout of Gilman (1,360 ft.) and Mt. Oxford (7,170 ft.) 27 mi. west-northwest, of accumulation and ablation, level of firn line, snow temperatures, and ice movement. The glacier appeared to be nearly in a state of balance. Geophysical studies were also carried on: considerable variation in seismic velocity with depth near the surface of Gilman Glacier was observed, probably representing a progressive compaction of firn. ***Copy seen:*** DGS.

51624. HATTERSLEY-SMITH, GEOFFREY F. The rolls on the Ellesmere ice shelf. (Arctic, 1957. v. 10, p. 32–44, 5 illus., text map.) 16 refs.

Surface rolls are characteristic features of both the Ellesmere ice shelf and the floating ice islands derived from it. These surface features are described and their origin and evolution discussed. Various theories of origin are considered which involve such forces as pressure from the polar pack, movement of glaciers, temperature variations, tidal movements and wind. Of these, wind action appears the most likely to have caused the rolls, and it is suggested that their development was analogous to the formation of *seif* dunes in a desert. "They should be regarded as fossil snow dunes that have been perpetuated by the annual drainage of melt-water."

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HATTERSLEY-SMITH, GEOFFREY F., *see* Canada. Defence Research Board. Op. Hazen 1957. *1958.* No. 50061.

51625. HAUFE, WILBERT OSCAR, 1922– . Physical environment and behaviour of immature stages of *Aedes communis,* Deg., Diptera: Culicidae, in subarctic Canada. (Canadian entomologist, Mar. 1957. v. 89, no. 3, p. 120–39, illus., tables.) 16 refs.

A study based on observations conducted at Fort Churchill, Manitoba 1950–1952, with information on the topography, climate and vegetation of the area; effect of weather on thermal variation in mosquito pools; behavior of larvae and pupae in response to insolation; solar radiation and the selection of environmental temperature by the larvae and pupae. It is concluded that time-temperature factors are inadequate in estimating rate of development in conditions studied unless allowance is made for the selective behavior of the insects.

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51626. HAUG, ARNE, *and* B. LARSEN. Carotene content of seaweed and seaweed meal. Oslo, 1958. 19 p. illus., tables, map. (Norsk institutt for tang- og tareforskning. Rapport no. 16.) 14 refs.

A study of seasonal and individual variations in carotene content and variations with age and place, in 16 species of algae, some of them common in arctic waters. Brown algae were found to contain B-carotene only; red algae, B carotene only or a mixture of A and B. No definite seasonal variation was found in four species as studied. In *Ascophyllum* differences with age and location were noted. Effects of drying and storage are also discussed. ***Copy seen:*** DA.

HAUG, ARNE, *see also* Jensen, A., *and* A. Haug. Geographical and seasonal variation . . . Laminaria . . . *1956.* No. 52064.

51627. HAUGE, HALVOR VEGARD. On the freshwater species of *Ceratium.* (Nytt magasin for botanikk, 1958. v. 6, p. 97–119, 9 illus.) 34 refs.

Four fresh-water dinoflagellates are studied, their ontogenesis, ecology and chronology. Extensive data are added on distribution in Norway; *C. hirundinella* occurs in Finnmark extending to Porsangerfjord, about 70° N.

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51628. HAUGHTON, SAMUEL, 1821–1897. On the tides of the arctic seas: part I, on the diurnal tides of Port Leopold, North Somerset; part II, the semidiurnal tides of Port Leopold, North Somerset. (Royal Society of London. Philosophical transactions, 1863. v. 153, part 11, p. 243–72, 3 plates, tables,

graphs.) Refs in text. Correction in the same journal, 1866, v. 156, p. 654–55.

Discusses tidal observations made aboard the *Investigator* in the winter of 1848–49 while fast in ice at 74° N. 90° W. during the J. C. Ross Expedition in Search for Franklin. The observations are tabulated, and diurnal and semidiurnal tides are computed. Comparative graphs are presented on the range of the tides, the variation in spring and neap tides, etc. Different approaches are attempted in using the data to compute the mean depth of the channel which conveys the tide from the South Atlantic to Port Leopold. ***Copy seen:*** DLC.

51629. HAUGHTON, SAMUEL, 1821–1897. On the tides of the arctic seas: part III, on the semidiurnal tides of Frederiksdal, near Cape Farewell, in Greenland. (Royal Society of London. Philosophical transactions, 1866. v. 156, part 22, p. 639–55, tables, graphs.)

Discusses daily recordings of high and low tide, made at 60° N. 45° W. by Asboé, a Danish missionary Aug. 1863–Aug. 1864. The observations are tabulated, also ranges of spring and neap tides. Eccentricity of the lunar orbit, mass of the moon, and depth of the sea are computed; the parallactic inequality is graphed. ***Copy seen:*** DLC.

51630. HAUGHTON, SAMUEL, 1821–1897. On the tides of the arctic seas: part IV, on the tides of Northumberland Sound, at the northern outlet of Wellington Channel. (Royal Society of London. Philosophical transactions, 1875. v. 165, part 11, p. 317–29, tables.)

Presents tabulated values of time and height of high and low water, and computed data on diurnal and semidiurnal tides at high and low water, based on observations made May 24–July 6, 1853 at 76°52′ N. 97° W. aboard the *Assistance* during Sir Edward Belcher's expedition in search of Franklin. ***Copy seen:*** DLC.

51631. HAUGHTON, SAMUEL, 1821–1897. On the tides of the arctic seas: part V, on the tides of Refuge Cove, Wellington Channel. (Royal Society of London. Philosophical transactions, 1875. v. 165, part 12, p. 331–37, tables.)

Discusses tidal observations made aboard the *Assistance* Sept. 16–Oct. 11, 1853 at 75°31′ N. 92°10′ W. during the Belcher expedition. Data are tabulated on high and low water, diurnal tide, and lunitidal intervals; mean values of heights and intervals of the semidiurnal tide are given. ***Copy seen:*** DLC.

51632. HAUGHTON, SAMUEL, 1821–1897. On the tides of the arctic seas: part VI, tides at Port Kennedy, in Bellot Strait. (Royal Society of London, Philosophical transactions, 1875. v. 165, part 13, p. 339–60, tables.)

Discusses hourly tidal observations made on the *Fox* July 5–28, 1859 at 72°01′ N. 94°15′ W. during Sir Leopold M'Clintock's expedition in search of Franklin. Data are tabulated on hourly values of diurnal and semidiurnal tide, times of principal phases of the diurnal tide, max. and min. apparent diurnal solitidal intervals, times of half-flood and half-ebb and heights of high and low water of the diurnal tide, heights and lunitidal intervals of the semidiurnal tide and times and lunitidal intervals of half-flood and half-ebb of the semidiurnal tide. ***Copy seen:*** DLC.

51633. HAUGHTON, SAMUEL, 1821–1897. On the tides of the arctic seas: part VII, tides of Port Kennedy, in Bellot Strait; final discussion. (Royal Society of London. Philosophical transactions, 1878, v. 169, pt. 1, p. 1–16, tables.)

Computes the diurnal and semidiurnal tidal constants in accordance with Fourier's theorem and other advanced formulae, from the observations presented and discussed in No. 51632. ***Copy seen:*** DLC.

51634. HAUGHTON, SAMUEL, 1821–1897. On the tides of the arctic seas: part VIII, on the tides of Lady Franklin Sound. (Royal Irish Academy. Transactions, Nov. 1893. v. 30, part 9, p. 325–46, tables.)

Discusses hourly tidal observations made on board the *Discovery* Sept. 16, 1875–Mar. 28, 1876, while the ship lay embedded in the ice at 81°45′ N. 65° W. during the 1875–76 British Arctic Expedition. Mean tide level, diurnal, semidiurnal, and tertiodiurnal tides are computed according to Fourier's theorem. ***Copy seen:*** DLC.

51635. HAUGHTON, SAMUEL, 1821–1897. On the tides of the arctic seas: part IX, on the tides of the northwestern entrance of Robeson Channel, Grinnell Land. (Royal Irish Academy. Transactions, Feb. 1895. v. 30, part 15, p. 587–96, tables.)

Discusses hourly tidal observations made on board the *Alert* Sept. 29–Oct. 23,

1875, and Dec. 12, 1875–Jan. 11, 1876, while the ship was moored off the northeast Ellesmere coast at 82°27′ N. 61°22′ W. during the British Arctic Expedition 1875–76. Due to incompleteness of the observations, only the semidiurnal tide is computed. ***Copy seen:*** DLC.

HAURWITZ, BERNHARD, *see* Sepulveda, G. M., *and* B. Haurwitz. The geographical . . . pressure oscillation . . . *1956.* No. 54695.

51636. HAUSEN, HANS, 1884– . Är utvinning av sandsten möjlig i Finland? (Tekniska föreningen i Finland. Förhandlingar, July 1938. årg. 58, häfte 7, p. 199–205, maps, illus.) 10 refs. Text in Swedish. ***Title tr.:*** Is mining of sandstone possible in Finland?

Contains a survey of localities where sandstone has been found, with discussion of the extent of the deposits and the mining possibilities. Sizable deposits are known at Enontekis and in northernmost Petsamo, but only those at Satakunta in southern Finland are considered suitable for development. ***Copy seen:*** DLC.

51637. HAWKINS, A., *and* **J. OLSZEWSKI.** Glia/nerve cell index for cortex of the whale. (Science, July 12, 1957. v. 126, no. 3263, p. 76–77, tables.) 6 refs.

Report on histological investigation of two brains of *Balaenoptera physalus* L. and, for comparison, a human brain. The results indicate that the increase in number of glia cells per nerve cell is not correlated with phylogenetic development but with brain weight.

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51638. HAWKSLEY, OSKAR. Ecology of a breeding population of arctic terns. (Bird-banding, Apr. 1957. v. 27, no. 2, p. 57–92, 4 diagrs., 6 tables.) 96 refs.

Contains results of a study of the behavior and ecology of *Sterna paradiseae,* carried out during the breeding seasons of 1947 and 1948 on Machias Seal Island in the Bay of Fundy, New Brunswick, supplemented by previous observations on this arctic species in Alaska, Churchill (Hudson Bay) and elsewhere. Arctic terns are principally deep-water feeders but adapt readily to changes in food supply. Weather and light affect food producing and social activity. Nesting sites with little vegetation are mostly desirable. Associates include a great variety of other charadriiform and anseriform birds; among the more important predators are gulls, hawks, jaegers and some mammals. Arctic terns lay smaller clutches in the Bay of Fundy than in arctic and subarctic regions. Suggestions for management include control of vegetation and predators. ***Copy seen:*** DSI.

HAY, JAMES R., *see* Cummings, B. G., and J. R. Hay. Light and dormancy in wild oats . . . *1958.* No. 50402.

51639. HAYMAN, CHARLES R. Commissioner summarizes Alaska Department of Health work for 1956–57 including Territory's new mental health plan. (Alaska's health, Dec. 1957. v. 14, p. 1–12, illus.)

A profusely illustrated report on Mental Health legislation and activities; ear, eye, nose and throat diseases; tuberculosis; speech and hearing corrective work; mental retardation in children; water pollution; sanitation, polio vaccination, etc. Other services are also noted, viz: food and drug control; services for crippled children, including those with defective sight, hearing and speech; exploration of ground water; vital statistics; health education, etc.

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51640. HAYMAN, CHARLES R., *and* **F. E. KESTER.** A study of infant mortality in Alaska. (Northwest medicine, July 1957. v. 56, no. 7, p. 819–23, illus., table, map.)

An analysis of deaths in Alaska, of infants under one year of age, for the period 1949–1955. Background, race, age, cause, geographic distribution are considered. Infant mortality among whites was found to be not higher than in the continental United States, but it is excessive among the native races.

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51641. HAYWARD, ROLAND, 1865–1906. Studies in *Amara.* (American Entomological Society. Transactions, 1908. v. 34, no. 1, p. 13–65.)

Contains keys, descriptions of 55 species (eight new) with critical notes and data on distribution and habitat; at least 15 species of the ground beetles are native to Kamchatka, Alaska, the Aleutians, Southeast Alaska and northern Canada.

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51642. HEARD, B. E. Formation of intra-cellular ice. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 532.) 4 refs.

The importance of crystal formation for

survival of slow-frozen cells is noted. Variability in cold-survival of the same kind of cells is explained on this basis and ice formation is suggested as criterion of survival. ***Copy seen:*** DNLM.

51643. HEASTIE, H. Average height of the standard isobaric surfaces over the area from the North Pole to 55° N. in April and October. Dec. 7, 1956. 22 charts. (Great Britain. Air Ministry. Meteorological Research Committee. M.R.P. 1020, S.C. 11/223.) 5 refs. In sequence to No. 40313, January data, and to July data *infra*.

Contains 22 charts based on data for 1949–1953; the isobaric surfaces mapped range from 700 mb. to 100 mb. Method of constructing the charts, their characteristics and peculiarities, are briefly described. Pub. in part in *Meteorological magazine*, Oct. 1958, v. 87, p. 301–306, 8 maps. ***Copy seen:*** DWB.

51644. HEASTIE, H. Average height of the standard isobaric surfaces over the area from the North Pole to 55° N. in July. Great Britain. Air Ministry. Meteorological Research Committee, Apr. 30, 1956. 3 p. 11 charts. (*Its:* M.R.P. 981.) 7 refs.

Contains circumpolar charts of standard isobaric surfaces, constructed from data July 1949–1953, similar to No. 51643. A condensed version was pub. in *Meteorological magazine*, July 1957, v. 86, no. 1021, p. 198–202. ***Copy seen:*** DWB.

HEBERLING, EARL J., *see* Adams, T., *and* E. J. Heberling. Human . . . responses . . . cold stress . . . *1958*. No. 49112.

HEDEEN, R. A., *see* Applewhite, K. H., *and others*. Residual effectiveness of DDT . . . *1953*. No. 49348.

51645. HEDLIN, BROR, *and others*. *Stratiotes*-sjöar i Norrbotten. (Svensk botanisk tidskrift, 1957. bd. 51, häfte 1, p. 317–43, 6 illus., 2 plates, 7 tables.) 31 refs. Text in Swedish. Summary in English. *Other authors:* E. Julin *and* A. Pekkari. ***Title tr.:*** *Stratiotes* lakes in Norrbotten.

Contains data on the occurrence of *Stratiotes aloides* in Källträsket, a lake in the southeastern section of Nederkalix parish in Norrbotten (65°52′ N.), and in some other lakes. Many other eutrophic plants such as *Ceratophyllum demersum* and *Potamogeton friesii* (cf. table 2) were found. The faunal population includes Turbellaria, Hirudinea and Mollusca (table 3). Some hibernal observations and chemical analyses are tabulated. The dispersion biology of *Stratiotes* and *Ceratophyllum* is discussed, and the suggestion offered that both species came to these lakes by drift from the White Sea with fresh water, during the warm Allerod period, about 11,000 years ago. ***Copy seen:*** DSI.

51646. HEDLUND, HANS, 1901– . Ett försök att odla skog ovanför skogsodlingsgränsen på Killingi i Gällivare socken. (Skogen, *Stockholm*, July 1, 1955. årg. 42, nr. 13, p. 237–38, illus.) Text in Swedish. ***Title tr.:*** An attempt at cultivating forests above the reforestation limit at Killingi in Gällivare parish.

Describes an experiment by 43 farmers of this small town (67°10′ N. 20°40′ E.) to reforest some 130 hectares of barren mountain meadows at 500 m. elevation. As coniferous trees once grew in this region, the farmers (with state aid) started pine-seeding in 1937, planting 1952, and fenced the reforestation area against reindeer. Pine growth is shown feasible in locations of this high altitude, but whether economic is not yet known. ***Copy seen:*** DLC.

51647. HEDLUND, HANS, 1901– . Svenska skogsbruk; Arjeplogs revir. (Skogen, *Stockholm*, Jan. 15, 1955. årg. 42. nr. 2, p. 30–32, illus.) Text in Swedish. ***Title tr.:*** Swedish forestry; Arjeplog forest district.

This district of 194,000 hectares of productive forests around the lakes Hornavan, Uddjaur, and Storavan (approx. 66° N. 18° E.), has old and degenerate pine stands. Birch, the chief enemy of pine regeneration is being eliminated by burning or aerial spraying (helicopter) with hormone derivatives. Natural regeneration, in the main feasible by leaving seed trees when preparing the ground, is supplemented by some planting. ***Copy seen:*** DA.

51648. HEDLUND, JOHN. Swedish mining review, 1957. (Canadian mining journal, June 1958. v. 79, no. 6, p. 110–11, table.)

Reports development, production and export in the metal mining industry: improvements, administrative changes, exploration or mining halted, tabular data for 1953–1957 on production and export; iron ore (most important), pyrite,

lead, zinc, and copper concentrates are the main products. ***Copy seen:*** DGS.

51649. HEDRICK, JOYCE. Lichens from the Aleutian Islands and the Alaska Peninsula. (Michigan Academy of Science, Arts and Letters. Papers, 1936 (1935 meeting). v. 21, p. 75–80, plates 8–10.) *Pub also* as: Papers from the Dept. of Botany and the Herbarium of the University of Michigan, no. 535.

Contains a list of 62 species, with localities and brief notes on frequency. They were collected in 1902 by W. J. Eyerdam, in the Aleutians, at King Cove on Alaska Peninsula, also on Kodiak and Sitkalidak, and at Seldovia on the coast of Kenai Peninsula. *Lecanora aleutica* n. sp. is described in Latin and English.

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51650. HEEZEN, BRUCE C. Whales entangled in deep sea cables. (Norsk hvalfangst-tidende, Dec. 1957. årg. 46, nr. 12, p. 665–81, illus., map, table.) Text in Norwegian and in English. 11 refs. Contribution no. 234 from Lamont Geological Observatory pub. in Deep sea research, 1957, v. 4.

Data are given on 14 cases of whales entangled in submarine cables: six at a depth of about 500 fathoms, 620 fathoms being the maximum depth reported. Those identified whales were all sperm whales. The cable was generally wrapped round the jaw, often round the flukes and fins, was rarely broken but always badly mauled. It is concluded that sperm whales swim along the sea floor at depths as great as 620 fathoms, become entangled while swimming with the jaw ploughing through the sediment in search of food.

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HEGNAUER, ALBERT HENRY, 1900– , *see* Angelakos, E. T., *and* A. H. Hegnauer. Antifibrillatory activity . . . antihistamics . . . hypothermia. *1958.* No. 49319.

HEGNAUER, ALBERT HENRY, 1900– , *see* Angelakos, E. T., *and others.* Ventricular excitability . . . hypothermic dog. *1957.* No. 49323.

HEGNAUER, ALBERT HENRY, 1900– , *see* Torres, J. C., *and others.* Effect . . . heart rate . . . fibrillation in hypothermia. *1958.* No. 55493.

51651. HEIDELMANN, G., *and others.* Zur Pathogenese und Klinik der Kälteurtikaria. (Deutsche medizinische Wochenschrift, Feb. 1957. Jahrg. 82, no. 7, p. 284–92, illus., tables.) 39 refs. Text in German. *Other authors:* E. G. Preuss *and* W. Grunke. ***Title tr.:*** Pathogenesis and clinical course of cold-urticaria.

A study of two patients, males, 28 and 21 years old; including symptoms, familial history, specific and general tests, clinical picture, histamin tests, etc. The release of a histamin-like substance was demonstrated in both cases, but application of antihistaminics and a series of other means had no effect.

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HEIDER, CHARLES, *see* Moyer, J. H., *and others.* Hypothermia 2; the effect of agents . . . sympathetic nervous system . . . *1957.* No. 53430.

HEIDER, CHARLES, *see* Moyer, J. H., *and others.* Hypothermia 3; the effect . . . renal . . . ischemia. *1957.* No. 53431.

HEIDRICH, J., *see* Levin, M.G., *and* N. N. Cheboksarov. Khozîaĭstvennokul'turnye tipy . . . *1955.* No. 52789.

51652. HEIKINHEIMO, LAURI. Metsätyövoiman tutkimusmenetelmä; maaseudun työvoiman tutkimuksia 1. Helsinki, 1954. 182 p. illus., tables, graphs. (Acta forestalia fennica, v. 63, no. 1.) Approx. 100 refs. Text in Finnish. Summary in English. ***Title tr.:*** Method of surveying forest labor; rural labor force studies, 1.

First of a series of studies carried out by the Institute of Forest Economics, Helsinki University, based on 1950 census data. Two random samples were mainly used, one from Ranua in Lapland. Forestry workers are divided into paid or unpaid (self- or family-employed), professional or seasonal, permanent or occasional. Certain special groups are distinguished. Labor input, working time, round of activity, and use of manpower are defined. The sampling method and results from other sources are discussed. English translation is provided for the samples of collected information. ***Copy seen:*** DLC.

HEIKINHEIMO, LAURI, *see also* Ristimäki, T. Maaseudun . . . miestyövoiman . . . perusteella . . . *1956.* No. 54322.

51653. HEIKURAINEN, LEO. Die kiefernbewachsenen eutrophen Moore Nordfinnlands; eine Moortypenstudie aus

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dem Gebiet des Kivalo-Höhenzuges. Helsinki, 1953. vi, 189 p. illus., map, tables. (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Kasvitieteellisiä julkaisuja, Annales botanici, osa 26, no. 2.) 105 refs. Text in German. Summary in Finnish. ***Title tr.:*** The pine-covered eutrophic moors of northern Finland; a study of moor types from the area of the Kivalo ridge.

A study of this type of moors, with the ultimate aim of ascertaining their agricultural utilization. Following introductory sections on earlier work and nature of area (approx. 66° N. 26° E.), the account deals with the ground vegetation, its plant associations, their variants and areas; the tree-cover, its general character, area, condition, component species and variations; the soil, its fertility, reaction, incline, thickness of peat layer, etc.

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51654. HEIKURAINEN, LEO. Rämemänniköiden uudistamiesesta paljaaksihakkausta käyttäen. Helsinki, 1954. 21 p. graphs, tables. (Acta forestalia fennica, v. 61, no. 27.) Text in Finnish. Summary in German. ***Title tr.:*** The natural rejuvenation of heath moor pine stands by the use of clean cutting.

A third of the Finnish forest area is moorland. About half of the forested moors are pine stands on heath moors. Clean cutting of such forest in northern Finland has been found to result in more satisfactory natural renewal than the customary method of only partial clearing. Relationships between the cutting, good seed year, and new growth are considered. ***Copy seen:*** DLC.

HEIL, WILLI, *see* Kannt, H. S., *and others*. Eisbrecher "General San Martin." *1955*. No. 52166.

51655. HEILBORN, OTTO. Chromosome numbers and dimensions, species-formation and phylogeny in the genus *Carex*. (Hereditas, 1924. bd. 5, häfte 2, p. 129–216, 22 illus., plate, 7 tables.) 85 refs.

Chromosome numbers of 44 species or forms of sedge are tabulated (p. 134); 22 different, exactly determined numbers ranging 9–56 have been found; they cannot be arranged in a series of multiples as in other genera. Great differences in size are often found between chromosomes within the same nucleus. A few cases of irregular chromosome distribution in meiosis are described. One of the most important processes in species-formation in *Carex*, has been the formation of mutants with one extra chromosome which, in a later generation, have given rise to mutants with the diploid number increased by two. The chromosome numbers are important in the phylogeny of the genus (fig. 13, p. 197). In some genera only one chromosome number has been found in many species. The genus *C.*, of which 22 irregular chromosome numbers are known, occupies a unique position within the vegetable kingdom, *C. rupestris* and *C. canescentes* from Troms, Norway, and *C. capillaris* from northern Sweden, are included in the discussion. ***Copy seen:*** DLC.

51656. HEILBORN, OTTO. Chromosome numbers in *Draba*. (Hereditas, 1927. bd. 9, p. 59–68, 2 illus.) 9 refs.

Chromosome counting is reported in 24 species of this herbaceous genus, seven in northern Scandinavia and Greenland, and one in Kamchatka Peninsula (*unalaschkiana*). The chromosome numbers within the genus form the series 8, 16, 24, 32, 40. The relationship between *D. rupestris* and *D. magellanica* (Greenland, Spitsbergen and Kuusamo, Finland) is investigated. The first species is uniform, the latter consists of three cytological types (24, 32, 40).

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51657. HEILBORN, OTTO. Chromosome studies in Cyperaceae. (Hereditas, 1928. bd. 11, häfte 2–3, p. 182–92, 3 illus., 4 tables.) 5 refs.

In 56 species and two hybrids of the genus *Carex*, 24 different chromosome numbers were found, ranging from 9 to 56. Of the investigated 58 forms, ten have numbers from 9 to 25, while 47 have numbers from 26 to 42, and one has 56 chromosomes. Four of the species were collected in northern Sweden: *C. saxatilis*, *C. magellanica*, *C. capitata* and *C. atrofusca*, near Abisko, and *C. tenuiflora* in the vicinity of Kiruna.

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51658. HEILBORN, OTTO. Chromosome studies in Cyperaceae, III–IV. (Hereditas, 1939. bd. 25, häfte 3, p. 224–40, illus., 3 tables.) 22 refs.

Contains tabulated data on chromosome numbers, and on the systematic value of the numbers. Three of the species studied are from Abisko, Torne Lappmark, viz.: *Carex lachenalii* (n=32), *C. macloviana* (n=43), and *Elyna myosuroides* (n=52–

59). Allopolyploidy seems to be lacking, but there is proof of autopolyploidy. Structural rearrangement of chromosomes (translocation, fusion or fragmentation) contributes to the aneuploid condition in the family. Pt. I–II of this series (not numbered) *supra.*

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HEIMANN, J., *see* Thorn, W., *and others.* Beitrag zum Stoffwechsel von Leber . . . *1957.* No. 55420.

51659. HEINRICH, G. Tierexperimentelle Untersuchungen über die pathologischen Veränderungen am Herzmuskel und im EKG nach Kreislaufunterbrechung in Hypothermie. (Archiv für Chirurgie, 1957. Bd. 287, p. 441–45, illus.) Text in German. ***Title tr.:*** Experimental investigations of pathological changes in the myocardium and ECG after suspension of circulation in hypothermia.

Account of experiments on dogs under hypothermia of 26–28° C. Stopping of circulation for up to 12½ min. involved no risk. But stoppage of even five min. produced cardiac lesion due to ischemia. These lesions (traced also on the ECG) consists in round cell infiltration and scar formation in the muscle and some nervous degeneration. ***Copy seen:*** DNLM.

51660. HEINRICH, G. Über die Toleranzgrenze bei Kreislaufunterbrechung in potenzierter Narkose und in kontrollierter Hypothermie; eine tierexperimentelle Studie. (Archiv für klinische Chirurgie, 1958. Bd. 286, Heft. 5, p. 491–538, illus. tables.) Approx. 90 refs. Text in German. ***Title tr.:*** Limits of tolerance to circulatory interruption during potentiated narcosis and controlled hypothermia; experimental study on animals.

Following a review of earlier investigations on circulation stoppage, the author discusses his own experiments with dogs, made hypothermic in varying degrees down to 26° C. The limits of circulatory stoppage without brain injury were found to be 12.5 min. However even a 5-min. interruption caused damage to the muscle and nerves of the heart.

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51661. HEINRICH, GERD H. A report on some North American arctic and subarctic Ichneumoninae, first supplement. (Canadian entomologist, Dec. 1958. v. 90, no. 12, p. 739–41.) cf. No. 45498.

Contains descriptions of *Coelichneumonops vockerothi* n. gen. et sp. (Quebec, Great Whale River, and Fort Chimo), *C. cashmani* n. sp. (Yukon Territory), *Eutanvacra valdenigra* n. sp. (Quebec, Payne Bay) and *E. Chillcotti* (Northwest Territories.). ***Copy seen:*** DSI.

HEINSHEIMER, G. J., *see* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

51662. HEINTZ, ANATOL, 1898– . Om pollenanalyse av mageinholdet fra Beresovka-mammuten. (Blyttia, 1958. bd, 16, hefte 3, p. 122–42, 5 illus., table.) 28 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Pollen analysis of the stomach contents of the Berezovka mammoth.

The pollen grains represent grasses (97.09%), herbs (2.67%), and trees (.17). The plants determined may be grouped ecologically as: steppe, moist forest and meadow, marsh, saline soil, and arctic-alpine plants. The mammoth was found on the Berezovka River in Yakutia (cf. No. 25079–25081) in a late Pleistocene deposit. It probably lived in a somewhat warmer part of the post-glacial period, and should be dated 6–7,000 years ago.

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51663. HEINTZEN, PAUL. Die mathematische Behandlung der Temperaturabhängigkeit biologischer Prozesse; eine kritische Untersuchung über Berechnung und Brauchbarkeit des "Temperaturquotienten," Q_{10}-Wertes. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 266, Heft 2, p. 207–218, illus.) 30 refs. Text in German. ***Title tr.:*** The mathematical treatment of temperature dependence of biological processes; a critical investigation on calculation and applicability of the "temperature quotient," Q_{10}-value.

Author shows that the internationally used Q_{10}-value is only applicable to some exponential forms of temperature functions. The van't Hoff law and Q_{10}-value are not applicable to the non-exponential temperature functions common in the biological realm; the inconsistency of Q_{10} in the latter cases is difficult to define. A compromise solution is proposed.

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51664. HEISKANEN, VEIJO. Paperipuurankojen mittauksen tarkkuudesta Perä-Pohjolassa. Helsinki, 1954. 13 p. tables (Acta forestalia fennica, 61, no. 18.)

Text in Finnish. Summary in English. ***Title tr.:*** On the accuracy of measurements of pulpwood boles in North Finland.

The accuracy of volume tables on the basis of top measurements of pine and spruce boles is examined. Top diameter and length of log are used in the formula to obtain volume. Smaller parcels of logs are apt to be more inaccurately calculated than are large lots where gently and strongly tapering logs are mixed. Actual measurements of pine boles on state and private forests and in northern and southern localities are found to differ, but reasons are not determined. Special tables with correction coefficients are suggested to improve accuracy of top measurements.

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51665. HEISTAD, ERLING. Chudo Norvezhskogo morîa. (Vokrug sveta, Nov. 1958, no. 11, p. 25–26, illus.) Text in Russian. ***Title tr.:*** Miracle of the Norwegian Sea.

Popular sketch of the herring fisheries by a Norwegian journalist: 20–25 thousand Norwegians are engaged in the fisheries; migrations of herring shoals; spawning grounds in the coastal waters of Norway; need for further research on conditions for conservation of herring stocks. ***Copy seen:*** DLC.

51666. HEIZER, ROBERT FLEMING, 1915– . Archaeology of the Uyak site, Kodiak Island, Alaska. Berkeley and Los Angeles, University of California Press, 1956. 199 p. illus., plates, diagrs., tables, maps. (Anthropological records, v. 17, no. 1) 128 refs.

Catalogs the archeological material, now at the United States National Museum (Smithsonian Institution), collected at Uyak Bay by the late Aleš Hrdlička in 1931–1936. The topography, fauna, flora and glaciation of Kodiak Island are sketched, weather records tabulated, 19th century vital statistics on the native population quoted, and the problems of the chronological dating of the Uyak site resulting from Hrdlička's crude excavation methods discussed. The burials, dwellings, sweathouses, etc., are discussed and diagrammed; the skeletal and animal remains tabulated. The stone, bone, wood, etc., artifacts are described in turn, classified and illustrated on plates 14–85. An appendix (p. 94–97) "notes on a pottery-bearing site at Olga Bay, Kodiak Island" by Donald Clark, deals with several potsherds and about 300 glass beads the latter collected in 1953 at two sites near Olga Bay. ***Copy seen:*** DLC.

51667. HELA, ILMO. The Baltic Sea as an object of the ice studies. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 29–35, 4 diagrs.)

"Factors determining the formation and evolution of ice in the various geomorphological areas of the Baltic are discussed individually and compared with conditions in the Arctic. The effects of the size of the sea, its climatic conditions, hydrography, low salinity, lack of tidal currents, the weakness of permanent currents, wind-induced sea-level changes, and the presence of numerous islands on the quality and types of ice, and ice-cover conditions are examined. Diagrams are presented showing the genesis of various types of ice in the Baltic and conditions under which ice forms at the surface."—SIPRE.

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51668. HELA, ILMO, *and* **F. KOROLEFF.** Hydrographical and chemical data collected in 1957 on board the R/V *Aranda* in the Barents Sea. Helsinki, 1958. 67 p. illus., text map, tables. (Finland. Havsforskningsinstitutet. Skrift no. 179.) 13 refs.

Contains tables of original hydrographic data, chemical data, hydrographic data for standard depths, bathythermograph data, and surface temperatures and salinities, obtained June 29–July 27, 1957, in the Barents Sea and north of Svalbard. Map shows route and stations, text lists personnel (14), describes methods and techniques, and notes units used in tables. Stations extended from 70°26′ N. 33°19′ E., off the Norwegian coast, to 80°24′ N. 12°10′ E., off the north coast of Vestspitsbergen. Geologic and gravimetric studies, carried out on expedition are to be published by the Finnish Geodetic Institute.

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51669. HELGESEN, LEONH. Skogreisning i Troms. (Skogen, *Oslo*, 1951. årg. 16, hefte 2, p. 13–15.) Text in Norwegian. ***Title tr.:*** Reforestation in Troms.

Pine forests which once covered Troms province have been succeeded by birch, because of careless cutting, grazing, neglect of regeneration. Pine is now reduced to five trees per decare, but it is

possible to increase pine forests 100% in 50 years. This can be accomplished through: restricted cutting and full use of seed years; complete elimination of birch from pine forests; planting, seeding and preparation of the ground in localities where natural regeneration is deficient; and protection against grazing.

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51670. HELK, JØRGEN V., 1905– . Fotogrammetrisk kortlaegning. (Ingeniøren, ugeblad, June 22, 1957. årg. 1, nr. 12, p. 8–10, illus., maps.) Text in Danish. ***Title tr.:*** Photogrammetric surveying.

A brief description of photogrammetry is given. Mapping of Greenland by this method started in 1930; work on coastal sailing charts was intensified after World War II. Since 1932 the Danish Geodetic Institute has produced photogrammetric maps (50) at scale 1:25,000 of most of the west and a large part of the east coast of Greenland, each map covering about 75,000 sq. km. The base has been laid for sailing charts (1:20,000 to 1:18,000); maps of cities and settlements (1:2,000), and special-interest maps (1:50,000) e.g., for mining, are planned.

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HELLAND-HANSEN, BJØRN, 1877–1957, *see* Alekseev, A. P., *and* B. V. Istoshin. Skhema postoiannykh techenii Norvezhskogo i Grenlandskogo morei. *1956.* No. 49240.

51671. HELLBERG, A. Samarbetsproblem för forsknings- och försöksverksamhet rörande husdjursskötseln i norra Finland, Norge och Sverige. (Nordisk jordbrugsforskning, 1956. årg. 38, häfte 1, p. 29–33.) Text in Swedish. ***Title tr.:*** The problem of cooperation in research and experimentation activities on animal husbandry in northern Finland, Norway and Sweden.

Animal husbandry problems in the Fennoscandian Arctic are reviewed: suggested fields of cooperative investigation; milk and meat production; fodder production, storage, and nutrient deficiencies; construction, lighting and heating of farm buildings; breed improvement and cross-breeding; veterinary problems; machine and labor techniques. Suggestions are made that whole fields of research be assigned, or the problems divided among the three countries, and that individual and joint reports be made available to all. ***Copy seen:*** DA.

51672. HELLÉN, WOLTER, 1890– . Zur Kenntnis der Braconidae: Cyclostomi Finnlands. (Notulae entomologicae, 1957. v. 37, no. 2, p. 33–52.) 9 refs. Text in German. ***Title tr.:*** Contribution to the Braconidae: Cyclostomi of Finland.

Contains a systematic list of about a hundred hymenopters of this family, with keys to the tribes, genera and species; seven are new species and native to all sections of northern Norway, Swedish, Finnish and Russian Lapland.

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51673. HELLÉN, WOLTER, 1890– . Zur Kenntnis der Braconiden (Hym.) Finnlands, II; Subfamilie Helconinae, part. Helsinki, 1958. 37 p. (Societas pro fauna et flora fennica. Fauna fennica, 4.) 19 refs. Text in German. ***Title tr.:*** To the knowledge of braconids (Hym.) of Finland, II; subfamily Helconinae, part. In sequence to No. 6939.

Contains a critical revision of about a hundred species of these ichneumon flies, with keys to the genera and species, descriptions of ten new species and data on general and Scandinavian distribution of others. *Blacus maryi* n. sp. (Lapland) and at least twenty other species are listed from Finnish Lapland and the Kuusamo region. ***Copy seen:*** DSI.

HELLON, R. F., *see* Clarke, R. S. J., *and others.* Cold vasodilatation . . . forearm. *1957.* No. 50285.

HELLON, R. F., *see* Clarke, R. S. J., *and others.* The duration of sustained contractions . . . different muscle temperatures. *1958.* No. 50286.

HELLON, R. F., *see* Clarke, R. S. J., *and others.* Hyperaemia . . . contraction at different temperatures. *1957.* No. 50287.

HELLON, R. F., *see* Clarke, R. S. J., *and others.* Vascular reactions . . . forearm to cold. *1958.* No. 50288.

51674. HELLQVIST, HELGE. Nordkalottmötet 1957. (Nordisk jordbrugsforskning, 1957. årg. 39, häfte 4, p. 418–25, illus.) Text in Swedish. ***Title tr.:*** The north Fennoscandian meeting 1957.

In July 1957, 33 agriculturists from Finland, Sweden, Denmark, Iceland, and Norway visited seven Norwegian agricultural stations north of the Arctic Circle. Most of the journey was by steamship. In this region where culti-

vated land is only 0.2 hectare per capita, combined occupations are common: farming-fishing and farming-forestry. The need for capital, power, communications, and knowledge, and the advantages of cooperation are stressed.

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51675. HELMERS, ULF, *and* **I. BYRNÄS.** Skogsodlingsarbete på ackord: ett led i försöken att lösa skogodlingsfrågor inom ett större norrländsk skogsföretag. (Föreningen skogsarbetens och Kungl. domänstyrelsens arbetsstudieavdeling. Meddelande, 1952. nr. 43, p. 1–44, tables, graphs.) Text in Swedish. Summary in English. Reprinted from Norrlands skogsvårdsförbund. Tidskrift, 1952, häfte 1, p. 64–103.

Title tr.: Forest cultivation on piecework rates; one aspect of the attempt to solve cultivation problems at a large Norrland forest concern.

Time studies were made by Mo och Domsjö AB on the various operations involved in preparing the ground, planting, and sowing; different implements and sites of varying difficulty were used. Results are presented in graphical and tabular form. Piecework rates per 1,000 units of area or per 1,000 plants, are graphed for work periods of different lengths, at various per diem wage rates, on the basis of the piece-rate at 125% the per diem rate. ***Copy seen:*** DA.

51676. HELSTAD, K. Finnmarksbrev, I-II. (Skogbrukeren, Oct. 15, Nov. 1, 1953. årg. 28, nr. 20, 21, p. 311–12, 325–26.) Text in Norwegian. ***Title tr.:*** Letter from Finnmark, I–II.

Traces the population of Finnmark back to 10,000–12,000 B.C., when (according to the Komsa antiquities, excavated in 1925) primitive tribes from the east populated an ice-free strip of coastland. Lapps and Norwegians (around 800 B.C.) and later Finns migrated to the area. Author's experimental planting of trees on the Nordkyn Peninsula and proposed establishment of two nurseries in Finnmark are noted. In pt. II, plants and birds observed in the vicinity of Nordkapp in early spring (June–July) are described: first to bloom are various willows, *Salix lanata, S. cineria* and *S. polaris.* Early wildflowers *Pedicularis lapponica, Dryas octopètata, Heracleum sibiricum* or the Tromsø palm, etc. develop under the snow, and are in full bloom when it melts. Birds observed were eider gulls, mergansers, loons, etc. Writer's statements are challenged (p. 344).

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HEMINGWAY, ALLAN, *see* Birzis, L., *and* A. Hemingway. Nervous control of shivering . . . brain stimulation. *1957.* No. 49737.

HEMINGWAY, ALLAN, *see also* Birzis, L., *and* A. Hemingway. Nervous control of shivering, 6; efferent brain discharge . . . *1957.* No. 49738.

51677. HEMMINGSEN, AXEL M. Deep-boring ovipository instincts of some crane-fly species (Tipulidae) of the subgenera *Vestiplex* Bezzi and *Oreomyza* Pok, and some associated phenomena. (Dansk naturhistorisk Forening. Videnskabelige meddelelser, 1956. bd. 118, p. 243–315, 16 illus., 5 tables.) 89 refs.

Contains results of study of the oviposition of six crane-fly species by insertion of the entire abdomen into the soil, digging with the shovel-shaped cerci. Among them is *Tipula* (*Vestiplex*) *arctica* observed on a visit to the Danish military base Grønnedal (61°14′ N. 48°06′ W.) in southwest Greenland. These species oviposit in forest soil, in alpine areas and in the arctic region. The method of deep oviposition is considered an adaptation to dry biotopes and protection of the eggs against dessication; it is also favorable for wing reduction (tables 1–5), a tendency existing especially in the females. ***Copy seen:*** DLC.

51678. HEMMINGSEN, AXEL M., *and* **B. JENSEN.** The occurrence of *Tipula* (*Vestiplex*) *arctica* Curtis in Greenland and its decreasing body length with increasing latitude. København, C. A. Reitzel, 1957. 20 p. plates, map, graphs. (Meddelelser om Grønland, bd. 159, nr. 1.) 31 refs.

Surveys occurrence of this crane-fly on the basis of literature, collections available in Copenhagen, and observations made in Greenland in 1954. Localities in which imagines have been caught according to these sources are mapped. Occurrence relative to season, and body length relative to latitude are discussed.

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HEMMINGSEN, E., *see* Coachman, L. K., *and others.* Gases in glaciers. *1958.* No. 50294.

51679. HEMPHILL, ERNEST. Countdown at Churchill. (Canadian aviation,

Aug. 1958. v. 31, no. 8, p. 37–39, 75, illus.)

Describes activities at the launching site, where approx. 40 Aerobee and 44 Nike-Cajun rockets will be fired in the IGY program to study temperatures, pressures and wind velocities, infra-red and cosmic radiation, composition and activity of the aurorae, etc. The rocket site, with facilities and equipment valued at over $10 million, has heated tunnels connecting all main buildings and the launching pads. The Aerobee-Hi launching pad has a vehicle track which can be swung 360° in azimuth and 10° in the vertical to direct the firing angle; a four-station Doppler Velocity and Positioning System fixes flight positions with an accuracy of one in 50,000.

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51680. HEMPHILL, ERNEST, *and* **P. BRANNAN.** A cure for carriers' ills. (Canadian aviation, May 1958. v. 31, no. 5, p. 26–29, 75, illus.)

Discusses decline in Canadian civil air transport volume in 1957, due mainly to termination of construction on the radar-defense chains; several companies seek compensation in northward expansion of civilian traffic. Some experience in arctic operation is summarized. The single-engined Beaver and Otter have proved dependable; the Caribou, built for operation at −40° F. to 120° F., is expected to give good performance. The Fairchild F–27, employing a pneumatic system instead of hydraulics, may eliminate troubles with frozen hydraulic lines. Aircraft maintenance is dealt with; a heated, tent-like device, enclosing the engine nacelle and surrounding portions of the wing, secures heat distribution to the entire lubrication system and provides comfort during engine overhaul and repair. ***Copy seen:*** DLC.

51681. HEMSTOCK, RUSSELL A. An appraisal of muskeg technology in Canada. (Canadian mining and metallurgical bulletin, Oct. 1958. v. 51, no. 558, p. 643–45.) 7 refs.

Reviews progress, especially in Canada, toward understanding and using muskeg or peat lands. Data on the *in situ* physical properties and development of machinery and vehicles for such areas are required. Railways will probably provide the main transportation in the North, supported by roads, fixed-wing aircraft and by helicopters. ***Copy seen:*** DGS.

HEMSTOCK, RUSSELL A., *see also* National Research Council of Canada. Muskeg research conf. *1957.* No. 53502.

HEMSTOCK, RUSSELL A., *see also* *Oil in Canada.* Northern . . . muskeg . . . *1958.* No. 53714.

51682. HENDERSON, BRADFORD. Nass and Yukon River developments 5,355,000 H.P. (Roads and engineering construction, Jan. 1957. v. 95, no. 1, p. 15–20, 111–16, illus., 4 maps.)

Outlines plans for electric power plants in British Columbia (Nass: 455,000 hp.) and on the Yukon River 4,900,000 hp.); the latter to be developed in three stages: Nakonake (2,800,000 hp.), Nakina (1,500,000 hp.), and Taku (600,000 hp.): it involves reversing of the flow of a long stretch of the river by construction of five large and several small dams, five rock tunnels, 7,700 ft. to 10 mi. in length, and a pumping plant. Road connections with the Alaska Highway are planned, and a transmission line to Alice Arm is proposed. ***Copy seen:*** DLC.

HENDERSON, J. R., *see* Andreasen, G. E., *and others.* Aeromagnetic map . . . *1958.* No. 49302.

HENDERSON, J. R., Jr., *see* Rossman, D. L., *and others.* Reconnaissance total intensity aeromagnetic map . . . Prince of Wales Island, Alaska. *1956.* No. 54414.

51683. HENDRICKS, STERLING B. Control of growth and reproduction by light and darkness. (Science in progress, 1957. v. 10, p. 157–80, illus., tables.)

A review of animal and plant responses to seasonal changes in light, and of the mechanisms underlying them. Plants and animals of lower and higher phyla are considered, among them some arctic forms (trout, ptarmigan). Features of the responses and their experimental elucidation; effect of wave length of light, and of photoperiodicity, as well as the role of darkness are discussed in relation to plants. Growth and reproductive reactions of arthropods and vertebrates (including man) to seasonal and experimental changes in light are also analyzed. ***Copy seen:*** DNLM.

51684. HENNEMAN, DOROTHY H., *and others.* Immediate metabolic response to hypothermia in man. (Journal of applied physiology, Mar. 1958. v. 12, no. 2, p. 164–68, illus.) 19 refs. *Other*

authors: J. P. Bunker *and* W. R. Brewster, Jr.

Cooling of ten subjects to 28°–30° C. in thiopentalcurare anesthesia and hyperventilation caused changes in arterial blood electrolytes, similar to those of respiratory alcalosis without hypothermia. An inhibition of glucose uptake and its subsequent glycolysis (by tissues) was also suggested. Metabolic acidosis did not occur in uncomplicated hypothermia.

Copy seen: DNLM.

HENRY, S. L., *see* Scheil, M. A., *and others*. Steel for Canadian pipelines. *1957*. No. 54600.

51685. HENRY, T. J. G. Maps of upper winds over Canada. Toronto, 1957. 61 p. diagrs., text maps. (Canada. Meteorological Branch) 17 refs.

Contains seasonal maps, two for each season, and two each for the 850, 700, 500, 300 and 200 mb. levels. The first map of each pair represents the vector mean flow; the second shows the variability of the wind about its vector mean, as expressed by the standard vector deviation. Maps are based on short-period observations. Text reviews development of upper-air observations in Canada since the 1930's; published summaries and analyses of data are noted. Properties of upper wind distributions (observed and computed), are discussed; construction of the maps is described, to obtain the seasonal normal contour patterns for standard isobaric surfaces; procedure used in constructing isopleths of vector mean wind speed for each level and season is outlined; calculation of standard vector deviation is given. The picture of the vector mean circulation and the patterns of standard vector deviation as shown by the maps are discussed; essential agreement with results of earlier studies is found. ***Copy seen:*** DN–HO.

51686. HENRY, WALTER K. Yukon River floods. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957, p. 76–77.)

Notes dates and heights of extensive floods at: Fort Yukon since 1936, Galena since 1925, and Ruby (highest) in 1925. Formation and effects of ice jams, and their relation to temperatures in several parts of Alaska are described.

Copy seen: CaMAI.

HENRY, WALTER K., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

HENSEL, HERBERT, *see* Kundt, H. W., *and others*. Hypothalamustemperatur . . . *1957*. No. 52565.

HENSEL, HERBERT, *see* Kundt, H. W., *and others*. Hypothalamustemperatur und Hautdurchblutung. *1957*. No. 52566.

51687. HENTGÈS, PIERRE. Sovetskiĭ Soĭûz daleko vidit. (Sibirskie ogni, Nov.–Dec. 1957. god 36, no. 6, p. 196–202.) Text in Russian. ***Title tr.:*** The Soviet Union looks ahead. Translated into Russian by D. Sirota.

Account of the present and future industrial and economic development of Yakutia by *Humanité*'s permanent correspondent in the U.S.S.R. He traveled in Yakut A.S.S.R. in Sept. 1956(?), visited Yakutsk, a mixed agricultural, dairy, reindeer and silver fox-breeding kolkhoz 80 km. down the Lena River, Oymyakon and Angarsk. He reports an interview with P. F. Shvetsov, director of the Institute of Cold (sic) on an IGY station planned near the Cold Pole in the Suntar-Khayata Range. The discovery of the diamond-bearing kimberlite pipe at Mir in 1954, and the Kolyma basin coal deposits, those of Sangara on the Lena and Chul'man south of the Aldan are discussed; the last about 700 x 100 km. in area consists of a coal bed 40 m. thick at a depth of 300 m. Plans are outlined for resource development, plant construction, and new industrial centers.

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51688. HEPPNER, JAMES P. A study of relationships between the aurora borealis and the geomagnetic disturbances caused by electric currents in the ionosphere. Ottawa, Oct. 1958. 39 p. 36 plates, diagrs., graphs. (Canada. Defence Research Board. Report, no. DR135.) 54 refs.

Ph. D. thesis, of which an abbreviated account entitled *Time sequences and spatial relations in auroral activity during magnetic bays at College, Alaska*, was published in 1954 (No. 35239).

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51689. HEQVIST, KARL-JOHAN. Über die Larve von *Temnostoma apiforme* Fabr.; Diptera, Syrphidae. (Entomologisk tidskrift, 1957. årg. 78, häfte 1, p. 29–31, 2 illus.) 4 refs. Text in German. ***Title tr.:*** On the larva of *Temnostoma apiforme* Fabr.; Diptera, Syrphidae.

Comparative study of the larvae of two closely related species, *T. vespiforme* (Uppland) and *T. apiforme* (Forsnäs, Pite Lappmark, Sweden); taxonomic characteristics of both are tabulated.
Copy seen: DLC.

HERDLICK, J. A., *see* Lorain, S. H., *and others*. Lode-tin mining at Lost River . . . *1958*. No. 52911.

51690. HERDMENGER, JOHANNES. Grönland schon vor 3,000 Jahren besiedelt. (Orion, Mar. 1958. Jahrg. 13, Heft 3, p. 221–23, illus., map.) Text in German. ***Title tr.:*** Greenland already settled 3,000 years ago.

Outline of archeological explorations of Greenland's coastal areas before World War II; more recent development in tracing remnants of the Thule culture; work in Peary Land (Eigel Knuth) and at Sarqaq, Disko Bugt; artifacts, tools, dating of the finds. ***Copy seen:*** DLC.

51691. HERMAN, CARLTON M., *and* **E. E. WEHR.** The occurrence of gizzard worms in Canada geese. (Journal of wildlife management, Oct. 1954. v. 18, no. 4, p. 509–513, tables.) 15 refs.

Report on examination of material from 16 localities. The roundworm *Amidostomum anseris* living under the horny lining of the gizzard was found to be widely distributed among the geese. This infection is considered to cause loss of weight and poor condition of birds studied at a refuge in North Carolina.
Copy seen: DLC.

51692. HERMANN, FREDE. Hydrographic conditions in the eastern part of the Labrador Sea and the Davis Strait, 1955. (International Council for the Study of the Sea. Annales biologiques 1955, *pub*. 1957. v. 12, p. 41–43, illus., maps.)

Account of investigations by the R/V *Dana* and the M/C *Adolf Jensen*. Temperature distribution, and variation (in the latter case, at the Godthåb Fjord, July, 1953–Oct. 1955) and phosphate concentration were studied. Various sections and movement of water masses are also discussed. ***Copy seen:*** DI.

51693. HERMANN, FREDE. Hydrographic conditions in West Greenland waters 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub*. 1958. v. 13, p. 36–37, illus., map.)

Report on temperature at 50 m. in the coastal and open waters and on water movements. The phosphate distribution at 20 m. is also studied and compared with that of previous years. The effect of winter cooling is discussed.
Copy seen: DI.

51694. HERMANN, FREDE. Sections Faroes to East Greenland and Cape Farewell to West Ireland. (International Council for the Exploration of the Sea. Annales biologiques, 1955, *pub*. 1957. v. 12, p. 33–35, illus., maps.)

Report on two sections made by the R/V *Dana* in July and August. An analysis and discussion of the movements of the main water bodies and comparisons with the previous year (1954) are included. ***Copy seen:*** DI.

51695. HERMANN, FREDE. Sections Faroes to East Greenland and Cape Farewell to western Ireland. (International Council for the Study of the Sea. Annales biologiques 1956, *pub*. 1958. v. 13, p. 34–35, illus., map.)

Description of distribution of water masses along these sections and down to a depth of ca. 3,000 m. Conditions and recent changes in the currents are also outlined. ***Copy seen:*** DI.

HERMANN, FREDE, *see also* International Commission NW Atlantic Fisheries. Proceedings . . . 1956–57. *1957*. No. 51934.

HERMANN, FREDE, *see also* International Commission NW Atlantic Fisheries. Proceedings . . . 1957–58. *1958*. No. 51935.

51696. HERMANN, FREDERICK J. Extensions of range and a new species in *Carex*. (Rhodora, Dec. 1937. v. 39, no. 468, p. 491–95.)

Contains an annotated list of 12 species (one new) from Utah and two from Colorado. At least one extension is recorded in Utah: *C. misandra*, "a boreal species ranging from Greenland to Quebec and Alaska; farther south known previously only from central Colorado." ***Copy seen:*** DA.

51697. HERMANN, HENRI. Les effets de l'hypothermie pure sur l'électroencephalogramme. (Acta physiologica et pharmacologica neerlandica, 1957. v. 6, p. 103–110.) 14 refs. Text in French. ***Title tr.:*** The effects of pure hypothermia upon the electroencephalogram.

Not-anesthetized dogs showed first changes in the EEG at about 24° C. with extinction taking place between 17° and 15° C. Complete recovery from temperatures of 22°–20° C. indicates that hypothermia in itself has no adverse effect on brain structure, whilst drugs used to facilitate cooling often slow down recovery. ***Copy seen:*** DNLM.

51698. HERMES, KARL. Die Lage der oberen Waldgrenze in den Gebirgen der Erde und ihr Abstand zur Schneegrenze. Köln, Selbstverlag des Geographischen Instituts der Universität Köln, 1955. 277 p. 8 fold. maps in portfolio. (Kölner geographische Arbeiten, Heft 5.) Refs. Dissertation. Text in German. ***Title tr.:*** The location of the upper tree line in the world's mountains and its distance from the snow line.

Attempt is made to establish these lines for specified areas on all continents, including the tree line in Polar regions (p. 18–24), Scandinavia, Kola Peninsula, Ural (p. 29–34), Kamchatka and Siberian mountains (p. 92–94), North America (p. 139–46, 150–53); similarly the snow line (p. 196–97, 210–11, 213–20).

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51699. HERNANDEZ, THOMAS, 1914– , *and* R. A. COULSON. Inhibition of renal tubular function by cold. (American journal of physiology, Mar. 1957. v. 188, no. 3, p. 485–89. illus.) 9 refs.

In alligators, cold (5° C.) increased the concentration of urinary Na, Cl, Ca, Mg, and glucose and lowered the excretion of NH_3, CO_2 and phosphate. Carbonic anhydrase was not totally inhibited by cold, but clearance of the sulphate and creatine was inhibited. It is concluded that cold almost eliminates renal tubular activity, a condition also found in turtles studied. ***Copy seen:*** DLC.

HÉROLD, M., *see* Cahn, J., *and* M. Hérold. Métabolisme cardiaque sous hypothermie. *1956.* No. 50044.

HÉROLD, M., *see* Cahn, J., *and* M. Hérold. Métabolisme cardiaque sous hypothermie; effets . . . STH. *1956.* No. 50045.

HÉROLD, M., *see* Cahn, J., *and* M. Hérold. Métabolisme cardiaque sous hypothermie, 3; effets du rythme idioventriculaire . . . *1956.* No. 50046.

51700. HÉROUX, OLIVER, 1922– , *and* J. ST. PIERRE. Effect of cold acclimation and vascularization of ears, heart, liver and muscles of white rats. (American journal of physiology, Jan. 1957. v. 188, no. 1, p. 163–68, illus., tables.) 13 refs.

Animals kept four weeks at 6° C. showed no effect on the number of capillaries of the heart and liver-sinusoid but showed a 12-fold increase in the ear. In various regions of the leg-muscle there was also a considerable increase in the number of capillaries. These changes are assumed to indicate higher metabolism in the cold-adapted animals.

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51701. HÉROUX, OLIVER, 1922– , *and* N. T. GRIDGEMAN. The effect of cold acclimation on the size of organs and tissues of the rat with special reference to modes of expression of results. (Canadian journal of biochemistry and physiology, Feb. 1958. v. 36, no. 2, p. 209–216, illus., tables.) 9 refs.

Account of studies of white rats kept at 6° C. or at 30° C. Cold environment and adaptation had no effect on brain, genital and lung weights; they reduced growth of muscle, pelt, fat, skeleton, spleen, thymus and hypertrophied the liver, intestine, kidney, heart and adrenals. The smaller size of cold acclimated rats is attributed to the smaller mass of muscle. ***Copy seen:*** DNLM.

51702. HÉROUX, OLIVER, 1922– . Effect of cold acclimation on thickness and mitotic index of epidermis. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 58.)

The Malpighian layer of the epidermis in rats exposed during four weeks to 6° C. was twice as thick in the ear and tail as before acclimation, but remained unchanged in the plantar and fur-covered areas. Data on the mitotic index of the various areas investigated are also discussed in this connection.

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51703. HÉROUX, OLIVER, 1922– . Weights and composition of muscles of warm- and cold-acclimated rats. (Canadian journal of biochemistry and physiology, Mar. 1958. v. 36, no. 3, p. 289–93, tables.) 5 refs.

After cold acclimation at 6° C., white rats were found to have a smaller muscle mass than controls kept at 30° C. Protein and water determinations revealed this to

be due to reduced protein deposition and not to differences in water content only. Apparently red and white muscle fibers as well as connective tissue, are affected.

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HÉROUX, OLIVER, 1922– , *see also* Depocas, F., ***and others.*** Energy metabolism . . . rat after acclimation . . . *1957.* No. 50510.

51704. HERRE, WOLF. Das Ren als Haustier; eine zoologische Monographie. Leipzig, Akademische Verlagsgesellschaft, 1955. 2, 324 p. 79 illus., incl. maps, tables. About 200 refs. Text in German. ***Title tr.:*** The reindeer as a domestic animal; a zoological monograph.

Comprehensive study of biological, economic and also ethnologic-archeologic interest, by an animal breeder. Consecutive sections deal with: (*1*) General aspects; position of the reindeer as a domestic animal and its economic value. (*2*) Wild forms; beginnings of domestication, and its extent in Europe; its antiquity; Lapps and others as reindeer breeders. (*3*) Wild forms of the genus *Rangifer*, their distribution, morphology and morphometry. (*4*) Domestic forms of the animal; their characteristics, morphometry, coloration, development and growth, body-build and measures of geographic races; antlers, skull, skin, hair, internal organs, etc. (*5*) Ecology, including food plants and physiology of nutrition; habitat and its nature; migrations; relations within the herd and with other animals. (*6*) Diseases. (*7*) Breeding; selection, management, sex life and reproduction, heredity. (*8*) Herd management; size, composition, reproduction; protection of herds; possibilities and criteria of selection; selection and husbandry in the U.S.S.R. (*9*) Performance, as draft animals, as producers of meat, skins, milk, etc. (*10*) Reindeer nomads; their life, shelter, food, etc.; the Lapps, their character, numbers, vital statistics, social and political status, etc. (*11*) Possibilities of development in Lapland, developments in America; possibilities in European Russia; comparisons with other domesticated animals. (*12*) Biological considerations of reindeer domestication. *Appendix* lists Russian and Lapp terms used for reindeer. ***Copy seen:*** DLC.

51705. HERSKOVITS, MELVILLE JEAN, 1895– . Some further notes on Franz Boas' arctic expedition. (American anthropologist, Feb. 1957. v. 59, no. 1, p. 112–16.) 4 refs.

Analyzes Boas' objectives for undertaking his 1883–84 expedition to Baffin Island. His original desire to study the migration of the Iglulik(?) Eskimos and his subsequent emphasis on problems of Eskimo culture and psychology are discussed on the basis of his correspondence and his daughter's testimony.

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51706. HERTZEN, CARL-HENRIK *von.* Seriebyggnad i Finland av 10500 hk havsisbrytare. (Tekniska föreningen i Finland. Förhandlingar, Mar. 1956. årg. 76, nr. 3, p. 64–74, illus., plates, tables.) Text in Swedish. *Also pub.* in shorter version in Teknisk tidskrift, Apr. 1955. årg. 85, häfte 16, p. 359–63. ***Title tr.:*** Series construction of 10,500 hp. ice-breakers in Finland.

The Finnish *Voima* is a prototype for four ice-breakers constructed or under construction at Sandvikens Skeppsdocka, Helsinki: the Swedish *Oden*, and the Russian *Kapitan Voronin*, *Kapitan Belousov*, and *Kapitan Melekhov*. Six diesel engines, each coupled to a generator, deliver power to the four propellers. Varying slightly, the displacement is about 5,000 t. and length o.a. about 83 m. *Voima* and *Oden* carry a crew of 73, while the *Kapitan*-class has accommodations for 117. All main data are tabulated; the three different arrangements of accommodations and equipment are illustrated. ***Copy seen:*** DLC.

51707. HESSELBERG, THEODOR, 1885– , *and* T. W. JOHANNESSEN. The recent variations of the climate at the norwegian arctic stations. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 18–29, illus., maps, graphs.)

Variations in air temperature and atmospheric pressure in the Atlantic sector of the Arctic are discussed on the basis of data from five stations established north of 70° N. lat. by the Norwegian Meteorological Institute, viz: Spitsbergen (established in 1912), Jan Mayen (1920), Bjørnøya (1921), Myggbukta (1922), and Hopen (1946). Map locates these and other synoptic stations north of 70° N. reporting in Jan. 1956. An analysis of the mean temperature for the different seasons shows an increase at all stations with the greatest increase in the winter. Some results of this have been a retreating ice-front and improved fishing. Illus.

show the marked retreat of glaciers on Spitsbergen. An analysis of the changes in pressure distribution indicates increasing southwesterly winds and a retreat of the Arctic High to a more northerly position. ***Copy seen:*** DLC.

51708. HESSLER, V. P., *and* A. R. FRANZKE. Earth-potential electrodes in permafrost and tundra. (Arctic, 1958. v. 11, no. 4, p. 211–17, illus., diagr., graphs.) *Also pub. as* Alaska, University, Geophysical Institute, Geophysical research report no. 6.

Describes installation at Point Barrow of two sets of electrodes to obtain earth-potential data for use in ionospheric studies. The first set, installed in a 6 x 6 ft. excavation down to permafrost (12 in. in Aug. 1955) was five untreated electrodes, which became useless during the winter with resistances increasing by several orders of magnitude as ground temperatures dropped, a pronounced increase occurring below 0° F. A second set, installed in summer 1956 with sodium chloride incorporated in the fill, proved practical for recording earth potentials, maintaining resistances of less than 5,000 ohms throughout the winter. ***Copy seen:*** CaMAI.

51709. HEUSSER, CALVIN JOHN, 1924– . Late Pleistocene environments and chronology of Pacific coastal Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1753–54.)

Contains abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958. Results are described of radio-carbon dating of basal and interbedded peats and pollen-peat stratigraphy of some fifty sections from Alexander Archipelago, Icy Cape, Prince William Sound and Katalla, Kenai Peninsula and Kodiak Island. Evidences of volcanism, glaciation and land-sea level changes are cited, and of the last, measurements and approximate dates are given. ***Copy seen:*** DGS.

51710. HEUSSER, CALVIN JOHN, 1924– . Lemon Creek Glacier, Juneau Ice Field Research Project. (*In:* American Geographical Society. Preliminary reports of the Antarctic and Northern Hemisphere glaciology programs, 1958. p. X 1–4.) Ref.

This project completed its ninth year of glaciological and related studies during June 5–17 and Sept. 1–16, 1957. Five research objectives, and achievements in the fields of hydrological budget, surface movement, mapping, glacier variations, and photographic record by total of six participants, are briefly reported. ***Copy seen:*** DN–HO.

51711. HEUSSER, CALVIN JOHN, 1924– . Pleistocene and postglacial vegetation of Alaska and the Yukon Territory. (Biology Colloquium, 18th. 1957, p. 62–72, illus., sketch maps, graph.) Approx. 63 refs.

Reconstruction of vegetation sequences, based mostly on review of the literature (some unpublished) of pollen and spore stratigraphy of Alaskan and Yukon peats. In unglaciated areas in the interior and on the Pacific coast, plants appear to have survived two or more intervals of glaciation. From these areas of refuge, elements migrated during the postglacial, and probably interglacials, to repopulate territory previously occupied by glaciers. Pollen diagrams from the Brooks Range show a gradual influx of spruce until the close of the postglacial interval of maximum warmth. Forest development in southern, southwest and southeast Alaska is traced. ***Copy seen:*** DGS.

HEUSSER, CALVIN JOHN, 1924– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

HEUSSER, CALVIN JOHN, 1924– , *see also* American Geographical Society. Geographic study of mountain glaciation. *1958.* No. 49276.

51712. HEWES, GORDON W., 1917– . Aboriginal use of fishery resources in northwestern North America. (Kroeber Anthropological Society. Papers, Spring 1956. no. 14, p. 98–99.) Abstract of Ph. D. dissertation, University of California.

Discusses the relation of fishing to culture, ecology, geography and wildlife management. Native fishing and development of commercial fisheries are sketched. Salmon stock originally depleted by the aborigines, increased as native population declined with advent of the white man and salmon was abundant when commercial fisheries and canning were introduced in the 1860's.

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51713. HEYES, J. K., *and* G. W. SHAW. Chemical determination of deoxyribonucleic acid in root tips before and after cold treatment. (Nature, *London,* May 10,

1958. v. 181, no. 4619, p. 1337–38, illus.) 8 refs.

Report on investigation of root tips of *Vicia, Trillium* and *Paris*. Cell division was suppressed at 5° C.; at 0° both division and expansion are suppressed. Results regarding deoxyribonucleic acid were contradictory and depending on the method used. ***Copy seen:*** DLC.

51714. HEYWOOD, W. W. Isachsen area, Ellef Ringnes Island, District of Franklin, Northwest Territories. Ottawa, 1957. 36 p. 9 plates, fold. map, 2 tables. (Canada. Geological Survey. Paper 56–8.) 21 refs.

Reconnaissance geology of the central part of the island, based on field study 1952 and 1953. Climate, flora, fauna, topography and drainage are sketched. A table of formations is presented, and description given of rocks, fossils, Quaternary sediments and their weathering, glaciation, structure, and the Isachsen piercement dome. Map, scale 1:190,080, shows distribution of features surveyed, many of them are illustrated.

Copy seen: DGS.

HIBBETT, TOMI K., *see* Moorrees, C. F. A. The Aleut dentition . . . *1957*. No. 53386.

51715. HIBBS, RUSSELL S. The cold front. (Marine Corps gazette, June 1958. v. 42, no. 6, p. 53–60, illus.)

Discusses the Arctic's strategic importance, emphasizing the Soviet Navy's experience in arctic operations; the U.S. excels only in naval architecture. The development of the Northeast and Northwest Passages is reviewed, and future of the Northwest Passage is discussed. Importance of increased U.S. activity in the Arctic is stressed.

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51716. HIESTAND, THOMAS C. Reconnaissance of Koyukuk Basin, Alaska, via helicopter. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1864.)

Abstracts paper presented at the Society meeting in Logan, Utah, May 10–11, 1957, describing stratigraphy of this western central Alaska sedimentary basin, as observed during explorations for an oil company. ***Copy seen:*** DGS.

HIESTAND, WILLIAM ANDREW, 1903– , *see* Jasper, R. L., *and others*. Comparison of tissue respiration . . . *1958*. No. 52050.

51717. HILDEBRANDT, GUNTHER. Über tagesrhythmische Steuerung der Reagibilität; Untersuchungen über den Tagesgang der akralen Wiedererwärmung. (Archiv für physikalische Therapie, 1957. Jahrg. 9, Heft 4, p. 292–303, illus.) 13 refs. Text in German. ***Title tr.:*** Diurnal rhythmic control of reactivity; investigations on the diurnal course of acral rewarming.

Account of investigation of 60 subjects, male and female, aged 17–74. Experiments on rewarming of a chilled extremity (hand) indicate a diurnal cycle in temperature regulation. This varies from person to person, suggesting different reaction types. ***Copy seen:*** DNLM.

51718. HILDES, J. A., *and others*. Antibodies to adenovirus and to psittacosis in Eastern Arctic Eskimos. (Canadian journal of public health, June 1958. v. 49, no. 6, p. 230–31, table.) 3 refs. *Other authors:* J. C. Wilt *and* F. J. Stanfield.

In blood samples from 241 apparently healthy adults from 13 localities of this area incidence of adenovirus antibodies was 35% and as high as 80% in two places. About 15% of the sera had antibodies to psittacosis.

Copy seen: DNLM.

HILL, D. E., *see* Tedrow, J. C. F., *and others*. Major genetic soils . . . *1958*. No. 55364.

51719. HILL, H. W. Hydrographic conditions in the Barents Sea during 1956. (International Council for the Study of the Sea. Annales biologiques, 1956, *pub.* 1958. v. 13, p. 11–26, illus., table, maps.) Ref.

Account based on investigations of English and Norwegian arctic teams including a minimum of four sections, each surveyed three times in 1956. Surface temperature and its course during the year, distribution of bottom temperature and salinity are discussed in detail. The latter two parameters are also described from sections and water masses and transport (currents) analyzed.

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HILL, R. W., *see* Kaufman, N., *and others*. The effects of prolonged hypothermia . . . *1958*. No. 52204.

51720. HILLMAN, ROBERT WRIGHT, 1915– . Hypervitaminosis A; experimental induction in the human subject.

(American journal of clinical nutrition, Nov.–Dec. 1956. v. 4, no. 6, p. 603–608, illus., tables.) 30 refs.

Account of experimental production of this hypervitaminosis in a man of forty during two periods, in December and the following May. Plasma vitamin levels, sedimentation rate, serum bilirubin, cholesterol concentration, etc., were determined and roentgenograms of the pelvis and extremities studied. Clinical manifestations are described and discussed. ***Copy seen:*** DNLM.

51721. HIMMELSTRUP, OLAV. Grønlandske boligproblemer. (Atuagagdliutit: Grønlandsposten, Dec. 13, 1956. Ukiut 96-iat, nr. 25, p. 2, 10, 14–17.) Text in Danish and Eskimo. ***Title tr.:*** Greenland housing problems.

Reviews development from 1953, the period of the building-loan scheme. In 1956, 238 houses were started; the number of types (32) should be reduced. Interior planning and building materials are discussed. For the smaller dwellings, wood (for basic construction) and fireproof slabs are best. Rowhouses are discussed, also, in the North, peat houses. ***Copy seen:*** DLC.

51722. HINDLE, EDWARD. Carl Linnaeus as a traveller. (Geographical journal, Dec. 1957. v. 123, pt. 4, p. 510–12, text map.)

Includes description of Linné's journey of May–Oct. 1732 to Lapland, then virtually unknown. From Luleå and the Luleälv he traveled to Kvikkjokk, thence to the mt.-glacier region on the Norwegian border, and to the Norwegian coast at Rørstad not far from the Lofoten Islands. He returned to Torneå and continued round the Gulf of Bothnia through Finland to Åbo. Results of the trip appeared as *Flora Lapponica* (No. 10194, 10195); his travel diary was published in English translation as *Lachesis Lapponica or A tour in Lapland*, and in Swedish under title *Iter Lapponicum* (cf. No. 10196). ***Copy seen:*** DGS.

HINES, EDGAR ALPHONSO, JR., 1905– , *see* Gifford, R. W., *and others.* Sympathectomy for Raynaud's phenomenon; follow-up . . . *1958.* No. 51182.

HINTON, A., *see* Bristow, J., *and* A. Hinton. Great . . . adventures . . . *1957.* No. 49921.

HINTON, J. WILLIAM, *see* Postel, A. H., *and others.* The . . . hypothermia in experimental hemorrhagic shock. *1957.* No. 54105.

51723. HIORTH, GUNNAR. Produksjon av planter av aktuelle fremmede treslag. (Norske skogplanteskoler. Årsskrift 1956, *pub.* 1957. p. 61–79.) Text in Norwegian. ***Title tr.:*** Production of plants of current foreign tree species.

Increasing the number of productive tree species in Norway, tree growth at higher elevations, and improved production in present forested regions are discussed. Imported species should be grown experimentally in plots similar to the habitat from which the seed was selected. Foreign trees believed useful to Norway are evaluated, among them nine *Abies* species, three *Larix*, two *Picea*, three *Pinus*, and a *Tsuga* sp. These and other conifers and deciduous species are discussed in turn: seeding, transplanting, early care, and differences in growth and handling, etc. ***Copy seen:*** DA.

51724. HIPKINS, FRED W. The Dungeness crab industry. Washington, D.C., 1957. 12 p. illus., tables. (U.S. Fish and Wildlife Service. Fishery leaflet 439.)

This crab (*Cancer magister*), often called Pacific crab, inhabits an area between central California and central Alaska with a corresponding extent of industry. Data are presented on its landings (since 1946); history of fishery; methods and boats; fishing areas; processing; marketing. ***Copy seen:*** DI.

HIROSE, H., *see* Wotkyns, R. S., *and others.* Prolonged hypothermia in experimental pneumococcal peritonitis. *1958.* No. 56118.

51725. HIRSCH, CHR. WORM. Sjøkabelen over Bussesund. (Elektroteknisk tidskrift, 1947. årg. 60, nr. 26, p. 305–306, 4 illus.) Text in Norwegian. ***Title tr.:*** The sea cable across Bussesund.

Bussesund, the strait between the mainland and Vardø in Finnmark, is a mile wide and 60 ft. deep, with sandy bottom. A 20 KV sea cable was laid across the strait for power supply to Vardø. This cable was destroyed by the Germans in 1944, and a new one was laid in 1946. ***Copy seen:*** DLC.

51726. HIRSCH, H., *and others.* Über die Erholung des Gehirns nach kompletter

Ischämie bei Hypothermie. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 265, Heft 4, p. 314–27, illus. table.) 72 refs. Text in German. *Other authors:* K. H. Euler *and* M. Schneider. ***Title tr.:*** On the recovery of the brain after complete ischemia with hypothermia.

Accounts of experiments on isolated heads of cats perfused with the donors blood and on rabbits by the cuff method, with hypothermia down to 20° C. Recovery latency and recovery time of the spontaneous potentials of the cortex were studied with ischemia and hypothermia applied concurrently. Some experiments are also discussed with temperature changes applied after ischemia.

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51727. HIRSCH, H., *and others.* Über die Wiederbelebung des Gehirns bei Hypothermie. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 265, Heft 4, p. 328–36, illus., table.) 32 refs. Text in German. *Other authors:* A. Bolte, A. Schaudig, *and* D. Tönnis. ***Title tr.:*** On brain resuscitation from hypothermia.

Account of experiments on hypothermic rabbits, made ischemic with the cuff method and having respiration suspended. Revival times increased in about a linear way between 38° and 20° body temperature. Survival time at each temperature was about doubled when ischemia and respiration suspension were not applied.

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51728. HIRSCH, H., *and others.* Über Formänderungen von Aktionspotentialen der Area striata durch Hypothermie. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 267, Heft 4, p. 348–57, illus.) 41 refs. Text in German. Summary in English. *Other authors:* A. Bolte, G. Huffmann, A. Schaudig *and* D. Tönnis. ***Title tr.:*** Changes in the form of action potentials of the area striata through hypothermia.

Account of experiments on isolated and artificially perfused heads of cats. Latencies of responses to photic or electric stimulation increased with decreasing temperature. Amplitudes of light responses first remained unaffected by falling temperature, then decreased, disappearing at 18°–17° C.; responses to electrical stimuli, first increased, then decreased, and disappeared at 18°–15° C.

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51729. HIRSCH, H. Über Formänderungen von Aktionspotentialen der Area striata durch Hypothermie nach elektrischer Reizung des N. opticus. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 266, Heft 1, p. 76.) Text in German. ***Title tr.:*** Changes in form of action potentials of the area striata through hypothermia following electrical stimulation of the N. opticus.

Summary of experiments on isolated cat heads at 37° and 15° C. Action potentials disappeared at 16°–17° with the (5) waves almost simultaneously extinguished. Latency for all waves increased with fall of temperature and amplitude of the total potential increased.

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HIRSCH, H., *see also* Schaudig, A., *and* H. Hirsch. Die Verkürzung der Wiederbelebungszeit . . . *1957.* No. 54598.

51730. HITCHCOCK, CHARLES LEO, 1902– . The *Tofieldia glutinosa* complex of western North America. (American midland naturalist, Mar. 1944. v. 31, no. 2, p. 487–98, 8 illus., text map.)

Contains a comparative study of this false asphodel and two closely related species, *T. occidentalis* and *T. intermedia.* A key is given and descriptions of five subspecies of *T. glutinosa,* of which ssp. *brevistyla* n. ssp. occurs in southern Alaska.

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51731. HJELVIK, KARL. Med kaptein Nordahl Grieg på Jan Mayen i 1942. (Polarboken 1958. p. 7–22, ports., facsim.) Text in Norwegian. ***Title tr.:*** With Captain Nordahl Grieg on Jan Mayen in 1942.

Memoir on this Norwegian writer 1902–1943, in particular his sojourns on Jan Mayen during two months in summer and for a short period in December 1942. Everyday life of the Norwegian garrison on the island is described; then the only Norwegian territory unoccupied by the Germans outside the Antarctic. A short introduction is contributed by Helge Ingstad. ***Copy seen:*** SPRI.

51732. HJORT, JOHAN, 1869–1948. Hydrografisk-biologiske studier over norske fiskerier. (Norske geografiske selskab. Årbok, 1894–1895, *pub.* 1895. v. 6, p. 127–46, 5 fold. col. maps.) Text in Norwegian. ***Title tr.:*** Hydrographic-biologic studies of Norwegian fisheries.

Annual periodicity of fish occurrence on the Norwegian coasts is discussed and variations are noted. Outer limits of the coastal banks are traced and differences

indicated between the fresh cold waters of the Baltic current which continues westward along the Norwegian coast, and the warmer saline ocean layers. In winter, the hydrology depends to some extent on meteorological conditions. Fishery research in Scandinavian waters indicates that fish approach the shore to spawn only in areas of the warmer water layers. In the fresher water the eggs, if left free, sink due to their specific weight. The cold Baltic current lacks the plankton necessary to feed fry of Norwegian coastal fish. Variations in salt content of the North Sea and adjacent waters over 2½ years are mapped. ***Copy seen:*** DLC.

51733. HJULSTRÖM, FILIP, *and others.* Mikkaglaciären i Sarek: 1, Om geografisk forskning i Sarekområdet, av F. Hjulström; 2, Mikkaglaciären sommaren 1946, av. N. Boman och B. Wennerberg; 3, Mikkaglaciären sommaren 1954, några iakttagelser och jämförelser med främst Tjågnorisglaciären, av G. Norling. (Geographica 1957. nr. 31, p. 48–90, illus., maps, tables, diagrs.) 23 refs. Text in Swedish. Summary in English. ***Title tr.:*** The Mikka glacier in Sarek: 1, On geographical research in the Sarek area, by F. Hjulström; 2, The Mikka glacier in the summer of 1946, by N. Boman and B. Wennerberg; 3, The Mikka glacier in the summer of 1954, some observations and comparisons, particularly with the Tjågnoris glacier, by G. Norberg.

Hjulström (p. 48–51) reviews research programs in the Sarek mountain region (67°27′ N. 17°40′ E.) of north Sweden. Its pioneer was Axel Hamberg who visited the area every year (except two) between 1895 and 1931 (No. 45405).

Boman and Wennerberg (p. 52–57) report that the Mikka glacier (67°25′ N. 17°42′ E.) receded 320 m. between 1913 and 1946 (measurements taken at the tip). At the tip an ice mass 80 m. thick has melted; 400 m. above the tip about 60 m. has melted. The glacier tongue and the moraines (the terminal moraines constitute four different lines) are described. The fast melting process is attributed to decreased precipitation during winter, autumn, and spring and higher temperatures in all seasons, especially summer.

Norling (p. 58–86) describes the glacier in detail, its greatest length about 4.5 km., lowest point about 935 m. above sea level. To the west of Sarektjåkko is a small glacial lake, an unusual feature in Swedish glaciers. The highest rate of movement in the middle of the glacier was 4.9 cm. in 24 hrs., a decrease of about 40% since 1895–97. The total recession 1913–1954 was 457 m., an average of 11 m./yr.; but since 1946 the glacier has receded 137 m., indicating an increase of about 50% in the rate of recession. The Tjågnoris glacier, about three km. east of Mikka, is 3 km. long, lowest point 1,150 m. above sea level; the total recession 1913–1954 was 210 m. and the rate, like Mikka's, had increased about 50%. Higher spring and autumn temperatures, by lengthening the ablation period, have been the important factor in the recession. ***Copy seen:*** CaMAI.

51734. HOAR, WILLIAM S., *and* **M. K. COTTLE.** Dietary fat and temperature tolerance of goldfish. (Canadian journal of zoology, Feb. 1952. v. 30, no. 1, p. 41–48, illus. table.) 7 refs.

Accounts of experiments, with low temperature down to 2.2°±0.3° C. No evidence was found of a relationship between the melting point of the dietary fats and resistance to cold. However, hydrogenation of the pilchard oil fed, reduces resistance to both low and high temperatures. ***Copy seen:*** DLC.

51735. HOAR, WILLIAM S., *and others.* Reactions of juvenile Pacific salmon to light. (Canada. Fisheries Research Board. Journal, Nov. 1957. v. 14, no. 6, p. 815–30, illus., tables.) 9 refs. *Other authors:* M. H. A. Keenleyside *and* R. G. Goodall.

A study of reactions of coho and sockeye fry and smolts and of chum and pink salmon fry to different light intensities. Reaction varied with species, age and light intensity. An attempt is made to relate these differences of behavior in two species to their schooling and alarm reaction. ***Copy seen:*** DLC.

51736. HOAR, WILLIAM S., *and* **M. K. COTTLE.** Some effects of temperature acclimatization on the chemical constitution of goldfish tissues. (Canadian journal of zoology, Feb. 1952. v. 30, no. 1, p. 49–54, illus., table.)

Report on experiments with fish held for 10 days or more at temperatures of 5, 15, 20, or 35° C. Their water content varied directly and lipid content inversely with the change in acclimatization temperature; cholesterol: fatty acid ratio varied directly, cholesterol: phospholipid ratio inversely, and iodine value changed by

0.51 point per degree of increase in water temperature. ***Copy seen:*** DLC.

HOAR, WILLIAM S., *see also* Irvine, D. G., *and others.* Effects of dietary phospholipid . . . *1957.* No. 51957.

HOARE, JOSEPH McCORMICK, 1918– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

HOARE, JOSEPH McCORMICK, 1918– , *see* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

51737. HOCHBAUM, HANS ALBERT. Travels and traditions of waterfowl. Minneapolis, University of Minnesota Press, 1955. x, 301 p. illus., maps, tables. Approx. 450 refs.

A penetrating study of the ducks, geese and swans, their behavior and movements as observed at the Delta Waterfowl Research Station, Manitoba (of which author is director); migrations (p. 89–213); and their traditions, "behavior that is delivered by ancestors to progeny non genetically." The discussion of migrations, which has the most direct bearing on arctic areas and conditions, includes the southward migration of these birds from their breeding grounds and home, and their return in the spring; the influence of movements of air masses upon the migrations and ways of orientation, etc. The concept of tradition and its role in migration is analyzed in detail. An extensive bibliography, a list of common and Latin names of the birds studied, and a useful index are appended. Author's numerous drawings and diagrams embellish and elucidate the study.

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51738. HOCK, RAYMOND JAMES, 1918– , *and* M. S. WILSON. High school biology in Alaska; present aspects. (*In:* Alaskan Science Conference . . . 1954. Proceedings, *pub.* 1957, p. 104–108.) 5 refs.

Comments on texts and course outlines; suggests that Alaskan subject matter and examples be brought into the classroom.

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51739. HOCK, RAYMOND JAMES, 1918– . Metabolic rates and rectal temperatures of active and "hibernating" black bears. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 440.)

With a den temperature 1° to 10° C. above that outside, rectal temperature stayed at 31.2°, some 7° below normal. Thermoneutrality in late winter ranged from 20° C. to −20° C., with lowest values at −10° C. Metabolic rate and RQ are also determined.

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HOCK, RAYMOND JAMES, 1918– , *see also* Adams, T., *and others.* Racial variations . . . cold stress. *1957.* No. 49113.

HOCK, RAYMOND JAMES, 1918– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

HODGSON, W. H., *see* Hood, J. M., *and* W. H. Hodgson. Marker flag visibility . . . *1958.* No. 51802.

51740. HOEFSMIT, F. C. Shoran reconnaissance in Canada's North. (Canadian geographical journal, Aug. 1957. v. 55, no. 2, p. 70–75, 5 illus., text map.)

Exploration and location of sites for shoran stations have been carried out by field parties from Ottawa in summers 1952–1956. Trip by Spartan Air Services and Canadian Aero Service in 1956 with Norseman aircraft, author participating, is described: the flight north from Churchill, Man., to Wager and Repulse Bays and west to Hayes Lake, Keewatin; installation of stations from Pelly Lake base (approx. 66° N. 100° W.) and at Hayes Lake. The Ross Bay station was installed using dog-teams from Repulse Bay. ***Copy seen:*** DLC.

51741. HÖGBERG, L. Lufttrycket i Sverige, 1901–1930. Stockholm, 1949. 27 p. incl maps. (Sweden. Meteorologiska och hydrologiska institutet. Meddelanden, ser. A, nr. 2.) Text in Swedish. Summary in English. ***Title tr.:*** Atmospheric pressure in Sweden 1901–1930.

Mean values of air pressure for the period 1901–1930 were computed. The barometric stations used (among them Karesuando, Jokkmokk, Haparanda, Piteå), annual and monthly means of air pressure for the years 1896–1930 for selected stations, monthly mean values for 1901–1930 reduced to 0° C. and normal gravity but not to sea level, and to sea level are tabulated. Other tables show quinquennial monthly means for the period 1866–1940, reduced to 0° C., normal gravity and sea level, and the difference between the mean pressure 1901–1930 and the pressure 1866–1895. Maps are drawn on the basis of these

values. Annual and secular variations 1866–1940 are given for some selected stations. ***Copy seen:*** DWB.

51742. HÖGBOM, ARVID GUSTAF. Nivåförändringarna i Norden; ett kapital ur den svenska naturforskningens historia. Göteborg, 1920. 163 p. fold. table. (Göteborgs k. vetenskaps- och vitterhets-samhälle. Handlingar, 1918–1919, 4. följden, häfte 21–22.) Refs. Text in Swedish. ***Title tr.:*** Changes of level in Fennoscandia; a chapter from the history of Swedish research in the natural sciences.

Reviews contributions to study of transgression and regression of the sea from 1694, Urban Hjärnes' discussion of the active process on the Swedish coast: the fact of recent submergence of dry tracts along the coast grew into a theory of diastrophism for the earth as a whole; Swedenborg (1710) expanded the geographic scope of the theory by relating it to Noah and the flood; Celsius, in 1724, attributed the apparent drop in sea level to a diminished water supply, his argument in contrast with earlier, concerned post-Glacial, largely historical time. Linnaeus related fossils and raised shorelines to changes of level.

Runeborg attempted to explain the changes as a result of deformation of the earth. C. Fr. Nordenskjöld in 1769 debated isostatic and eustatic changes. Kielhau in 1838 reported on changes of level in Norway, attributed by A. Bravais in 1842 to rise of the land. Eugène Robert (1844) recognized that relative rise of the land was greater in northern than in middle latitudes. Agassiz's glacial theory gave interpretation to erratic boulders, gravel deposits, glacial striae and other phenomena common to Scandinavia. Differentiation of Glacial and post-Glacial deposits, of supramarine and submarine deposits, and other local investigations added to knowledge of the Scandinavian landscape. Plant geography studies, and the advancement of geological theory are discussed with mention of other Scandinavian investigators and their works.

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51743. *HÖHN, EMIL OTTO, 1919– . Observations on display and other forms of behavior of certain arctic birds. (Auk, Apr. 1957. v. 74, no. 2, p. 203–214.) 16 refs.

* See also No. 51760.

More than 20 species were observed during a three-month stay (May–July 1953) in the Sachs Harbour area of Banks Island (72° N. 125° W.) in the Western Canadian Arctic. Courtship, distraction and fear displays, aggressive behavior, display flights and songs, retrieving of eggs and "nest complex" are recorded and described.

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51744. *HÖHN, EMIL OTTO, 1919– . The supposed occurrence and nesting of the slaty-backed gull in the western arctic region of Canada. (Canadian field-naturalist, Jan.–Mar. 1958. v. 72, no. 1, p. 5–6.) 6 refs.

Between July 18 and 23, 1955, no occurrence was recorded of this gull, *Larus schistisagus*, on Harrowby Bay (70°10′ N. 128° W.) on the arctic coast, as reported by A. K. Fisher in 1902, and H. H. Bodfish in 1901. Hence "there is no valid record for *L. schistisagus* for Canada or the adjacent seas, nor any evidence that this gull has nested on the North American continent."

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HØIDAL, PEDER, *see* Jonsgård, Å., *and* P. Høidal. Strandings of Sowerby's whale . . . *1957*. No. 52102.

51745. HÖIJER, BJÖRN-ERIK, 1907– . Hemma i Malmberget. (Svenska turistföreningen. Årsskrift, 1957. p. 153–68, 5 illus.) Text in Swedish. ***Title tr.:*** At home in Malmberget.

A native of Malmberget in northern Sweden traces the history of mining there, from the 18th century when ore was hauled to the coast by reindeer. Recent changes are briefly reviewed; the mines are now state-owned. Present mining conditions and the miner's life are sketched. ***Copy seen:*** DGS.

51746. HOEL, ADOLF, 1879– . Hallvard Devold; en merkelig livsskjebne. (Polarboken 1957, p. 152–56, port.) Text in Norwegian. ***Title tr.:*** Hallvard Devold; a remarkable life story.

Obituary with sketch of his life (1898–1957) and activities: service at meteorological and geophysical stations in north Norway, Svalbard and on Jan Mayen; hunting in northeast Greenland and in 1928 founding a hunting company, Arktisk naeringsdrift (Arctic trade). He raised the Norwegian flag at the Myggbukta (73°29′ N. 21°33′ W.) weather

* See also No. 51760.

station in 1931 and claimed the part of northeast Greenland comprising the Norwegian hunting districts for Norway. The claim was disputed by Denmark, and the case lost before the International Court at the Hague. In 1933–34 Devold was in charge of Isfjord Radio and a meteorological station on Spitsbergen; in 1938 he organized a salmon fishing expedition to southeast Greenland; in 1941 led an expedition to northeast Greenland, which was seized by the Americans; in 1940 he published *Polarliv* (No. 28745) on his experiences in the Arctic.

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HOERNI, J. A., *see* Meier, M. F., *and others.* Preliminary . . . crevasse formation . . . *1957.* No. 53215.

51747. HOFER, ERNST. Arktische Riviera; ein Bildband über die Schönheit Nordostgrönlands. Bern, Kümmerly & Frey, 1957. 125 p. 78 illus., 3 maps. Text in German. ***Title tr.:*** Arctic Riviera; an illustrated volume on the beauty of Northeast Greenland.

Collection of color and black-and-white photographs of landscape taken, many from aircraft, by the official photographer on four Danish expeditions in the area in 1949, 1950, 1951, and 1954 under the direction of L. Koch. Ice conditions, icebergs, glaciers and other geological phenomena, vegetation and plant life, animal studies and Greenlanders are included. Informative captions accompany the photographs, many of scientific interest, and many taken in the vicinity of and on Ella Ø where a station was established. An account of the author's experiences and impressions of other members of the expeditions are included, as well as a map of the area. ***Copy seen:*** DLC.

51748. HOFF, CLARENCE CLAYTON, 1908– . List of the pseudoscorpions of North America north of Mexico. New York, 1958. 50 p. (American Museum of Natural History. New York. American Museum novitates, no. 1875.) 10 refs.

Contains a systematic annotated list of more than one hundred fifty species of pseudoscorpions with synonyms and data on the distribution; *Chelifer cancroides* from Alaska, is included. In a second list, the species are arranged alphabetically by states and provinces; a key to the genera reported for North America is added.

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51749. HOFFMAN, ROGER A., *and* C. G. WILBER. Comparison of temperature response of some homeotherms to tranquilizing and related drugs. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 72.)

Summary of investigations on the temperature effect of reserpine, serotonin and chlorpromazine upon some birds and mammals. A species variation in temperature responses (and O_2-consumption) to these drugs was established.

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51750. HOFFMAN, ROGER A. Effect of LSD–25 on body temperature of pigeons. (American journal of physiology, Dec. 1958. v. 195, no. 3, p. 747–50, illus.) 12 refs.

Subcutaneous administration of this compound caused a temperature fall with a maximum in 1–2 hrs. and recovery by 4–6 hrs. Simultaneously O_2-consumption and heart rate decreased, while breathing rate increased greatly.

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51751. HOFFMAN, ROGER A. Temperature response of the rat to action and interaction of chlorpromazine, reserpine and serotonin. (American journal of physiology, Dec. 1958. v. 195, no. 3, p. 755–58, illus.) 13 refs.

Account of experiments indicating that reserpine and chlorpromazine act by different mechanisms; "while reserpine and serotonin may act at similar sites, it is . . . apparent that different effector sites are differently affected as well, at least insofar as thermoregulation is concerned."

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51752. HOFFMANN, ROBERT S. The meaning of the word "taiga." (Ecology, July, 1958. v. 39, no. 3, p. 540–41.) 16 refs.

Two meanings are attached to this term (of Russian origin) by western ecologists: the circumpolar coniferous forest zone which bounds the tundra on the south; and the ecotone between tundra and coniferous forest. Author is against restricting the term to an ecotone. He cites Russian sources to show the original and present-day meaning as the first cited above, and reviews other terms used for the ecotone. ***Copy seen:*** DLC.

51753. HOFMANN, WALTHER, 1920– . Bestimmung von Gletschergeschwindigkeiten aus Luftbildern. (Bildmessung und Luftbildwesen, Sept. 1, 1958. no. 3, p. 71–88, illus., tables, graph, diagrs.) 6 refs. Text in German. Sum-

mary in English and French. ***Title tr.:*** Determination of glacier velocities from aerial photographs.

"A method of aerial photogrammetry which permits measurement of glacier movement is described, and the results of tests in Greenland in July 1957 during preparatory work for the International Glaciological Expedition of 1957–1960 are reported. The method consists in measuring directly by stereoscopy the displacements on photographs taken during two independent flights. The measured values are reduced to pure motion parallaxes using a stereo model of the flight. The most suitable instruments for plotting are the Zeiss Aerophotograph Stereopret and Stereotope. The method proved satisfactory in Greenland in spite of poor photographic material. Data on the velocity of Kangigdleq and Sigssortartoq Glaciers are tabulated."—SIPRE.

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51754. HOFMANN, WALTHER, 1920– . Glaziologisch-geodätische Forschungsarbeiten am Mt. Rainier, USA. (Zeitschrift für Vermessungswesen, Feb. 1957. Jahrg. 82, Heft 2, p. 54–56.) 5 refs. Text in German. ***Title tr.:*** Glaciological-geodetic research on Mt. Rainier, U.S.A.

Reports the continuation in 1956 of studies initiated by the author in 1952. Photogrammetric and trigonometric observation procedures are described briefly.

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51755. HOFMANN, WALTHER, 1920– . Die Internationale Glaziologische Grönland Expedition 1959/60. (Naturwissenschaftliche Rundschau, May 1958. Heft 5, p. 169–75, illus.) Ref. Text in German. ***Title tr.:*** The International Glaciological Greenland Expedition 1959/60.

Reviews organization, plans, and main objectives of this expedition to the central inland ice, the author in charge of geodetic work. The budget, state and dynamics of the icecap are to be studied: German scientists to carry out geophysical, meteorological, and geodetic work; Danes, geodetic and photometric measurements of the coasts; Austrians, radiation in the ablation zone; French, glaciology and hydrology of the ablation zone; and Swiss, glaciology of the icecap. A summer 1957 reconnaissance was made to determine access, station locations, routes, etc. General direction and technical arrangements are by the French.

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51756. HOFMANN, WALTHER, 1920– . Lagemessungen bei der Internationalen Glaziologischen Grönland-Expedition (EGIG) 1959. (Zeitschrift für Vermessungswesen, July 1958. Jahrg. 83, Heft 7, p. 216–22, map, diagrs.) 7 refs. Text in German. ***Title tr.:*** Position measurements by the International Glaciological Greenland Expedition 1959.

Positions are to be determined with a horizontal accuracy of ± 2 m., vertical ± 1 m., along two base lines: one (820 km.) runs west-east from Umanak to Cecilia Nunatak, the other (300 km.) north-south some 100 km. from the western edge of the icecap. Aluminum tubes 10 m. long are to be used for markers, placed in 3-m.-deep bore-holes at 10 km. intervals. Height determinations along the west-east profile will be made by geometric levelling; along the north-south line, trigonometrically. Advantages and disadvantages of possible methods of position determination are discussed in detail; the favored method requires four weasels equipped with tellurometers to measure a chain of squares 10 by 10 km. while moving parallel at this distance along the base line (two at 10 km. distance from the line); the geometric figure, of which the weasels mark the four corners, will be maintained square through accurate navigation by compasses and kilometer-counters. Measurements are to be reduced and controlled upon completion of each square. Polygonometric measurements will be applied on the north-south profile and the eastern part of the west-east profile. ***Copy seen:*** DLC.

51757. HOFMANN, WALTHER, 1920– . Stand der Vorbereitungen zur Internationalen Glaziologischen Grönland-Expedition (EGIG) 1957–60. (Zeitschrift für Vermessungswesen, July 1958. Jahrg. 83, Heft 7, p. 235–36.) 6 refs. Text in German. ***Title tr.:*** Status of the preparations for the International Glaciological Greenland Expedition (EGIG) 1957–1960.

The main expedition, headed by P. É. Victor is to begin work in 1959 (Apr.–Sept.), the glaciologists and meteorologists wintering (1959–60) on the inland ice. Five national groups are to participate: Denmark (group: coastal geodesy) will undertake aerophotogrammetric sur-

veys of the glacier-tongues on the western edge of the inland ice at Disko and Umanaq Bays, also survey of Kangerdlugssuaq glacier. Germany (group: geodesy and geophysics, including meteorology) will carry out seismic, gravimetric, magnetometric and electric measurements of the inland ice for the determination of its thickness and density and exploration of the ground beneath the ice, also measurements of quadrilaterals and check points for the aerial survey on Kangerdlugssuaq glacier; the geodetic program covers measurements of position and altitude along two profiles within the zone of greatest glacial activity. France (group: hydrology and coastal glaciology) is responsible for the technical preparation, logistics, etc.; its hydrology groups will measure run-off and bathymetry in Kangerdlugssuaq Fjord, measure ablation and study structure of the marginal zone of the inland ice. The Swiss (glaciology) group will investigate the structure, physics, and chemistry of the firn and ice-bodies above the firn line. An Austrian expert on radiation measurements is to be with the coastal glaciology group. Group leaders and some participants are named.

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51758. HOGUE, DONALD W. Significant environmental contrasts of the Thule and Narsarssuak, Greenland, areas, including the adjacent icecap areas. Natick, Mass. Nov. 1958. 23 p. text map, 13 tables. (U.S. Quartermaster Research and Engineering Center. Environmental Protection Research Division. Research Study Report RER–23) 17 refs.

Furnishes information on topography, weather conditions, and accessibility of these two sites and of their adjacent icecap areas; and discusses their relative merits for testing equipment and for research purposes. Narsarssuak, in southwest Greenland, has easier year-round accessibility; is 1,200 miles closer to the United States; can be reached by large ships during any month, even in midwinter with icebreaker assistance. Its climatic conditions are warmer but stormier than Thule in northwest Greenland. Several hundred miles of ice-laden waters must be navigated to reach Thule during the brief shipping season, and in 1957 most supplies (six out of every seven tons) went there by ship. Access to the inland ice is less difficult from the Thule area; but Narsarssuak Air Base has a 47-mile approach road to the ice-cap.

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51759. HOGUE, DONALD W. Temperatures of northern North America. Natick, Mass., June 1956, rev. Oct. 1957. 62 p. 13 text maps, 7 tables. (U.S. Quartermaster Corps. Environmental Protection Research Division. Research Study Report RER–9.) 53 refs.

Second printing, with minor revisions, a few additional data and references, of No. 45575. ***Copy seen:*** CaMAI.

51760. *HOHN, EMIL OTTO, 1919– . Observations on the behaviour of certain arctic birds. (Arctic, 1958. v. 11, no. 2, p. 93–101.) 9 refs.

Report of observations on 14 species of birds (loons, old squaw, ptarmigan, plover, jaegers, sandpipers, phalerope, gulls, tern) made in Mackenzie District in summer 1955, mostly near the mouth of the Anderson River (69°59′ N. 129° W.). Calls, alarm or distraction behavior, play, courtship, attack real or feigned, display flights, etc., are noted. Two general observations are included: on distraction displays and falcon hunting habits in the presence of a human intruder.

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51761. HOHORST, H. E. Über das Auftreten von Bluthochdruck in nördlichen Klimaten; vorläufige Mitteilung. (Medizinische, Jan. 1957. Jahrg. 1957. no. 1, p. 48–49, tables.) 6 refs. Text in German. ***Title tr.:*** On the incidence of high blood pressure in northern climates; preliminary communication.

Discusses incidence of high blood pressure in 310 German war prisoners of whom 100 lived in sub-arctic or arctic Russia. Vital statistics are cited from such areas in North America and conclusion is offered that cold climate may cause high blood pressure, as some quoted Russian investigators claim.

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51762. HOLAND, HJALMAR R. Nicholas of Lynn, a pre-Columbian traveler in North America. (American-Scandinavian review, Mar. 1958. v. 46, no. 1, p. 19–32, illus., maps.) 20 refs.

Attempt is made to establish that a Norwegian-Swedish expedition to North America took place in 1355–1364, in search of apostate Greenlanders. It reached Hudson Bay, and divided into

*See also No. 51743–51744.

two parties one sailing by the Nelson River and Lake Winnipeg to Kensington, Minn.; the other in which the Englishman, Nicholas of Lynn, took part, exploring the northern part of Hudson Strait and establishing the position of the magnetic pole. Nicholas was attached to the expedition as an expert navigator, being the inventor of the astrolabe. ***Copy seen:*** DLC.

51763. HOLCOMBE, RICHARD M. Similarities and contrasts between the arctic and antarctic marine climates. (*In:* Polar Atmosphere Symposium, Oslo 1956. v. 1, *pub.* 1958, p. 9–17, 6 maps, 6 graphs.) Refs.

Pairs of superimposed polar map projections of similar scale are shown for comparing graphically climatic parameters in the Arctic and Antarctic, including pack-ice limits, mean 32-degree isotherm, tracks of maximum cyclone frequency, winter and summer divergence, and lines of maximum precipitation frequency. Continental influences in the Arctic and the absence of year-long persistence of conditions in the Arctic as compared to the Antarctic are evident. Typical upper air conditions at Little America and at Alert, Ellesmere Island are graphed. ***Copy seen:*** DLC.

51764. HOLDAR, CARL-GUSTAV. Deglaciationsförloppet i Torneträsk-området efter senaste nedisningsperioden, med vissa tillbakablickar och regionala jämförelser. (Geologiska föreningen, Stockholm. Förhandlingar, 1957. bd. 79, häfte 3, no. 490, p. 291–528, 70 illus., 48 diagrs. 15 text maps, 7 plate maps.) 162 refs. Text in Swedish. Summary in English. ***Title tr.:*** The progress of deglaciation in the Torneträsk region after the latest glacial period, with certain backward glances and regional comparisons.

Disappearance of the ice after the most recent glacial period in this region of northern Sweden and Norway was investigated to clarify and describe the course of events. Erosional forms, glacial striae, till, morainal material, terraces, fluvial sediment and soil creep were examined with regard to relative age, effects of bedrock and topography, ice movement, stream direction, wind direction, precipitation, and recent changes. It is concluded that "the inland ice was no doubt ruled by the same physical laws as the recent glaciers, therefore its last remnants must have disappeared among the high mountains, as glacier ice does today." ***Copy seen:*** DGS.

51765. HOLDSWORTH, JOHN B. Gateway to the Aleutians. (Nature magazine, Nov. 1958. v. 51, no. 9, p. 456–60, illus.)

Impressions from Cold Bay (55°15′ N. 162°40′ W.) by a newly arrived meteorologist, with descriptions of the nearby volcanoes and mountains, common plants, birds, soils, tundra, seashore, weather, etc., photos of landscape and plants.

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51766. HOLGERSEN, HOLGER. Bird-banding in Norway 1953, report no. 4. Stavanger, Nov. 1954. 38 p. (Stavanger, Norway. Museet. Sterna, no. 6.)

Contains tabular data on birds ringed (26,632) and a list of the recoveries; 39 were ringed in Tromsø, some others were ringed or recorded in other northern localities of Scandinavia.

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51767. HOLGERSEN, HOLGER. Bird-banding in Norway 1956, report no. 7. (Stavanger, Norway. Museet. Sterna, Dec. 1957. bd. 2, hefte 5, (no. 30), p. 137–84.)

Contains tabular data on birds ringed (29,586) and a list of recoveries, some in the northern regions of Scandinavia; also (p. 149–51) record of 41 birds ringed as adults July 14–16, 1954, at Reindalen (77°50′ N. 15°30′ E.) on the north side of Van Mijenfiord, Vestspitsbergen. Previous reports are listed: No. 35282, 51766, No. 45583–45584. ***Copy seen:*** DI.

51768. HOLGERSEN, HOLGER. Islandsk Rödben, *Tringa totanus robusta* (Schiöler), i Grönland. (Dansk ornithologisk forening. Tidsskrift, Apr. 1957. årg. 51, hefte 2, p. 73–74.) Text in Norwegian. Summary in English. ***Title tr.:*** Icelandic redshank, *Tringa totanus robusta* (Schiöler), in Greenland.

"A specimen of redshank, collected at Myggbukta in East Greenland in May 1939 and kept in the Stavanger Museum, is the first positive record of the subspecies *Tringa t. robusta* in Greenland."—Author's abstract. ***Copy seen:*** DSI.

51769. HOLGERSEN, HOLGER. Ringmerkingsoversikt 1957. (Stavanger, Norway. Museet. Sterna, Nov. 1958. bd. 3, hefte 4, p. 145–77.) Text in Norwegian. Summary in English. ***Title tr.:*** Bird-banding 1957; report no. 8.

Presents data and list of recoveries. Many specimens were banded or recovered in the northern regions of Scandinavia. During the year, 32,153 were ringed in Norway, bringing the total to 294,007. ***Copy seen:*** DI.

51770. HOLLAND, GEORGE P. Notes on the genus *Hystrichopsylla,* Rotschild in the New World, with descriptions of one new species and two new subspecies; Siphonaptera: Hystrichopsyllidae. (Canadian entomologist, July 1957. v. 89, no. 7, p. 309–324, 29 illus.) 4 refs. *Pub. also as:* Contrib. No. 3550, Entomol. Div., Science Service, Dept. of Agriculture, Ottawa, Canada.

Contains a discussion of the genus, a key to the nearctic species, and an annotated list of ten with localities and hosts for each. *H. dippie* subspecies (Ketchikan, Alaska) and *H. occidentalis* (various localities in western and southern Alaska) are included. ***Copy seen:*** DLC.

51771. HOLLAND, MICHAEL F. W., *d.* 1957. An expedition to West Greenland, 1956. (Geographical journal, Mar. 1958. v. 124, no. 1, p. 69–79, maps.) 6 refs.

Gives account of a five-man British expedition organized to continue the glaciological work of Oxford expeditions of 1935, 1936 and 1938 in the Sukkertoppen icecap region (approx. 66° N. 52°–52°30′ W.), to attempt the ascent of Mt. Atter from the south and to try to sledge up the Taterat glacier. The physiography of the area is described and results of glaciological and geomorphological studies summarized. Average annual accumulation on the south side of Mt. Atter showed slight decrease over an 11-yr. period, while at the head of Igdlo glacier accumulation increased significantly, 1948–1956. No evidence of great wastage above the firn line was found, while rocks and small moraines indicated some retreat of glacier fronts; that of Taterat Glacier was in the same position as in 1938. Relief above 1,200 m. elevation shows evidence of intense erosion by frost shattering aided by an abundant meltwater supply from above the firn line and debris transport by cirque glaciers, avalanches, or mass movement of ice. The party's equipment and food are discussed. Changed conditions of West Greenlanders are noted. Work of M. F. W. Holland and circumstances of his death in July 1957 while with a Danish IGY party in North Greenland are reported by Dr. B. Fristrup. ***Copy seen:*** DGS.

51772. HOLLAND, W. C., *and* R. L. KLEIN. Effects of temperature, Na and K concentration and quinidine on transmembrane flux of K^{42} and incidence of atrial fibrillation. (Circulation research, July 1958. v. 6, no. 4, p. 516–21, illus.) 6 refs.

Report on experiments with isolated rabbit atria which demonstrated *inter alia* that lowered temperature (14° to 29° C.) inhibits fibrillation and its associated flux changes. Decreased extracellular Na, or increased K or the presence of quinidine had similar effects. ***Copy seen:*** DLC.

51773. HOLLICK, CHARLES ARTHUR, 1857–1933, *and* N. L. BRITTON. *Cerastium arvense,* L., and its North American varieties. (Torrey Botanical Club. Bulletin, Mar. 1887, v. 14, no. 3, p. 45–51.)

Two of these chickweeds are northern varieties: *Cerastium arvense* var. *latifolium,* native to arctic regions of Europe, Asia, and North America (Labrador), also *C.a.* var. *fuegianum,* ranging from the Arctic to northern Pennsylvania and Utah. ***Copy seen:*** DLC.

51774. HOLLICK, CHARLES ARTHUR, 1857–1933. Descriptions of new species of Tertiary cycads, with a review of those previously recorded. (Torrey Botanical Club. Bulletin, Apr. 1932. v. 59, no. 4, p. 169–89, 14 plates.)

Describes: Ceratozamia wrightii, Dioön inopinus and *D. praespinulosum* n. spp., all found near the head of Hamilton Bay, Kupreanof Island, Alexander Archipelago, Alaska, in Tertiary formations; data are added on distribution of New and Old World Tertiary cycads. They "are of special interest as representing the last bid for life of the cycadophytes outside of the tropical and subtropical zones as now recognized." ***Copy seen:*** DLC.

51775. HOLLICK, CHARLES ARTHUR, 1857–1933. Former climatic conditions in Alaska as indicated by the Cretaceous and Tertiary floras. (New York Botanical Garden. Journal, 1913. v. 14, p. 210–13.)

Reviews collection of M. A. J. Collier from the Yukon valley, in 1902, and that in the Canadian Geological Survey from the Kootenay valley. Climatic conditions on the Pacific coast were, at least

as far as the Cretaceous Period, milder than those of the Interior; the Cretaceous and Tertiary floras of the coastal region were almost as different from the contemporaneous floras of the Interior as they are today. ***Copy seen:*** DA.

51776. HOLLICK, CHARLES ARTHUR, 1857–1933. A new fossil species of *Hydrangea*. (Torrey Botanical Club. Bulletin, Jan. 1925. v. 52, no. 1, p. 21–22, plate 2.)

Describes: Hydrangea alaskana n. sp., a fossil plant found in Tertiary shaly sandstone in "Jaw Mountain, Alaska Peninsula, 20 miles N.W. of Aniakchak Bay." ***Copy seen:*** DA.

HOLLISTER, H. J., *see* Dodimead, A. J., *and* H. J. Hollister. Drift bottle releases . . . *1958*. No. 50582.

HOLLMANN, WERNER, *see* Kannt, H. S., *and others*. Eisbrecher "General San Martin." *1955*. No. 52166.

51777. HOLM, ÅKE. Spiders (Araneae) from Greenland. (Arkiv för zoologi, Nov. 1958. ser. 2, bd. 11, no. 31, p. 525–34, 10 illus.) 13 refs.

Lists spiders from East and West Greenland in the State Museum of Natural History collection at Stockholm; it derives from several Swedish expeditions to Greenland since 1870, also from Dr. G. Wängsjö's work in 1948 and 1950 on Ella Island, Ymer Island and Gauss Peninsula. Thirty of some fifty species known from Greenland are represented (no new species). Disko, Upernavik, a few southern Greenland localities (A. A. Holst, 1878 and Kolthoff 1883), Godthåb and Julianehåb (A. v. Klinckowström 1913) provided specimens. ***Copy seen:*** DLC.

51778. HOLM, JOHAN CHRISTENSEN. Grønlandske mønter. (Grønland, June 1957. nr. 6, p. 201–209, illus.) Text in Danish. ***Title tr.:*** Greenland coins.

Describes all series issued, the first in 1894 for use at Angmagssalik only, the first for all Greenland in 1926.
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51779. HOLM, LENNART. Études taxonomiques sur les pléosporacées. Uppsala, Lundequistka bokhandl., 1957. 188 p. 6 illus., plate. (Symbolae botanicae upsalienses, v. 14, no. 3.) 219 refs. Text in French. ***Title tr.:*** Taxonomic studies on the Pleosporaceae.

Contains a systematic account of this group of fungi, with keys, descriptions of 112 species, synonyms, exsiccata, and data on host plants, geographic distribution and material examined. Three new species are described and some fifty new combinations are established. At least ten species are recorded in Vestspitsbergen, Greenland, northern Scandinavia and Kola Peninsula. ***Copy seen:*** DA.

51780. HOLM, RIGMOR RØRDAM. Lidt om udviklingen i Angmagssalik. (Grønland, May 1958. nr. 5, p. 188–96, illus.) Text in Danish. ***Title tr.:*** Notes on the development at Angmagssalik.

Impressions from the author's years as medical practitioner at this East Greenland town. ***Copy seen:*** DLC.

51781. HOLMBERG, SVEN, 1906– . Nordpolen, jordens centrum. (Ett år i luften, flygets årsbok, 1955. p. 231–44, illus, maps.) Text in Swedish. ***Title tr.:*** The North Pole, center of the world.

Discusses the strategic importance of the Arctic. American and Soviet intercontinental bombers are compared, and distances in km. and hours from various Soviet bases to major industrial centers in the United States are given. U.S. and Soviet air bases in the Arctic are mapped, and important U.S. bases abroad are listed. ***Copy seen:*** DLC.

51782. HOLMEN, KJELD. Chromosome numbers of some species of *Sphagnum*. (Botanisk tidsskrift, 1955. bd. 52, hefte 1, p. 37–42, 13 illus.) 5 refs.

Contains data on 13 species, ten were haploid having 19 chromosomes and three diploid with 38 chromosomes in the gamethophytic phase, so the basic number in *Sphagnum* is 19. A certain number of very small accessory chromosomes were present in all species (four in the haploid and probably eight in the diploid species). At least six of the species are native to Swedish Lapland. ***Copy seen:*** DA.

51783. HOLMEN, KJELD, *and* **B. LANGE.** *Sphagnum wulfianum* and *Sphagnum centrale*, their morphology and occurrence in Greenland. (Botanisk tidsskrift, Dec. 1958. bd. 54, hefte 4, p. 379–86, 5 illus., 2 tables.) 14 refs.

Contains data on *Sphagnum wulfianum* collected in small colonies around a shallow pond near Godhavn (69°15′ N.) on the south coast of Disko; it is found through the boreal zones of Russia and western Siberia. *Sphagnum centrale* is described from three localities, all on southwesternmost Greenland (60°33′–61°12′ N.); its distribution may be called

circumboreal (follows roughly the 50th parallel). ***Copy seen:*** DA.

51784. HOLMEN, KJELD. Three west arctic moss species in Greenland: on the occurrence of *Cinclidium latifolium, Aulacomnium acuminatum* and *Trichostomum cuspidatissum*. København, C. A. Reitzel, 1957. 16 p., maps, tables. (Meddelelser om Grønland, bd. 156, nr. 3) 14 refs.

Gives information, from summer 1956 field studies, on localities, ecological conditions and composition of plant communities in which these mosses are found. They are an exclusively arctic species, but not circumpolar.

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HOLMEN, KJELD, *see also* Böcher, T. W., *and others*. Grønlands flora. *1957*. No. 49796.

51785. HOLMES, R. M., *and* G. W. ROBERTSON. Note on a portable field growth chamber for winter injury studies. (Canadian journal of plant science, July 1958. v. 38, no. 3, p. 377–79, illus.)

Description of a device which enables wintering crops to "revive" and grow at any time during the winter, thus enabling assessment of frost damage up to the point of revival. It consists of a bottomless insulated box placed over the plot to be tested. Inside the box are heating, airing and lighting units, capable of creating the desired conditions over the experimental area and plants.

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51786. HOLMES, RICHARD T. Audubon warbler in southeastern Alaska. (Murrelet, Sept.–Dec. 1957. v. 38, no. 3, p. 37.)

Contains record of *Dendroica auduboni*, observed seven miles north of Juneau, near Auke Lake on May 31, 1957.

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51787. HOLMES, ROBERT WILLIAM. Surface chlorophyll "A", surface primary production, and 300 plankton volumes in the eastern Pacific Ocean. (*In:* Plankton symposium 1957, *pub. as:* International Council for the Exploration of the Sea. Rapports et procès verbaux, Apr. 1958. v. 144, p. 109–116, illus., table, maps.) 11 refs.

Contains data on nearly all of the simultaneously observed surface chlorophyll *a*, surface primary production, and 300-plankton volume, irrespective of time of collection, with the aim of ascertaining the "productivity" of this area. Daily organic C requirement of net zooplankton from the upper 300 meters is compared with the daily organic C production of the phytoplankton; finally, photosynthetic rates per unit chlorophyll *a* are compared in sea water with rates from the laboratory. The Aleutian waters west of about 155° W. are quite rich; the highest chlorophyll *a* and surface productivity occurred in Bering Sea

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51788. HOLMQUIST, CHARLOTTE. An observation on young specimens of *Ammodytes dubius*. (Meddelelser om Grønland, 1958. bd. 159, nr. 2, p. 11–14, map.) 4 refs.

Author found young specimens of this marine fish in holes of iceberg fragments, in Atâ harbor (69°45′ N. 51° W.), West Greenland. The fish did not attempt to get into open water, and returned to the "lagoons" when put out, apparently preferring their lower temperature and salinity. ***Copy seen:*** DGS.

51789. HOLMSEN, PER, 1911– . De eokambriske lag under hyolithussonen mellem Čarajavrre og Časkias, Vestfinnmark. (Norway. Geologiske undersøkelse. Skrifter 200, *its* Årbok 1956, *pub.* 1957, p. 47–50, text map, diagr.) Ref. Text in Norwegian. Summary in English. ***Title tr.:*** The Eocambrian beds below the hyolithus zone between Čarajavrre and Časkias, western Finnmark.

Investigations in 1956 reveal that the Cambrian tillite described in No. 45593 rests on older Eocambrian arkose beds. Total thickness of the Eocambrian beds is at least 5.5 m., probably considerably more. ***Copy seen:*** DGS.

51790. HOLMSEN, PER, 1911– , *and others*. The Precambrian geology of Vest-Finnmark, northern Norway. Oslo, H. Aschehoug, 1957. 107 p. illus., maps (2 fold.), diagrs., cross sections, 7 tables. (Norway. Geologiske undersøkelse. Publication, nr. 201.) 20 refs. Text in English. Summary in Norwegian. *Other authors:* P. Padget *and* E. Pehkonen.

The exposed geologic formations of a 5,000 km.^{2} Precambrian area in western Finnmark and southeastern Troms were provisionally mapped in 1954–55. A limited area around Caravarre consists of weakly metamorphosed rocks, the core of a series of roughly concentric zones of increasing thermal metamorphism culmi-

nating both east and westward in granitic rocks. To the north and northwest, shales of the Hyolithus zone (Caledonian) lie unconformably above the Precambrian. Comparisons are made with similar formations in northern Finland and Sweden, and resemblance to the regional metamorphism in the Scottish highlands and elsewhere is noted. Emphasis was placed on systematic bedrock mapping and the search for ore, especially sulphide deposits. Stratigraphic description is presented for eight sub-areas. The most significant finds of rocks and minerals of possible economic value are summarized.

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51791. HOLMSGAARD, ERIK. Svenske årringsundersøgelser. (Norsk skogbruk, May 1957. årg. 3, nr. 10, p. 286–88, diagr.) 7 refs. Text in Danish. Summary in English. ***Title tr.:*** Swedish annual ring investigations.

Bo Eklund's work on the width of annual tree rings of pine and spruce in northern Sweden is reviewed and his methods are criticized. Ringwidth correlations with variations in temperature are believed to be emphasized over relationships with variations in precipitation. Records from scattered weather stations are believed to be less representative of actual precipitation than of temperature. Therefore the station precipitation data are less representative in such studies. ***Copy seen:*** DA.

51792. HOLT, OLAV, *and* **B. LANDMARK.** Some statistical properties of the signal fine structure in ionospheric scatter propagation. Oslo, H. Aschehoug, Mar. 1958. 7 p. diagrs. (Norske videnskaps-akademi i Oslo. Geofysiske publikasjoner, v. 20, no. 8.) 7 refs.

Analyzes recordings from an 1150 km. ionospheric scatter circuit Tromsø (70° N. 19° E.) Kjeller (60° N. 11° E.) on 46.8 mc./s. Probability distribution and maxima of signal envelope, and separation between successive maxima of signal envelope were obtained both for the background and the meteoric components. Statistical properties of the background component were found in agreement with those to be expected from Gaussian noise; i.e., the signal may be explained in terms of scattering from a large number of irregularities. Interference between a few reflected components (result of trail bending due to large scale wind gradients) may account for fading of enduring meteoric bursts. ***Copy seen:*** DGS.

HOLT, SIDNEY J., *see* Internationa Commission NW Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

51793. HOLTEDAHL, HANS. On the Norwegian continental terrace, primarily outside Møre-Romsdal: its geomorphology and sediments. With contribution on the Quaternary geology of adjacent land and on the bottom deposits of the Norwegian Sea. Bergen, Grieg, 1956. 209 p., illus., tables, diagrs., maps incl. 1 fold. (Bergen, Norway. Universitetet. Årbok 1955, naturvitenskapelig rekke, no. 14.) 184 refs.

Presents comprehensive study on submarine morphology of Norwegian continental shelf, here called continental terrace, based on sounding results, study of bottom sediments, and effects of glaciers during the last glacial age.

Studies were carried out (1951–54) and bottom sediments collected in the southern area of the Norwegian Sea between Iceland and Norway. The marine-geological, geomorphological work includes the continental terrace of northern Norway, the Barents Sea shelf and the west coast of Spitsbergen (p. 60), and the coastal area of East Greenland (p. 61). Basic submarine features, origin and development of the shelf, major fault lines, flexure zones, and tectonic movements are briefly characterized. ***Copy seen:*** DLC.

51794. HOLTEDAHL, HANS. A petrographical and mineralogical study of two high altitude soils from Trollheimen, Norway. (Norsk geologisk tidsskrift, 1953. bd. 32, hefte 2–4, p. 191–226, diagrs., graphs, maps, tables.) 40 refs.

Analyses of two soil columns on the summit plateau of Midtre Gjevilvasskamm in the Trollheimen region are described. Neither has a soil profile development. Each has coarser materials in the section above bedrock. Particle size and lack of stratification rule out accumulation by wind transport. Some chemical weathering is evident, but most of the disintegration is due to frost action. One is believed to be a residual soil, the other a till. They are thought to be no older than the Wisconsin glaciation.

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51795. HOLTEDAHL, HANS. Some remarks on geomorphology of continental shelves off Norway, Labrador, and southeast Alaska. (Journal of geology, July 1958. v. 66, no. 4, p. 461–71,

5 maps, incl. 2 fold., diagr.) 24 refs. *Also pub. as:* California University. Scripps Institute of Oceanography, Contribution.

Marked topographical similarities are noted between these continental shelves. Longitudinal channels and transverse depressions, with common characteristics, are found off the Labrador and Southeast Alaska coasts; are believed to indicate that present land areas are bordered by major fracture zones, along which dislocations took place during the Cenozoic uplift. Areas discussed are: off Tromsø, Norway; between Nain and Domino Pt., between South Wolf Island and Strait of Belle Isle, Labrador; between Cross Sound and Yakutat Bay, Alaska.

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51796. HOLTVED, ERIK, 1899– . Remarks on Eskimo semantics. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958. p. 617–23.) Refs. in text.

Analyzes the semantic system of the Eskimo language and its peculiar word formation. Word stems representing concepts of nominal or verbal character are used either independently or as suffixes and express an idea, i.e., sentence, rather than a single word. The difficulties of translating these word-sentences are discussed: a more exhaustive study of Eskimo primary stems is required for comparative linguistic analysès.

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51797. HOLTVED, ERIK, 1899– . William Thalbitzer, 5. februar 1873–18. september 1958. (Grønland, Dec. 1958. nr. 12, p. 456–61, port.) Text in Danish. ***Title tr.:*** William Thalbitzer, February 5, 1873–September 18, 1958. A shorter notice, *pub.* in *Geografisk tidsskrift,* 1958. bd. 57, p. vi–vii.

Obituary of this specialist in Greenlandic, particularly East Greenlandic, language and culture, with notes on his scientific activities, his travels in Greenland, and on his published works.

Copy seen: DLC.

51798. HOLUB, A., *and others.* Development of chemical thermoregulation in piglets. (Nature, *London,* Oct. 1957. v. 180, no. 4591, p. 858–59, tables.) 2 refs. *Other authors:* Z. Forman *and* D. Ježková.

Account of investigation on O_2-consumption, rectal temperature, vasomotor and pilomotor reaction in piglets exposed for brief periods to $3 \pm 1°$ C. Thermoregulation was found to be unsatisfactory up to the sixth day of life, begins to assert itself from the ninth day and is nearly perfect on the twentieth day.

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51799. HOMULUS, STEVE. Mining development in the Northwest Territories. (Western miner and oil review, June 1957. v. 30, no. 6, p. 48–50, illus.) *Outlines* major regions of recent mineral discoveries, and reviews activities of mining companies engaged in the prospecting and production. Gold (Yellowknife region), lead-zinc, nickel (Rankin Inlet, etc.), uranium (Marian River area, etc.) copper-nickel (arctic coast), lithium and iron (Belcher, Nastapoka Islands) are treated in turn. Transportation routes and rates in the Yellowknife area are briefly dealt with. ***Copy seen:*** DI.

51800. HONG, SUK KI. Effects of pituitrin and cold on water exchanges of frogs. (American journal of physiology, Mar. 1957. v. 188, no. 3, p. 439–42, table.) 15 refs.

Pituitrin injection caused a 2.5-fold increase in water uptake across the skin without an accompanying rise in urine formation. Cold (1° C.) partly or fully abolished this pituitrin effect. N, KCN, or IAA had a similar effect.

Copy seen: DLC.

51801. HONIGMANN, JOHN JOSEPH, 1914– , *and* **R. N. CARRERA.** Cross-cultural use of Machover's figure drawing test. (American anthropologist, Aug. 1957. v. 59, no. 4, p. 650–54.) 12 refs.

Reports on procedure, interpretation and results of a comparative human figure drawing test conducted among a group of Eskimo children at Great Whale River in northern Quebec, 1950, and Cree children at Attawapiskat, northern Ontario, in 1955. The tested Eskimos (boys aged 8–13, girls 12–14) showed better adjustment and less sexual conflict than did the Indians. The lower I.Q. of the Eskimos, based on the Goodenough "Draw a man test," is attributed to their poorer drawing skill. The Machover technique appears to have little value for anthrcpological field study. ***Copy seen:*** DLC.

HOOD, A. D., *see* Canada. Dept. of Transport. Navigation conditions . . . Hudson Bay Route . . . 1956. *1957.* No. 50082.

HOOD, A. D., *see* Canada. Dept. of Transport. Navigation conditions . . . Hudson Bay Route . . . 1957. *1958.* No. 50083.

51802. HOOD, JOHN M., Jr., *and* **W. H. HODGSON.** Marker flag visibility in the polar regions. San Diego, Sept. 8, 1958. 5 p., 2 graphs, 3 tables. (U.S. Navy Electronics Laboratory, NEL letter report no. 45.) 3 refs.

Presents information on the visibility ranges of five different flag materials, as seen under three general lighting conditions. Two of the materials were dyed with fluorescent yellow and red; the other three were standard red, yellow, and black bunting. Calculations of visibility range were made for three conditions of haze; namely 1, 5, and 25 miles " meteorological range," and under each of three illumination and viewing situations. Visibility ranges were calculated through the use of special nomographs; based on data obtained in the spring of 1957 at Pt. Barrow, Alaska, and on field measurements made at the U.S. Navy Electronics Laboratory, San Diego. Method of calculation is described; results of measurements and computations are presented, with discussion and conclusions. Black bunting gave the best visibility ranges in all but one case; red fluorescent material may have value under conditions not considered. Color fading, wind conditions should be considered. Actual field measurements are to be made at the Arctic Research Laboratory, Pt. Barrow.

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51803. HOOKER, JOSEPH DALTON, 1817–1911. An account of the plants collected by Dr. Walker in Greenland and arctic America during the expedition of Sir Francis M'Clintock, R.N., in the yacht *Fox.* (Linnean Society. Journal, Botany, 1861. v. 5, p. 79–89.)

Lists 95 flowering plants and vascular cryptogams collected in 1857–1859 on Boothia Peninsula at Port Kennedy (72°01′ N. 94°14′ W.), and on the West Greenland coast (Frederikshåb and Godthåb, Disko, Fiskamaer, and Upernavik): four mosses and liverworts determined by W. Mitten; 16 algae by Dr. Dickie; eight fungi, by M. J. Berkeley; and 46 lichens, by W. Mitten; some observations of Dr. Walker on the air and soil temperature at Port Kennedy are added. ***Copy seen:*** DLC.

51804. HOOVER, PHILLIP F. Arctic Test Branch gets the cold facts on Army equipment. (Army information digest, Jan. 1957. v. 12, no. 1, p. 19–23, photos.)

Describes work (cold weather tests) of the Continental Army Command Arctic Test Branch at Fort Greely, Alaska. It was established as a permanent test agency in 1949; its facilities covering 565,000 acres include firing ranges, vehicular test courses, and airborne test drop zones; its natural test conditions include winter temperatures of −50° F. or lower and winds of 40 mph.

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HOPE, EARL R., *see* Fel'dshteĭn, Îâ. I. Geograficheskoe raspredelenie polîarnykh siîanieĭ . . . *1958.* No. 50868.

HOPE, EARL R., *see* Fel'zenbaum, A. I. O szhatiîakh . . . l'dov . . . *1957.* No. 50870.

HOPE, EARL R., *see* Gaĭgerov, S. S. Atmosfernye protsessy . . . *1957.* No. 51041.

HOPE, EARL R., *see* Kaplin, P. A. Otstuplenie lednikov . . . *1958.* No. 52177.

HOPE, EARL R., *see* Krasovskiĭ, V. I. Pervye rezul'taty nablîudeniĭ verkhneĭ atmosfery. *1957.* No. 52469.

HOPE, EARL R., *see* Nikol'skiĭ, A. P. K voprosu o geograficheskom raspredelenii... *1957.* No. 53601.

HOPE, EARL R., *see* Nikol'skiĭ, A. P. O planetarnom raspredelenii . . . *1957.* No. 53604.

HOPE, EARL R., *see Sudostroenie.* Stroitel'stvo atomnogo ledokola. *1957.* No. 55215.

HOPE, EARL R., *see* Vîalov, S. S., *and* N. A. T͡Sytovich. Cohesion of frozen soils . . . *1957.* No. 55796.

51805. HOPKINS, A. L. The rehydration contraction of frozen dried muscle. (Journal of cellular and comparative physiology, Feb. 1958. v. 51, no. 1, p. 67–80, illus.) 13 refs.

A study of contraction in frozen-dried frog muscle. The amount of shortening in the rehydrated muscle fibers, their ability for work, the maximal tension that they develop and the effect of temperature upon these processes indicate "that the contractile system of living muscle is not

destroyed by freezing and drying." The rehydrated fibers respond to high concentrations of ATP and are insensitive to changes in pH and ionic composition of the medium. ***Copy seen:*** DNLM.

HOPKINS, DAVID MOODY, 1921– , *see* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958*. No. 50694.

HOPKINS, DAVID MOODY, 1921– , *see* Williams, H., *and others*. Landscapes of Alaska . . . *1958*. No. 56055.

HOPKINS, J. P., *see* Williams, H., *and others*. Landscapes of Alaska . . . *1958*. No. 56055.

51806. HOPPE, GUNNAR, 1914– . Problems of glacial morphology and the ice age. (Geografiska annaler, 1957. årg. 39, häfte 1, p. 1–18, illus., 2 fold. maps.) 30 refs.

Possible reasons for the preferred orientation of material in washboard moraines are discussed on the basis of field studies in northern Sweden. It is concluded that the orientation does not correspond to the direction of ice flow but is the product of complex factors which cannot be determined at present. Another type of moraine is discussed, the hummocky moraine landscape of Veiki type, largely formed subglacially. The question of ice-dammed lakes is also discussed briefly. A number of topographical maps and aerial photographs are included to illustrate the various formations. ***Copy seen:*** DGS.

51807. HOPPING, GEORGE REDSTONE, 1899– . A revision of the *Clytini* of boreal America, Cerambycidae, Coleoptera; part I. (Entomological Society of America. Annals, Sept. 1932. v. 25, no. 3, p. 529–77, plates 1–5.)

Contains a critical revision of the beetles of this tribe with characteristics of the tribe, generic synonymy, generic and specific keys; and a systematic list of 55 species, descriptions, synonyms, critical notes and data on host plants and geographic distribution. *Xylotrechus undulatus* from Alaska (p. 536–38) is included. Part II of this paper does not contain arctic species. ***Copy seen:*** DSI.

51808. HORI, TAKEO. On the supercooling and evaporation of thin water films, 1; (Teion kagaku, 1956. ser. A, v. 15, p. 33–42, illus.) Text in Japanese. Summary in English.

Laboratory studies with thin films of water sandwiched between glass or quartz plates and cooled to −100° C. are reported, and the experimental procedure and apparatus used are described. The degree of supercooling showed a tendency to increase with decreasing film thickness and was independent of volume or interface area. Vapor pressure in equilibrium with a water film of a certain thickness was approximately equal to the saturation vapor pressure of bulk water; it fell more or less rapidly with decreasing film thickness to reach zero pressure at a limiting thickness. Sufficiently thin films of water, held between solid surfaces, acquired a high rigidity without crystallizing and exhibited a high resistance both to freezing and evaporation. ***Copy seen:*** DWB.

51809. HORN, GEORGE HENRY, 1840–1897. A monograph of the species of *Chrysobothris* inhabiting the United States. (American Entomological Society. Transactions, 1886. v. 13, p. 65–124, plates 2–7.)

In this genus of wood-boring beetles, 50 species are described including 18 new to science; *C. trinervia*, native to the Hudson Bay region and Alaska, is included. ***Copy seen:*** DA.

51810. HORN, GEORGE HENRY, 1840–1897. A monograph of the species of the subfamilies Eucneminae, Cerophytinae and Perothopinae inhabiting the United States. (American Entomological Society. Transactions, 1886. v. 13, p. 5–58, 2 illus.)

Of the 59 beetle species dealt with, 12 are described as new; one, *Epiphanis cornutus*, occurs in Alaska.

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51811. HORN, GEORGE HENRY, 1840–1897. Synopsis of the genera and species of the Staphylinide tribe Tachiporini of the United States. (American Entomological Society. Transactions, 1877. v. 6, p. 81–128, plate 1.)

Deals with about 80 species of this tribe of rove beetles, 24 described as new to science, and five from Alaska: *Tachinus maculicollis, T. nigricornis, T. instabilis, T. circumcinctus* and *Bolitobius trinotatus*. ***Copy seen:*** DA.

51812. HORNBURG, PER. Melding om prøver med torv fra Finnmark til fremstilling av formbrensel. (Norsk myrselskap. Meddelelser, Dec. 1955. årg. 53, nr. 6, p. 165–72, tables.) Text

in Norwegian. ***Title tr.:*** Report on experiments with peat from Finnmark for production of fuel bricks.

At a local peat factory, experiments were made with cuts of peat from five bogs in Finnmark, northern Norway. The samples are described as wood, heath, moss, and sedge mixtures, in various degrees of humidification. Water content, pulverization, and cohesion are discussed. Moss peat appeared to be less suited to briquetting than the other varieties. ***Copy seen:*** DA.

51813. HORNBURG, PER. Myrene ved Svartnes og Smelror i Vardø herred, Finnmark fylke. (Norsk myrselskap. Meddelelser, Feb. 1951. årg. 49, nr. 1, p. 17–29, map, tables.) Text in Norwegian. ***Title tr.:*** The bogs of Svartnes and Smelror in Vardø commune, Finnmark province.

The bogland of these communities on the northeastern tip of the Norwegian mainland (70° N. 31° E.) totals over 500 acres in seven mapped areas. The climate, bedrock, loose materials and topography are reviewed. The bogs are described in turn: vegetation, depth, substrate, possible improvement and use. Plant species are identified; the area of six bog types is tabulated; mineral analysis, peat production, cultivation, drainage, and fertilization requirements are discussed. ***Copy seen:*** DA.

51814. HORNBY, JOHN. Ice-breaker. (Norseman, May–June, 1958. v. 16, no. 3, p. 211–15.)

Sketches Fridtjof Nansen's life and work on the Arctic. ***Copy seen:*** DLC.

51815. HORNER, S. G. L., *and others.* Single sideband links Canadian traders. (Electronics, Oct. 1, 1957. v. 30, no. 10, p. 174–76, illus., diagrs.) 2 refs. *Other authors*: M. G. Crosby *and* B. C. Coffman. Network of single sideband installations at 61 Hudson's Bay Co. trading posts, was found superior to the conventional a-m (amplitude modulation) radio sets in power requirements, signal reliability and speech privacy. The 30- (increasable to 60-) watt transmitters have interchangeable coils for three frequencies in the 1.5–7.6-mc. band and use mechanical filters in the generation of the sideband. Transmitter and receiver operate from 32-volt batteries and are relay-connected to the same 72-ohm antenna.

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51816. HORNSEY, SHIRLEY. The effect of hypothermia on the radiosensitivity of mice to whole-body X-irradiation. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 547–49, illus.) 7 refs.

Mice cooled to near 0° C. when irradiated, survived doses fatal to normothermic controls, the protective factor being 2.8. Protection was mainly during the second of the two post-irradiation phases. Some protection by cooling was observed with regard to fertility, but none against cataracts. ***Copy seen:*** DNLM.

HOROWITZ, R., *see* Lagow, H. E., *and others.* Rocket measurements . . . *1958.* No. 52624.

51817. HORST, C. J. van der. Kishechnodyshashchie, Enteropneusta, morei SSSR. (Leningrad. Gosudarstvennyi gidrologicheskii institut. Issledovaniia morei SSSR, 1933. vyp. 19, p. 73–78, illus.) Text in Russian and German. ***Title tr.:*** The Enteropneusta of Soviet seas.

Description of three species of these "worms" including their anatomy and histology. The material was collected on the expedition of the Hydrological Institute to the Bering, Okhotsk and contiguous seas. ***Copy seen:*** DLC.

51818. HORSTED, SVEND AAGE, *and* **E. SMIDT.** The deep sea prawn *Pandalus borealis* Kr. in Greenland waters. København, C. A. Reitzel, 1956. 118 p. illus. tables, maps. (Denmark. Danmarks fiskeri- og havundersøgelser. Meddelelser, ny ser. bd. 1, no. 11) 36 refs.

A year-round (July 1953–1954) study of the biology of this prawn, of the hydrographic conditions, and the prawn grounds in the Julianehåb and Nanortalik Districts, southwest Greenland. The biological survey includes stocks in different districts, spawning, number and size of eggs, hatching, larvae, growth and sex reversal, food, distribution and migration, enemies, catches, other animals on the prawn grounds, etc. The hydrographic-biological investigations (p. 61–104) deal with bathymetry, currents, temperature and water masses; distribution of *Pandalus* in the area, size, sex, migrations, etc. Another prawn common in the same area, *Spirontocaris machilenta,* is treated also (p. 105–108): its frequency in relation to bottom temperature, reproduction, male-female numbers, parasites, etc.

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HORVATH, STEVEN MICHAEL, 1911– , *see* Blatteis, C. M., *and* S. M. Horvath. Renal, cardiovascular and respiratory responses . . . hypothermia. *1958.* No. 49771.

HORVATH, STEVEN MICHAEL, 1911– , *see* Blatteis, C. M., *and* S. M. Horvath. Renal hemodynamics and function during hypothermia. *1957.* No. 49772.

HORVATH, STEVEN MICHAEL, 1911– , *see* Spurr, G. B., *and others.* Shivering . . . men . . . cold . . . *1957.* No. 55104.

HOSKINS, DALE D., *see* Scott, E. M., *and others.* Serum-cholesterol . . . blood-pressure of Alaskan Eskimo . . . *1958.* No. 54644.

HOSKINS, J. R., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

51819. HOTCHKISS, NEIL, 1901– . Range extensions of marsh and aquatic plants, 2. (Rhodora, Mar. 1951, v. 53, no. 627, p. 91–93.)

Includes: "Myriophyllum verticillatum L., Stikine Flats, southeastern Alaska, July 30, 1942, L. J. Palmer No. 720," a species recorded neither in E. Hultén's *Flora of Alaska and Yukon,* nor J. P. Anderson's *Flora of Alaska and adjacent parts of Canada.* Part I of this paper (1942) does not contain arctic material.

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51820. HOTTES, FREDERICK CHARLES, 1899– . A new species of *Cinara* (Aphidae) from Sitka spruce. (Biological Society of Washington. Proceedings, May 9, 1958. v. 71, p. 61–62, illus.)

Describes: Cinara sitchensis n. sp., host: *Picea sitchensis.* ***Copy seen:*** DSI.

HOTTES, FREDERICK CHARLES, 1899– , *see also* Drake, C. J., *and* F. C. Hottes. Saldidae . . . *1950.* No. 50620.

51821. HOUCK, WARREN J. Cuvier's beaked whale from northern California. (Journal of mammalogy, May 1958. v. 39, no. 2, p. 308–309, illus.)

Notes and photographs of a specimen of *Ziphius cavirostris* 19 ft. 7 in. long, washed ashore in Humboldt County. This is apparently the fourth specimen of its kind reported from the west coast of the United States. ***Copy seen:*** DLC.

51822. HOUGH, HENRY W. Report from Canada. (Uranium magazine, Nov.–Dec. 1958. v. 5, no. 6, p. 3, 16–21, text map, table.)

Describes chiefly the Blind River (Elliott Lake) area, but notes development of uranium mining near Port Radium since La Bine's discoveries in 1930, and near Beaverlodge, Sask. Value of government contracts, and mill capacity in t/d are shown in table.

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HOUSEPIAN, EDGAR M., *see* Pool, J. L., *and others.* Mechanism . . . centrally induced cardiac irregularities . . . hypothermia. *1958.* No. 54076.

HOUSEPIAN, EDGAR M., *see* Purpura, D. P., *and others.* Hypothermic potentiation . . . cardiac irregularities. *1958.* No. 54170.

HOUSTON, JAMES, *see* Baird, I. Anoutoaloak, the mace . . . NWT. *1957.* No. 49485.

51823. HOUSTON, JOSEPH R., *and others.* Reconnaissance for radioactive deposits in southeastern Alaska, 1952. Washington, D.C., U.S. Govt. Print. Off., 1958. 31 p. 7 maps, 3 fold., 5 tables. (U.S. Geological Survey. Bulletin 1058–A. Mineral resources of Alaska.) 17 refs. *Other authors:* R. G. Bates, R. S. Velikanje, *and* H. Wedow, *Jr.*

Three localities were surveyed: northern Prince of Wales Island and parts of adjacent islands; the Taku Harbor-Point Astley district (approx. 58° N. 134° W.), and the Hyder area. Work was done on behalf of the U.S. Atomic Energy Commission. Significant concentrations of radioactive minerals (carbonate-hematite veins) were found only near Salmon Bay (approx. 56°20′ N. 133°10′ W.) on northeast Prince of Wales Island. Minerals present in these veins are identified; radioactivity is mostly due to thorium; data are tabulated; seven surface samples assayed 0.034% equivalent uranium or 0.16% equivalent thorium; it appears unlikely that richer deposits lie at greater depths. Samples from the two other areas studied are also reported; little or no radioactivity was noted.

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51824. HOVD, AKSEL. Dyrking av brenntorvmyr. (Norsk myrselskap. Meddelelser, Feb. 1956. årg. 54, nr. 1, p. 1–11, tables.) Text in Norwegian. ***Title tr.:*** Cultivation of fuel-peat bogland.

On Andøya, Norway, 69° N., there is an estimated 20,000 hectares of mineral soils and rock overlain by bogland 1–1.5 m. thick. This bogland should be cultivated rather than removed for fuel. Drainage and forage cropping on several experimental plots are reported, and the difficulties of adequate drainage and overwintering the crops are emphasized.

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51825. HOWARD, GRACE E. Some lichens of western Alaska. (Bryologist, Mar. 1958. v. 61, no. 1, p. 85–92.) 13 refs.

A list of species identified in numerous collections including one from the U.S. National Museum. Locality, substrate, date, frequency, altitude, value as food, etc., are noted. ***Copy seen:*** DA.

HOWARD, HECTOR S., *see* Webb, W. R., *and* H. S. Howard. Restoration of function . . . refrigerated heart. *1958.* No. 55959.

51826. HOWE, MARSHALL AVERY, 1867–1936. Arthur Hollick, February 6, 1857–March 11, 1933. (Torrey Botanical Club. Bulletin, Nov. 1933. v. 60, no. 8, p. 537–53, port.)

Contains a biographical sketch of this prominent paleobotanist noting his work and publications on Alaska among others (cf. No. 7255–7257). A bibliography of his scientific works, approx. 250 in number, is included. ***Copy seen:*** DLC.

51827. HOWE, MARSHALL AVERY, 1867–1936. The hepaticae and anthocerotes of California. New York, 1899. 208 p. plates 88–122, table (Torrey Botanical Club. Memoirs, v. 7). 242 refs.

Contains a taxonomic treatment of 86 species of liverworts, with synonyms, descriptions, keys, critical notes and data on ecology and distribution. Several of the species are reported from Alaska, three for the first time.

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51828. HOWE, REGINALD HEBER, 1875–1932. The genus *Cetraria* as represented in the United States and Canada. (Torreya, Oct. 1915. v. 15, no. 10, p. 213–30, 4 illus., 6 text maps.)

Contains a generic description, a key to the species, and an annotated list of seven forms of this lichen, all native to northern regions of Alaska and Canada.

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51829. HOWE, REGINALD HEBER, 1875–1932. Some comparisons of the lichen floras of Eurasia and North America. (Torreya, Aug. 1914. v. 14, no. 8, p. 138–40.)

Discusses the "interesting correlation of species-distribution found" on these two continents, with some examples taken from Usneaceae. *Ramalina calicaris* (L.) Fr. emend. (-scopulorum) group is included, and the only representative of this species-group is the occurrence in Alaska of *R. subfarinacea.*

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51830. HOWELL, JESSE V., *and* **A. I. LEVORSEN.** Directory of geological material in North America. 2nd edition. Washington, D.C., American Geological Institute, 1957. 208 p. (National Academy of Sciences-National Research Council pub. no. 556.)

Lists (1) sources of broad geographic and topical scope, and (2) sources of information available within each province or state, in which the data are of local application. In the 19 topical categories materials pertinent to study of the far North are included. Provincial sources include those in Manitoba, Northwest Territories, Ontario, Quebec, Yukon Territory, and Alaska: government bureaus, map agencies, air photograph and cross section suppliers, guide books, technical information, publications, libraries and museums, etc.

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51831. HOWELL, LYNN GORMAN, 1905– , *and* **J. D. MARTINEZ.** Polar movement as indicated by rock magnetism. (Geophysics, Apr. 1957. v. 22, no. 2, p. 384–97, diagrs. 5 maps, photo.) 18 refs.

Measurements of remanent magnetism have been carried out by geophysicists in the United States and England in a broad sampling of Paleozoic sediments. The direction of magnetization of these rocks indicates that the positions of the earth's magnetic poles were quite different in Paleozoic times from their positions today. Since the magnetic poles are thought to be connected with the spin axis of the earth, the locations of the magnetic poles, as averaged over space and time, should indicate the locations of the geographic poles. Based on paleomagnetic data obtained by several observers, maps are shown locating the magnetic poles during the Carboniferous, Cambrian, Triassic-Permian, and Paleozoic times. ***Copy seen:*** DLC.

51832. HOWELL, THOMAS, 1842–1912. A rearrangement of American Portulaceae. (Erythea, Feb. 1893. v. 1, no. 2, p. 29–41.)

A critical revision of 65 American species of this herb family, based on a number of characters of the fruit structure, and matters of habit. *Claytonia arctica* (Alaskan coasts and islands), *Montia chamissonis* (Alaska to California), and *M. asarifolia* (high mountains from Alaska to California), are included.

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51833. HOWES, JOHN. The lemming. (Canadian nature, Jan.–Feb. 1957. v. 19, no. 1, p. 13–16, illus.)

Popular description of the two forms, commonly found in the Canadian Arctic, the so-called brown and banded lemmings, *Dicrostonyx hudsonius* and *Lemmus trimucronatus;* their appearance, habits, and migrations, etc.

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HOWICK, E. E., *see* Brown, J. H., *and* E. E. Howick. Physical measurements of sea ice. *1958.* No. 49949.

HRDLIČKA, ALEŠ, 1869–1943, *see* Heizer, R. F. Archaeology of the Uyak site . . . *1956.* No. 51666.

HRDLIČKA, ALEŠ, 1869–1943, *see* Stewart, T. D. The age . . . neuralarch defects in Alaskan natives . . . *1953.* No. 55163.

51834. HSIEH, ARNOLD C. L., *and* L. D. CARLSON. Role of sympathetic nervous system in chemical regulation of heat production. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 62–63.)

In cold-adapted, curarized rats exposed to cold, the calorigenic effect of adrenaline and noradrenaline was enhanced. On the other hand the hydrochlorides of hexamethonium and of piperoxane prevented an increase of O_2-consumption under similar conditions.

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51835. HSIEH, ARNOLD C. L., *and* L. D. CARLSON. Role of the thyroid in metabolic response to low temperature. (American journal of physiology, Jan. 1957. v. 188, no. 1, p. 40–44, illus.) 29 refs.

Account of experiments with cold- and heat-adapted rats, exposed to cold (or heat) before and following thyroidectomy. O_2-consumption, heart rate, muscle activity, rectal and surface temperatures were recorded. It was found that thyroxin stores were utilized twice as fast by the cold acclimatized rats. Upon exposure to cold, the rats increased their oxygen consumption and continued so after depletion of the thyroxin reserves, which indicates that the metabolic response to cold is not directly dependent upon the quantity of circulating thyroxin.

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HSIEH, ARNOLD C. L., *see also* Carlson, L. D., *and others.* Immersion . . . tissue insulation. *1958.* No. 50132.

HSIEH, ARNOLD C. L., *see also* Carlson, L. D., *and* A. C. L. Hsieh. The role . . . thyroid . . . metabolic response to low temperature. *1957.* No. 50133.

HU, WAN-YING, *see* Dao, C., *and others.* Electrocardiographic changes . . . hypothermia. *1958.* No. 50443.

51836. HUBBARD, DONALD. Logan Mountains, N.W.T., 1955. (Canadian alpine journal, 1957. v. 40, p. 21–30, illus., text map.) 2 refs.

Reports climbing trip, July 4–28, 1955, by party of five; about 23 first ascents were made (map, 5 photos.) Numerous other peaks are available in this area (62°–62°10′ N. 127°35′–127°50′ W.) traversed by Brintnell River.

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51837. HUBBS, CARL LEAVITT, 1894– . Notes on the blennioid fishes of western North America. (Michigan Academy of Science, Arts and Letters. Papers 1926 meeting, pub. 1927. v. 7, p. 351–94, 9 tables.)

Contains a systematic annotated list of about forty species, with synonyms, keys, descriptions of new forms, critical, habitat and distributional notes. Comparative data on species, their intergradation and measurements are tabulated. At least ten species and sub-species are recorded in the Bering and Okhotsk Seas, Aleutian waters and Gulf of Alaska.

Copy seen: DLC.

51838. HUBLEY, RICHARD CARLETON, 1926–1957. An analysis of surface energy during the ablation season on Lemon Creek Glacier, Alaska. (American Geophysical Union. Transactions, Feb. 1957. v. 31, no. 1, p. 68–85, tables, graphs.) 31 refs.

Data collected in summers of 1953–54 at a micrometeorological station on this

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glacier in the Juneau Ice Field (58°24′ N. 134°34′ W.) at approx. 4,000 ft., were used in an empirical investigation of the energy transfer at an isothermal, melting snow surface and its relationship to observed meteorological parameters; more refined instrumentation and methods of observation were available than in earlier, similar investigations by H. U. Sverdrup (No. 17287, 17305) and C. C. Wallén (No. 19095). Diurnal net radiation transfer to a level snow surface on cloudy days was generally found to be greater than when skies were clear. Heat transfer by rainfall was found insignificant except when the snow temperature was below freezing. The most important factor causing ablation was turbulent heat transfer, the rate of which was almost invariably related to windspeed and vertical temperature distribution above the surface. ***Copy seen:*** DLC.

51839. HUBLEY, RICHARD CARLETON, 1926–1957. IGY research program on McCall Glacier, Brooks Range, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1906.)

Abstract of paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957. Describes geophysical research program, May 1957–Sept. 1958, on a typical glacier of the Romanzof Mts. of the eastern Brooks Range, including micrometeorology, snow and ice stratigraphy, glacier movement, and thermal structure within the glacier. The small, alpine-valley type glaciers of this area have not shrunk in the last several decades like other Alaskan glaciers, possibly because, being thermally polar, they may respond differently to climatic changes than the predominating thermally temperate glaciers.

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HUBLEY, RICHARD CARLETON, 1926–1957, *see also* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

51840. HUDSON, GEORGE ELFORD, 1907– . Birds observed in the Kotzebue Sound area of Alaska during the summer of 1956. (Murrelet, Sept.–Dec. 1957. v. 38, no. 3, p. 26–29.)

Contains an annotated list of over 70 species collected near Eskimo villages in this area, especially at Selawik about 75 miles east of Kotzebue, and on several side trips, including two by airplane to Shishmaref and Deering, and along the arctic coast from Kotzebue to Point Hope. ***Copy seen:*** DSI.

51841. HÜGIN, F., *and* F. VERZÁR. Versagen der Wärmeregulation bei alten Tieren. (Gerontologia, 1957. v. 1, no. 2, p. 91–106, illus. tables.) 10 refs. Text in German. Summary in English. ***Title tr.:*** Failure of heat regulation in old animals.

Account of experiments with rats three to over 30 months old. Rectal temperature was found to decrease with age; upon exposure to cold, older animals showed a greater fall in body temperature, and in warm environment exhibited a greater rise than young rats. Neither cooling nor warming showed a correlation to body weight. ***Copy seen:*** DNLM.

HÜTTLE-WORTH, GERTA, *see* Jakobson, R., *and others.* Paleosiberian . . . bibliographical guide. *1957.* No. 52044.

HUFFMANN, G., *see* Hirsch, H., *and others.* Über Formänderungen von Aktionspotentialen . . . *1958.* No. 51728.

51842. HUGHES, CHARLES CAMPBELL. An Eskimo deviant from the "Eskimo" type of social organization. (American anthropologist, Dec. 1958. v. 60, no. 6, pt. 1, p. 1140–47, graph, table.) 8 refs.

Deals with the complexity in the social structure of the St. Lawrence Island Eskimos and their divergence from the pattern characteristic for other Eskimo regions. Their kinship terminology, patrilineal descent, "sib", clan and tribal affiliations, etc., are discussed.

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HUGHES, N. F., *see* Forbes, C. L., *and others.* Palaeontological evidence . . . Vestspitsbergen. *1958.* No. 50944.

HUGHES, O. L., *see* Terasmae, J. Contributions . . . palynology . . . Missinaibi River . . . *1958.* No. 55377.

HUGHES, THOMAS E., *see* U.S. Library of Congress. Bibliography on snow, ice and permafrost . . . *1957–58.* No. 55635.

51843. HUIKARI, OLAVI. Skogsdikningen mekaniseras i Finland. (Norsk skogbruk, Apr. 1957. årg. 3, nr. 8, p. 219–20, 4 illus.) Text in Swedish. ***Title tr.:*** Mechanization of forest drainage in Finland.

Swamps cover more than 30% of Finland; and over 60% of the swamp

land is in the northern half of the country. Swamp drainage operations have become increasingly mechanized since 1950. Equipment, operations, and economic aspects of the program are discussed.

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51844. HULTÉN, ERIC, 1894– . De amfiatlantiska växterna. (Svensk botanisk tidskrift, 1957. bd. 51, häfte 1, p. 19–35, 12 text maps.) Text in Swedish. Summary in English. ***Title tr.:*** The amphiatlantic plants.

Contains results of investigation of total areas of plants which show a so-called amphiatlantic distributional pattern, i.e., they are found on both sides of the Atlantic but are lacking in the Pacific. "Some of these plants have areas of approximately the same size in Europe and in North America, others again have their main area in Europe and only outpost localities in America, while still another group shows the opposite conditions" (p. 34). The distribution of these groups is discussed and illustrated on text maps. In the author's opinion this survey hardly supports the suggestion of hypothetical existence of a landbridge between Europe and North America. The total areas of about 270 amphiatlantic plants are mapped. ***Copy seen:*** DSI.

51845. HULTÉN, ERIC, 1894– . A new *Oxytropis* species from Alaska. (Botanisk tidsskrift, 1954. bd. 51, p. 124–25.)

Describes: Oxytropis glaberrima n. sp. found June 25, 1952, in the valley of the upper Kurupa River, a right tributary of the Colville. ***Copy seen:*** DA.

HULTÉN, ERIC, 1894– , *see also* Faegri, K. . . . *Cerastium alpinum* gruppen. *1957.* No. 50831.

HULTMARK, NILS, *see* Kvarby, N., *and others.* Skogliga arronderingsfrågor. *1957.* No. 52599.

HUMAN RELATIONS AREA FILES, INC., *see* American Anthropological Assoc. News of foundations . . . *1957.* No. 49273.

HUMAN RELATIONS AREA FILES, INC., *see* Fitzsimmons, T. RSFSR . . . *1957.* No. 50918.

HUMAN RELATIONS AREA FILES, INC., *see* Indiana. University. Finland. *1955.* No. 51918.

HUMAN RELATIONS AREA FILES, INC., *see* Indiana. University. The Karelians. *1955.* No. 51919.

HUMAN RELATIONS AREA FILES, INC., *see* Indiana. University. The Lapps. *1955.* No. 51920.

HUMAN RELATIONS AREA FILES, INC., *see* Indiana. University. The Ostyak . . . and . . . Vogul . . . *1955.* No. 51921.

HUMAN RELATIONS AREA FILES, INC., *see* Indiana. University. The Samoyed. *1955.* No. 51922.

HUMAN RELATIONS AREA FILES, INC., *see* Indiana. University. The Zyryans . . . *1955.* No. 51923.

51846. HUMMEL, C. L. Bedrock geology of an area near Nome, Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1730.) Abstract of a paper presented at the Society meeting in Golden, Colorado, May 8–10, 1958.

Describes bedrock deformed during at least two orogenies in an area extending about 15 mi. east and 35 mi. north of Nome. ***Copy seen:*** DGS.

51847. HUMMEL, C. L. Geology of the bedrock and lodes of the Nome gold fields, Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1754.) Abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958.

Field investigations in an area 15 mi. wide extending 35 mi. north of Nome are described. Most of the bedrock is quartzose and calcareous schist and interbedded marble of sedimentary origin; nearly all of it has been regionally metamorphosed. Two orogenies occurred, the later, probably in Tertiary times, giving rise to the Kigluaik Mts. Most of the lode deposits are of base-metals with gold and scheelite as minor constituents. Many are high grade, but too small to be of economic importance. Pegmatites and metasedimentary graphite deposits in the Kigluaik Mts. have no present economic value.

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51848. HUMPHREY, PHILIP STONG, *and* R. S. BUTSCH. The anatomy of the Labrador duck *Camptorhynchus labradorius,* Gmelin. Washington, D.C. May 1958. 23 p. illus., 5 plates, incl.

2 col. (Smithsonian Institution. Smithsonian miscellaneous collections, v. 135, no. 7.) 21 refs.

A study of the feathers and their arrangement (pterylosis) of a male specimen, including X-ray photographs. Also, description of the bill, feet, trachea and coloration of soft parts. The taxonomy of this form is discussed, as suggested by the study. ***Copy seen:*** DLC.

51849. HUMPHREY, PHILIP STONG. Classification and systematic position of eiders. (Condor, Mar.–Apr. 1958. v. 60, no. 2, p. 129–35, illus.) 24 refs.

Contains data on tracheal structure, plumage patterns, food (Igiak Bay, Alaska) and diving habits of the genera in the tribe Mergini. The genus *Lampronetta* should be placed in genus *Somateria*, but *Polysticta* should be maintained as a separate genus. The eiders are most closely related to the Anatini, and should be placed in a separate tribe, Somateriini, next to the Anatini. ***Copy seen:*** DSI.

51850. HUMPHREY, PHILIP STONG. Remarks on the courtship and voice of the black scoter. (Condor, Mar.–Apr. 1957. v. 59, no. 2, p. 139–40, illus.)

A pair of black scoters (*Melanitta nigra americana*) was observed on June 26, 1952, at Igiak Bay on the Yukon-Kuskokwim delta in Alaska. The display sequence of the male (bowing, tail snap, and forward rush) and two notes in addition to "low, growling noises" are described; the female exhibited the characteristic "excited" pose.

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51851. HUMPHRYS, GRAHAM. The railway stimulus in Labrador-Ungava. (Geography, Apr. 1957. v. 42, pt. 2, no. 196, p. 117–19, text map.)

The Quebec North Shore & Labrador Railway moved 12 million tons of iron ore in 1956; its maximum capacity will be 20 million tons. This railroad has stimulated further exploration for orebodies, as at Wabush Lake, 200 mi. north of Seven Islands and 30 mi. west of the railway. A road is being built by the British Newfoundland Corp. from the railway eastward to Grand Falls on the Hamilton River, a potential hydroelectric power source. Schefferville, the northern rail terminus and primarily an iron-mining town, is on the Mid-Canada defense radar line. Men and construction material for radar sites have increased the railway's freight volume, also the average monthly aircraft landings from 170 to over 850. ***Copy seen:*** DGS.

51852. HUMPHRYS, GRAHAM. Schefferville, Quebec: a new pioneering town. (Geographical review, Apr. 1958. v. 48, no. 2, p. 151–66, plates, 2 text maps.) 2 refs.

Description, with location map, town plan, and numerous photos, of this company town (Iron Ore Co. of Canada) near the recently developed mines at Knob Lake. It is the terminus of the new Quebec North Shore and Labrador Railway; its airport (two scheduled lines) is control center of the eastern arm of the Mid-Canada Defence Line. The McGill Sub-Arctic Research Laboratory carries on research in seismology, ionospheric physics, snow and ice, geomorphology, vegetation and agriculture in the area. A factor in future planning of this settlement is its distance (30 miles) from large low-grade iron ore deposits not yet developed. A new town may be required. Inadequacy of original site, shortage of housing, uncertain future in mining are also factors. Schefferville is not a "pioneer" town, but rather an outlier of civilization, maintained by the need for iron. ***Copy seen:*** DGS.

51853. HUNT, J. B. Brittle fracture of mild steel in torsion. (Engineering, Aug. 9, 1957. v. 184, no. 4770, p. 173–74, diagrs., graphs, tables.)

"Impact tests were made on mild-steel specimens in torsion at low temperatures to study the variation in stress-strain characteristics as brittle fracture conditions are approached (test range −100° to −195° C.). It was found that a uniform elasto-plastic twist existed and that this twist became a maximum when the overall ductility began to decrease. Torque-twist curves with a negative slope after yield were obtained."—Author's abstract. ***Copy seen:*** DLC.

51854. HUNT, JOHN CLARK. Burning Alaska. (American forests, Aug. 1958. v. 64, no. 8, p. 12–15, 40–42, illus., map.)

Includes information on the forest area of Alaska (225 million acres), the damage of the great forest fire of 1957; local causes of forest fires; fire control services. Earlier large fires and their causes, special difficulties of control in Alaska and economic aspects are discussed, plans for additional protection are outlined.

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51855. HUNTEN, D. M. Recent work at the University of Saskatchewan on auroral and night sky spectra. (Annales de géophysique, 1958. t. 14, fasc. 2, p. 167–74, graph.) 19 refs. Summary in French.

Reviews work of 1954–1957 in spectroscopy of aurora and airglow, carried out at Saskatoon and Churchill. Notes agreement, disagreement with previous findings; unusual features are indicated. ***Copy seen:*** DLC.

HUNTER, JOHN, *see* Meyer, J. S., *and* J. Hunter. Effects of hypothermia . . . hypoxia. *1957.* No. 53256.

51856. HUNTLEY, THEODORE A. *and* **R. E. ROYALL.** Construction of the Alaska Highway. Washington, D.C., Sept. 1945. 176 p., illus., 6 maps incl. 2 fold., diagrs., tables. (U.S. Public Roads Commission, no. P–3471.) Refs.

In two parts, the first by Huntley (p. 1–32) describes the military emergency which made the highway necessary, and the events through Mar. 1943 connected with construction. Part 2, by Royall, based on an inspection trip in Sept. 1943 (p. 33–85) continues the report of construction activities through Oct. 1943, when the road was substantially completed. Bridges and culverts, etc. are included, also equipment costs, camp facilities and workers, organization, and medical service. Appended are legal, financial, diplomatic and statistical information, correspondence and directives. ***Copy seen:*** DGS.

HUPPERT, J., *see* Panijel, J., *and others.* Effets de la congélation . . . bacteriophages. *1957.* No. 53851.

51857. HURD, PAUL DAVID, 1921– . Analysis of soil invertebrate samples from Barrow, Alaska. Berkeley, Calif. Feb. 1, 1958. 24 p. Mimeographed. Final report, Project ONR–173, Feb. 1 1956, and ONR–193, Feb. 1, 1957, Arctic Institute of North America.

Report on a qualitative and quantitative analysis of soil insects and related forms from Point Barrow, Alaska. Over 300 species are recorded and taxonomically listed. The most numerous found were Diptera with 130 species, Acarina or mites (60), Hymenoptera (40) and Collembola or springtails (25). The collection is housed at the Dept. of Entomology and Parasitology, University of California, Berkeley.

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51858. HURLEY, LLOYD A. Angioarchitectural changes associated with rapid rewarming subsequent to freezing injury. (Angiology, Feb. 1957. v. 8, no. 1, p. 19–28, illus.) 6 refs.

A study of hind legs of rabbits, with the aid of plastic casts and angiographs. Revascularization started as early as three days after cold-injury and played a significant role in the heating process. Opening up of side branches and new capillary outgrowths resulted in a dense network of blood vessels in the recovered area. ***Copy seen:*** DNLM.

51859. HURTIG, THEODOR. Schwedisch-Lappland und die Lappen. (Geographische Berichte, Sept. 1958. Heft 8, p. 81–105, tables, maps (2 in pocket)). 15 refs. Text in German. ***Title tr.:*** Swedish Lapland and the Lapps.

Presents a general survey with special attention to reindeer breeding, based on a trip in 1957 and on published sources. Morphology and orography of Lapland are outlined; characteristics of the mountains, rivers, and valleys are given. Four natural landscapes are described. Climatic conditions are summarized, with data for the period 1901–1930. Land use is reviewed and elucidated in a table. Types of population, their occupations and reindeer breeding are described according to studies of E. Manker, G. Ulenius and others. Seasonal migration of the herds, nomadism, and its transition to the present social and cultural life are discussed. ***Copy seen:*** DLC.

51860. HUS, HENRI THEODORE ANTOINE. Preliminary notes on West-Coast Porphyras. (Zoe, Sept.–Oct. 1900. v. 5, no. 4–5, p. 61–70.) 13 refs.

Contains a key and annotated list of 14 species and varieties of the algal genus *Porphyra,* at least eight recorded in Alaskan waters. ***Copy seen:*** DLC.

HUSSEY, K. M., *see* Carlson, P. R., *and others.* Geology and mechanical stabilization of Cenozoic sediments . . . *1958.* No. 50134.

HUSSEY, K. M., *see* O'Sullivan, J. B., *and others.* Geology . . . soil materials . . . *1958.* No. 53805.

HUSSEY, K. M., *see* O'Sullivan, J. B., *and* K. M. Hussey. Problems . . . soils stabilization . . . Barrow . . . *1957.* No. 53806.

HUSSEY, K. M., *see* Rosenfeld, G. A., *and* K. M. Hussey. A consideration . . . oriented lakes. 1958. No. 54396.

51861. HUSTEDT, FRIEDRICH, 1886– . Süsswasserdiatomeen von Island, Spitzbergen und den Färöer-Inseln. (Botanisches Archiv (Mez), 1936. Bd. 38, p. 152–207.) 37 refs. Text in German. Summary in English. ***Title tr.:*** Freshwater diatoms from Iceland, Spitsbergen, and the Faeroe Islands.

Contains notes on collections and a systematic list of 193 species also many varieties and forms, seven described as new. *Achnanthes petersenii* n. sp. and at least 15 others are recorded in Spitsbergen. ***Copy seen:*** DA.

51862. HUSTICH, ILMARI, 1911– . Hudson Bay's subarktiska lågland. (Nordenskiöld-samfundet. Tidskrift, 1957. årg. 17, p. 45–62, illus., maps.) Text in Swedish. ***Title tr.:*** Hudson Bay's subarctic lowlands.

Contains a general geographical description of the coastal area west of Hudson and James Bays, visited by the author in 1956 with a Canadian forestry and phytogeographical expedition. Flights over the area and many local excursions were made as reconnaissance for a research project started by A. E. Porsild and planned to last for three to four years. Finnish and Russian scientists who have dealt with similar areas in their own countries are mentioned. Efforts to create economic opportunities for local inhabitants (2,000–3,000 individuals) are noted. ***Copy seen:*** DLC.

51863. HUTCHINSON, RICHARD W. Regional zonation of pegmatites near Ross Lake, District of Mackenzie, Northwest Territories. Ottawa, Queen's Printer, 1955. 50 p. plates, maps (7 fold.) tables. (Canada. Geological Survey. Bulletin 34.) 47 refs.

Report of a detailed field (approx. 62°40′ N. 113° W.) and laboratory study, begun summer 1952. Regional distribution and mineralogic characteristics of these rocks are described in detail, and a genetic relationship between them and the (Redout Lake) granite mass to the east is suggested. Pegmatite bodies examined (350) are described and referred by number to base map which shows their location, size and shape, and occurrence of certain rare-element minerals. Six typical bodies were mapped in detail by plane table methods. In the laboratory, thin section examination, X-ray diffraction work, preparation of grain mounts of plagioclase feldspar and their study by the colored Becke line method, spectrographic analysis and heavy mineral separation were employed. Among conclusions reached: nature of the pegmatite bodies varies systematically with increasing distance from the Redout Lake granite mass; all the pegmatites in the area were derived directly or indirectly from the granite, outward migration down a temperature-pressure gradient was responsible for the progressive changes in the resulting pegmatite bodies; concentrations of the rare-element minerals are not likely to be found in pegmatites within one mile of the Redout Lake granite. ***Copy seen:*** DGS.

HUTT, BRUCE K., *see* Spurr, G. B., *and others.* Shivering . . . men . . . cold . . . *1957.* No. 55104.

51864. HUTT, GORDON McLEAN, 1902– . Prospector's guide to industrial minerals in Canada. Montreal? 1958. 42 p. tables.

Handbook, designed to advise the prospector on what industrial minerals to seek, and where; what discoveries to stake, to merely note, or to ignore. Characteristics of most common minerals are listed; potential buyers are indicated. ***Copy seen:*** DGS.

HUUS, JOHAN, 1892–1947, *see* Føyn, B., *and* J. Huus. Norges dyreliv. *1947–50.* No. 50939.

51865. HUZIOKA, TOSIO. A study on the running of a caterpillar snow car. (Teion kagaku, 1956. ser. A, v. 15, p. 93–100, illus., table.) 4 refs. Text in Japanese. Summary in English.

Measurements of the ruts made by the vehicle weighing 2,460 kg. at speeds from 1.5–30 km./hr. showed no decrease in depth with increasing speed as formerly reported. The ruts were uniformly 8.5 cm. deep at a speed of 1.5 km./hr., the depth of the compressed layer being 16 cm., while at higher speeds depth varied from 9–12 cm. and the compressed layer was 14–22 cm. deep. The lack of correspondence between rut depth and vehicle speed is attributable to the fragility of the snow, which was an aggregate of hoar crystals.

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51866. HVALRÅDET. International whaling statistics. Edited by the Com-

mittee on Whaling Statistics. Oslo, 1930—*in progress.*

Issued annually since 1950 in 2 parts of approx. 80 pages each (in earlier years issued irregularly), one part covering the antarctic season; the other, whaling grounds outside the Antarctic. The latter include among other areas, West Greenland, Newfoundland, Kamchatka. A summary, in perspective, of the year's results is followed by tabular data on number and kind of whales killed in various areas, and by various countries, average size, foetus measurements, oil and sperm-oil production. Texts of documents are included occasionally, as in v. 30 *pub.* 1953, International convention for the regulation of whaling 2 Dec. 1946, schedule as amended to 1952.

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51867. HVARFNER, HARALD. Fjäl-land, skogsland, kustland; om norrländskt stenåldersliv från sommar till vinter. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1958, p. 25–35, illus., map.) 11 refs. Text in Swedish. ***Title tr.:*** Mountain, forest, coast; stone age life in Norrland from summer to winter.

Extensive archeological investigations carried out in north Sweden over the years, since 1942 by Riksantikvarieämbetet (Office of the State Antiquarian), disclose a stone age (shale and quartzite) culture not yet possible to date. Indications are found of a continuance into the Middle Ages and of its existence concurrently with a metal culture. The sites, whether by Lapps or others, are located along water-courses and are of two types according to the (mountain or forest) location. The sites on mountain streams submerged during part of the year, and temporary in character, rarely have distinct culture-layers. The forest region sites with thick culture-layers, seem to have been used intensively and are of a permanent type. Sites of both regions may have been used by the same people according to season.

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51868. HVARFNER, HARALD. Riksantikvarieämbetets kulturhistoriska inventeringar och undersökningar i samband med vattenkraftutbyggnader i Norrbottens län. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1957, p. 34–37.) Text in Swedish. ***Title tr.:*** The cultural inventories and investigations of the State Antiquarian office in connection with hydro-electric power projects in Norrbotten.

Inventories, archeological and ethnographic investigations and photographs are being made in northern Sweden to record prehistoric and recent culture before it is obliterated in the changes concomitant with power development.

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51869. HVOSLEF, OTHAR. Planteskoledrift i Troms. (Tidsskrift for skogbruk, Sept. 1953. årg. 61, hefte 9, p. 355–62, illus.) Text in Norwegian. ***Title tr.:*** Nurseries in Troms.

Describes the Fagerlídal nursery in the Målselvdal valley (69°12′ N. 18°35′ E.), and the Ervik nursery near Harstad (68°48′ N. 16°30′ E.) which supplies the coastal regions. Fagerlídal has problems of soil cultivation and frost; most of the planting is done during two-three weeks, in late May–early June; it had a stock of six million plants in 1953 and is to have two million for sale in 1956. Ervik is somewhat smaller. ***Copy seen:*** DA.

51870. HVOSLEF, OTHAR. Problemer i nord-norsk skogbruk. (Skogbrukeren, Apr. 1, 1954. årg. 29, nr. 7, p. 99–100.) Text in Norwegian. ***Title tr.:*** Problems in North Norway forestry.

Most serious is disposition of birch, chief tree in the area but now superseded locally for practical purposes by hydro-electric power and imported oil. Experiments in its use for pulp and fiber show the quality too poor; inadequate and costly transportation facilities are a further handicap. Plans are underway to replace birch with conifers.

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51871. HVOSLEF, OTHAR. Skogene nordenfor Polarcirkelen. (Tidsskrift for skogbruk, 1956. årg. 64, hefte 4, p. 185–207, illus.) Text in Norwegian. ***Title tr.:*** The forests north of the Arctic Circle.

Describes the journey across rugged Saltfjellet mountain (66°30′ N.) where climate and vegetation manifest arctic characteristics, through the pine forests of Troms and Finnmark and into the spruce forests of northern Finland. The topography, the history of forestry, modern practices, commercial production, etc. are summarized. Natural renewal, annual increases, and cultivation of spruce and fir are discussed. The northernmost plantations near Hammerfest (71° N.)

include Alaskan and Siberian varieties, and natural birch stands.

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51872. HVOSLEF, OTHAR. Skogkongressen i Finnland; ekskursjon nr. 13. (Skogbrukeren, Sept. 1, 1954. årg. 29, no. 17, p. 264–67, illus.) Text in Norwegian. ***Title tr.:*** The forestry congress in Finland; excursion no. 13.

Report of a Scandinavian Forestry Congress excursion to Finnish Lapland north of Kemijärvi (66°41′ N. 27°30′ E.). Large-scale burning is done in the area to promote regeneration of old forests, and to improve degenerated raw humus. The trip over the tundra battlefields of World War II, post-war colonization, etc., are noted. ***Copy seen:*** DA.

51873. HVOSLEF, OTHAR. Skogreising i Troms. (Tidsskrift for skogbruk, Feb. 1953. årg. 61, hefte 2, p. 31–47.) Text in Norwegian. ***Title tr.:*** Reforestation in Troms.

Survey of forests and forestry in Troms province; and recommendations for an eighty-year plan for increased production. Growth conditions, productive and total areas, forest planting, and means of transportation are reported, with analysis of factors preventing increased production at present. The recommendations include: redistribution of outlying fields, manpower state subsidies, cultivation of nursery land, disposition of birch, its gradual replacement by conifers, and that of forest pastures by cultivated pastures. ***Copy seen:*** DA.

51874. HYLANDER, NILS, 1904– . Nomenklatorische und systematische Studien über nordische Gefässpflanzen. Uppsala, Almquist & Wiksell, 1945. 337 p. (Uppsala. Universitet. Årsskrift, 1945, no. 7.) Text in German. ***Title tr.:*** Studies in nomenclature and taxonomy of northern vascular plants.

Contains discussion of nomenclature and systematics of families and genera of northern plants, followed by a taxonomic annotated list of some eight hundred species, subspecies and varieties, with synonyms, literature citations and critical notes. Specific localities are rarely cited. About twenty species are recorded from arctic regions of Europe, Asia and North America. ***Copy seen:*** DLC.

51875. HYLANDER, NILS, 1904– . On cut-leaved and small-leaved forms of *Alnus glutinosa* and *A. incana*. (Svensk botanisk tidskrift, Nov. 4, 1957. bd. 51, häfte 2, p. 437–53, 28 plates.) 22 refs.

Contains an annotated list of eight forms of *A. glutinosa* and 16 of *A. incana*, with synonyms, Latin diagnoses of six new forms, illus. and data on distribution. *A. incana* f. *chamaedryoides* (Nederluleå in Norrbotten) and *A. incana* var. *virescens* f. *orlovae* n. nom. (Kola Peninsula) are included. ***Copy seen:*** DA.

51876. HYLANDER, NILS, 1904– . On cut-leaved and small-leaved forms of Scandinavian birches. (Svensk botanisk tidskrift, Nov. 1957. bd. 51, häfte 2, p. 417–36, 28 plates.) 22 refs.

Contains a critical revision of aberrant forms of the genus *Betula*. Twelve forms of *B. verrucosa*, two of *B. pubescens*, and seven of *B. pubescens* x *verrucosa* are listed, one described as new; synonyms, illustrations and data on distribution are supplied, *B. pubescens* f. *incisa*, occurring in Lule Lappmark, is included.

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51877. *IGY BULLETIN.* Washington, D.C., July 1957– , *in progress.* Issued monthly in approx. 15 p. by the U.S. National Committee for the International Geophysical Year. From Aug. 1957, two issues are included in each of the bi-monthly *Transactions* of the American Geophysical Union.

Presents summaries and reports on projects and experiments in the U.S. program as well as news of activities in other countries, compiled from progress reports submitted to the National Academy of Sciences, correspondence, and discussions. Recent issues include selected bibliographies. ***Copy seen:*** DLC.

51878. I. O. Grønlandsforskeren, kaptajn H. C. Ryder. (Atuagagdliutit: Grønlandsposten, Sept. 11, 1958. Ukiut 98-iat, nr. 19, p. 9, 18.) Text in Danish and Eskimo. ***Title tr.:*** The Greenland explorer, Captain H. C. Ryder.

Notes on Carl Hartvig Ryder (1858–1923), his five expeditions to Greenland (the most important that to East Greenland in the *Hekla* in 1891–92), his meteorological and survey work, his interest in Norse and Eskimo archeology. ***Copy seen:*** DLC.

51879. ÎABLOCHKIN, N. N., *and* K. D. GRISHIN. Èlektropodogrev rastvora dliâ kamennoĭ kladki v zimnikh usloviâkh. (Stroitel'naiâ promyshlennost', Sept. 1957. god 35, no. 9, p. 40–41, diagr.)

Text in Russian. ***Title tr.:*** Electric heating of mortar for masonry under winter conditions.

A system of heating mortar to maintain the required fluidity at low temperatures is described with illus. The mortar supply pan with vibrator and bricklayer's mortar box at the construction site are both well insulated and electrically heated to a specified temperature. The arrangements are of simple construction and can be made with local building facilities. ***Copy seen:*** DLC.

ÎABLOKOV, A. V., *see* Kleĭnenberg, S. E., *and* A. V. ÎAblokov. O morfologii . . . kitoobraznykh. *1958.* No. 52315.

51880. ÎAKHONTOV, V. D. Prolet promyslovykh vodoplavaûshchikh ptiû v srednem techenii reki Kolymy. (Zoologicheskiĭ zhurnal, Mar. 1957. t. 36, vyp. 3, p. 462–64, tables.) Text in Russian. Summary in English. ***Title tr.:*** Flight of game waterfowl over the middle course of the Kolyma.

Notes and data on spring and fall flights of wild ducks and geese based on observations during 1949–1954. Spring flights are somewhat later than in central or southern Yakutia and considerably later than in Siberia generally.

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51881. ÎAKOVLEV, ALEKSANDR STEPANOVICH, 1886–1953. Rual Amundsen, 1872–1928. Moskva, Molodaû gvardiû, 1957. 223 p. illus., col. front. (Zhizn' zamechatel'nykh lûdeĭ.) 16 refs. Text in Russian. ***Title tr.:*** Roald Amundsen, 1872–1928.

Biography of Amundsen, including the story of his arctic voyages and flights, presented in the form of a novel, reprinted from the first, 1948, edition. Appended is a summary of recent arctic explorations by A. F. Treshnikov (p. 217–20), chronology of Amundsen's life (p. 221), and a list of (16) publications of and about Amundsen in Russian.

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51882. ÎAKOVLEV, GURIÏ NIKOLAEVICH. Ispytanie muzhestva; dnevnik polûrnika. Moskva, Gos. izd-vo geogr. lit-ry, 1957. 262 p. illus., plans (1 fold.), map. Text in Russian. ***Title tr.:*** A test of courage; a polar worker's diary.

Narrative of life, work and events on the Soviet drifting station North Pole-2, 1950–51 by its glaciologist. The station, headed by M. M. Somov, was set up Apr. 1, 1950, on an ice floe at 76°02′ N. 193°30′ E., and ÎAkovlev arrived on Apr. 7th. He describes the organization of the camp, transportation (by air and dog-team), camp life (tents, bath-house, meal preparation, fresh-water supply, etc.); visits of polar bears; scientific observations; struggle with melt water in summer; destruction of the radiostation by fire (p. 112). The station, originally occupied for six months, was continued to a full year; winter equipment and supplies were flown in, Oct. 26–Nov. 4. Technique of landing in polar night (p. 171–79), protection of the tents by outer snow walls, difficulties of winter observations, destruction of the floe by cracking and pressure, and transfer of the camp to another site in February (p. 208–233) are described. The station was evacuated at 81°45′ N. 196°12′ E. on Apr. 9–12, 1951. The members of the party (16, Apr.–Oct., 11, Oct.–Apr.) are characterized; station location, ice and weather conditions are stated throughout the drift. The camp was sighted again in 1954 and visited by a helicopter party from drifting station North Pole-4 (p. 255–61). The tents were found intact upon columns of ice, which thus protected from summer melt stood man high above the surface of the ice floe; the floe itself was of the same thickness (3 m.) as in 1951. ***Copy seen:*** DLC.

51883. ÎAKOVLEV, GURIÏ NIKOLAEVICH. Solar radiation as the chief component of the heat balance of the arctic ice. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 181–84, 3 tables.) 4 refs.

The role of radiative processes in the thermal balance of an ice sheet in the central Arctic Basin is examined on the basis of studies on drift station North Pole-2. Heat from direct radiation does not contribute much to the total supply of heat to the ice. The main portion of the incoming solar energy is derived from dispersed radiation. A stable transition to a positive daily radiation balance occurs in early May, reaching a maximum in June and July. Daily radiation balance begins to decrease in early Aug., the transition to negative sums begins in mid-Sept. and in Oct. a stable negative balance sets in. Maximum negative values were observed in mid-Feb. 1951 and the end of Dec. 1950. The maximum monthly radiation-balance value recorded was 3.5 kg-cal./cm.^{2} in

June and 3.7 kg.-cal. in July. In spite of the fact that the annual radiation balance sum is small, it predominates over other components of the thermal balance in months when the income of solar energy and radiation from the ice surface are most active.—From SIPRE.

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51884. ÎÀKOVLEV, GURIÏ NIKOLAEVICH. Turbulentnyĭ teploobmen ledîanogo pokrova s vozdukhom v Tsentral'noĭ Arktike. (Problemy Arktiki, sbornik statei, 1957. vyp. 2, p. 193–204, diagrs., tables.) 5 refs. Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Turbulent heat exchange between ice cover and air in the Central Arctic.

Presents results of analysis of data on ice and air temperature and on near-surface wind collected by the drifting station North Pole-2 in 1950–51. A. R. Konstantinov's empirical formula for computing heat exchange caused by wind was applied and the heat current found to move from ice to air during May–Sept. and from air to ice in Oct.–April. Detailed data on amount of the turbulent heat exchange are given (tables 1 and 2), and compared with similar data for Turukhansk (66° N. 88° E.) and with data on radiation heat exchange in the Central Arctic, direction of which is opposite to that of turbulent heat exchange: down in summer and up in winter. The annual balance of turbulent heat exchange approaches 7 kg.-cal./cm.^{2}; radiation heat exchange amounts to 21 kg.-cal./cm.^{2}. ***Copy seen:*** DLC.

51885. ÎÀKOVLEV, L., *and* **B. I. PIÏP.** Probuzhdenie Koríakskoĭ sopki. (Ogonëk, Mar. 1957. god 35, no. 12, p. 32, illus.) Text in Russian. ***Title tr.:*** Awakening of Koryakskaya Sopka.

This volcano (53°20′ N. 158°40′ E.), almost completely dormant since 1896, showed clouds of vapor in Dec. 1956, and ejected ashes in 1957; Photo. illus. of Koryakskaya, vapor-crowned, with Avachinskaya Sopka in the background.

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ÎÀKOVLEV, O. A., *see* Abramov, V. F., *and others.* Sravnitel'naîa oîsenka otboĭki rudy . . . *1958.* No. 49105.

51886. ÎÀKOVLEV, SERGEÏ ALEKSANDROVICH, 1878–1957. Chetvertichnye otlozheniîa severnoĭ chasti Russkoĭ ravniny. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Trudy, 1957. t. 13, p. 32–35, table.) Ref. Text in Russian. ***Title tr.:*** Quaternary deposits in the northern part of the Russian plain.

Reviews the study of Quaternary deposits in the European North, including Kolguyev Island, Kola Peninsula, the White Sea region, Mezen', Pechora and other river basins. Three periods are distinguished and the outstanding scientists mentioned: the latter half of the 19th century, the early part of this century, when twofold glaciation was established, and recent investigation, after manifold marine transgression was identified. In the recent period, the work of ÎU. L. Rudovitš, particularly his discovery of boreal transgression on Kolguyev with plant fossils (No. 25712), and others are cited. The interrelation between glaciation and marine transgressions is outlined in a table (after No. 35355).

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51887. ÎÀKOVLEV, SERGEÏ ALEKSANDROVICH, 1878–1957. K izucheniîu lednikovykh valunov na Russkoĭ ravnine. (Leningrad. Vsesoîuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Materialy, nov. seriîa, chetvertichnaîa geologiîa i geomorfologiîa, 1956. vyp. 1, p. 18–43, tables, cross-sections) 90 refs. Text in Russian. ***Title tr.:*** On the study of glacial boulders in the Russian plain.

Three stages are distinguished in this study: incidental, systematic including qualitative composition, and determination of the quantitative correlation of boulders according to statistical method. Each stage is characterized in turn and the literature evaluated. The last stage is treated fully, and work on the Severnaya Dvina (near mouth of the Pinega), Vym, Vychegda, Mga, and in other localities is considered. The centers and directions of glaciers which covered various parts of Russia, especially northern regions, are summarized.

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51888. ÎÀKOVLEVA, M. A. O rabote sekîsii inzhenernogo merzlotovedeniîa VII mezhduvedomstvennogo soveshchaniîa po merzlotovedeniîu. (Akademiîa nauk SSSR. Institut merzlotovedeniîa. Trudy, 1958. t. 14, p. 140–48.) Text in Russian. ***Title tr.:*** The work of the Permafrost Engineering Section of the

Seventh Interdepartmental Conference on Permafrostology.

Subjects discussed at this conference in March 1956 include: construction problems, advances in practical and scientific fields, deficiencies and methods of correcting them. Progress in the design and construction of heated buildings on permafrost was recognized and certain failures were attributed to unfavorable natural conditions or inadequate planning. Investigations on tangential stresses between a foundation and frozen ground showed that maximum stresses develop near the permafrost boundary and decrease with distance from it. Good results were reported with prefabricated reinforced concrete foundations. A new technique for setting piles in frozen ground by blasting and a method of repairing deformed foundations were recommended. Pipeline construction was discussed and a method of determining heat losses of metal pipes was described. The exploitation of natural resources in permafrost, construction of hydraulic installations, and transportation problems were considered. The need for more extensive investigations in road and airfield construction was emphasized—From SIPRE.

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51889. ÎÀKOVLEVA, S. V. Issledovanie lednikovykh valunov. (*In:* Akademiîa nauk SSSR. Geologicheskiĭ institut. Kratkoe polevoe rukovodstvo, 1957. p. 77–81.) 6 refs. Text in Russian. ***Title tr.:*** Investigation of glacial boulders.

Four groups of boulders are distinguished according to their origin, viz.: Fennoscandia, Novaya Zemlya and Timan, Ural, North Siberia; and their types (29, based on composition) are enumerated. Instructions for field investigations are given; identification, description, petrographic properties and measurements are reviewed. Glacial boulder investigation is important for the determination of former glaciers, their origin, and direction.

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51890. ÎÀKOVLEVA, S. V. Orientirovka valunov v osnovnykh morenakh i ee znachenie dlîa opredeleniîa napravleniîa dvizheniîa lednikov. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Trudy, 1957, vol. 13, p. 300–303, illus.) 2 refs. Text in Russian. ***Title tr.:*** Orientation of boulders in ground moraines and its importance for determination of glacier movement direction.

Reports results of investigation on glacial boulders southwest of Lake Ladoga and on the bank of the Ob' River. Their predominant orientation is studied and diagrammed. The direction and extension thither of glaciers from Novaya Zemlya are considered. The orientation of the boulders deposited is claimed to disclose the direction of movement of the glaciers.

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51891. ÎÀKUSHEV, IVAN ALEKSANDROVICH, 1882–1935. Die Zukunft Sibiriens. Prague-Vršovice, Druck Legiografie, 1928. 2 p.l., 212, 4 p. illus., tables, fold. map. Refs. Text in German. ***Title tr.:*** The future of Siberia.

Comprehensive study of economic conditions and potentialities of Siberia: forests, fur animals, fisheries and minerals treated in turn (p. 13–106). Colonization, administration, population are outlined. Agriculture, industry, commerce, transportation and communication, climate and health resorts are discussed. Pertinent information on the far North, Yakut A.S.S.R., and Kamchatka are included.

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51892. IAMPIETRO, P. F., *and others.* Caloric intake during prolonged cold exposure. Natick, Mass., Sept. 1957. 8 p., illus., tables. (U.S. Quartermaster Corps. Environmental Protection Research Division. Technical report EP–66.) *Other authors:* D. E. Bass *and* E. R. Buskirk.

Account of caloric intake and energy expenditure of five men exposed for 14 days to a temperature of 60° F. wearing only shorts and allowed minimal physical activity. Cold exposure was preceded and followed by two weeks at 80° F. The increased caloric intake observed in the cold resulted from increased shivering.

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51893. IAMPIETRO, P. F., *and others.* Caloric intake during prolonged cold exposure. (Metabolism; clinical and experimental, Mar. 1958. v. 7, no. 2, p. 149–53, illus., table.) 7 refs. Other *authors:* D. E. Bass *and* E. R. Buskirk.

Content as in item above.

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51894. IAMPIETRO, P. F., *and others.* Diurnal oxygen consumption and rectal temperature of man during continuous

cold exposure. (Journal of applied physiology, May 1957. v. 10, no. 3, p. 398–400, illus.) 4 refs. *Other authors:* D. E. Bass *and* E. R. Buskirk.

Account of observations on five men living for 14 days at 60° F. dressed in shorts only and with minimal physical activity. The cold period was preceded and followed by two weeks at 80° F. Results indicate that rectal temperature was well maintained during cold exposure and O_2-consumption appeared to respond in maintaining this temperature.

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51895. IAMPIETRO, P. F., *and others.* Effect of food, climate and exercise on rectal temperature during the day. (Journal of applied physiology, Nov. 1957. v. 11, no. 3, p. 349–52, illus., table.) 11 refs. *Other authors:* E. R. Buskirk, D. E. Bass, *and* B. E. Welch.

Results of the experiments indicate that living in diverse, including cold, climates has little or no effect on rectal temperature. Neither had exercise; fasting reduced the diurnal elevation to one-half of normal and when combined with exercise abolished it altogether.

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51896. IAMPIETRO, P. F., *and others.* Effects of food, climate, and exercise on rectal temperature during the day. Natick, Mass. Dec. 1957. 4, 5p. illus., table. (U.S. Quartermaster Corps. Environmental Protection Research Division. Technical report, EP–76.) 11 refs. *Other authors:* E. R. Buskirk *and* D. E. Bass.

A study of young, healthy men living in different climates, including the subarctic (Fort Churchill, northern Manitoba). The results indicate that climate has no effect on rectal temperature as registered between 8 a.m. and 8 p.m. However, fasting without exercise reduced the diurnal rise in rectal temperature, and when combined with exercise abolished it altogether.

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51897. IAMPIETRO, P. F., *and others.* Heat exchanges of nude men exposed to cold varying from moderate to severe. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 76.) *Other authors:* E. R. Buskirk *and* D. E. Bass.

Report on investigation of oxygen consumption ($\dot{V}o_2$) skin temperature (Ts) and rectal temperature (Tr) during a 90 min. exposure to various combinations of dry-bulb temperatures (80°–20° F.) and wind-speed (<1 to 10 mph). Speed of body temperature changes and their relation to degree of cold as well as responses in O_2-consumption and its dependence on ambient temperature are analyzed and discussed.

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51898. IAMPIETRO, P. F., *and others.* Heat exchanges of nude men in the cold; effect of humidity, temperature and wind-speed. (Journal of applied physiology, May 1958. v. 12, no. 3, p. 351–56, illus., tables.) 8 refs. *Other authors:* D. E. Bass *and* E. R. Buskirk.

Account of investigation on skin and rectal temperatures, O_2-consumption, and subjective sensation. Wind was found to have the strongest effect on both physiological and subjective response; dry bulb had a lesser effect, and relative humidity *per se* little or none. ***Copy seen:*** DLC.

IAMPIETRO, P. F., *see also* Buskirk, E. R., *and others.* Variations . . . metabolism . . . food, exercise and climate. *1957.* No. 50023.

IAMPIETRO, P. F., *see also* Kreider, M. B., *and others.* Effect . . . cold exposure on nocturnal body temperatures of man. *1958.* No. 52481.

IAMPIETRO, P. F., *see also* Welch, B. E., *and others.* The relation of climate and temperature . . . food and water intake . . . *1957.* No. 55984.

IAMPIETRO, P. F., *see also* Welch, B. E., *and others.* Relation . . . climate and temperature to food and water intake . . . *1958.* No. 55985.

IAMPIETRO, P. F., *see also* Wood, J. E., *and others.* Responses of peripheral veins of man . . . cold exposure. *1958.* No. 56105.

51899. ÎÂSHINA, Z. I. O grîadovom rel'efe na Gydanskom poluostrove. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958. Vyp. 8, p. 29–33, illus.) Text in Russian. ***Title tr.:*** On ridged relief on the Gydan Peninsula.

Comments on V. N. Sokolov and G. A. Znachko-ÎÂvorskiĭ's paper (No. 55037) and reports similar ridged relief with Namzakhey-Yakha River basin and Lyderto Lake regions in central Gydan. Its connection is suggested with former glaciation and results of accumulation by glacial waters. ***Copy seen:*** DGS.

ÎASHINA, Z. I., *see* Svatkov, N. M. Pochvy ostrova Vrangelîa. *1958.* No. 55250.

51900. ÎASHNOV, V. A. Fauna solonovatovodnykh vodoemov o-va Vrangelîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1935. vyp. 22, p. 119–34, illus., tables.) 37 refs. Text in Russian. Summary in English. ***Title tr.:*** The fauna of the brackish basins of Vrangelya Island.

Report on zooplankton collected in the fall of 1929 during the voyage of the *Litke,* in basins on Rodgers Bay and also in basins of Bukhta Provideniya on the Chukotsk Peninsula coast. The fauna consists mainly of copepods, two representatives of amphipods and single representatives of Rotatoria and Polychaeta. A new copepod *Nitocra marinae* n. sp. is described in detail. Morphology, including sexual dimorphism, geographic variations, geographic distribution, etc. are recorded. ***Copy seen:*** DLC.

51901. ÎASNOV, MIKHAIL ALEKSEEVICH, 1906– . Sibir' v shestoĭ piîatiletke. (Ogonëk, July 1956. god 34, no. 29, Sibirskiĭ nomer, p. 2–3, illus., map.) Text in Russian. ***Title tr.:*** Siberia in the sixth five-year.

Interview with M.A. ÎAsnov, chairman of the Council of Ministers of the R.S.F.S.R., on the economic development of Siberia planned for the period 1956–60. The Yenisey and Angara hydroelectric plants and the great new industrial centers which will emerge around them are mentioned among other developments, sited on the sketch-map. Another interview entitled: Sibir' ėto: kamennyĭ ugol', khleb, gidroėnergiîa, les, zhelezo, tsvetnye metally (Siberia means: coal, cereals, water power, lumber, iron, non-ferrous metals) appeared in *Sovetskiĭ soîuz,* 1957, no. 12 (94), p. 5–7, illus.

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51902. ÎATSKOVSKIĬ, A. I. "Ledovaîa" fumarola na Ichinskom vulkane. (Vsesoîuznoe geograficheskoe obshchestvo, Jan.–Feb. 1958. t. 90, vyp. 1, p. 66–69, illus.) 2 refs. Text in Russian. ***Title tr.:*** An "icy" fumarole on the Ichinskiy volcano.

Presents observations made Aug. 30–31, 1956, while on a geographers and alpinists' trip in Kamchatka. The building and appearance of this fumarole in the wide glaciated slope of the 3038 m. peak and its activity are described. Conclusion is offered that Ichinskaya Sopka is neither active as recorded by P. N. Novogradlenov (No. 12598), nor extinct as reported by V. I. Vlodavets (No. 38103); it must be considered as dying out. Map of the volcano and sketch of the fumarole are included. ***Copy seen:*** DLC.

51903. ÎATSKOVSKIĬ, A. I. V strane vulkanov. (Dal'niĭ vostok, July–Aug. 1958. god 26, no. 4, p. 152–56, illus.) Text in Russian. ***Title tr.:*** In the land of volcanoes.

Describes a trip in 1956, with a group of alpinists and geologists to Kamchatka volcanoes: ascent to the summit of Avachinskaya Sopka and descent to the bottom of its crater; a trip to Esso (55°55′ N. 158°40′ E.), first ascent of Ichinskaya Sopka (55°40′ N. 157°45′ E., 3621 m. above the sea level), and discovery of its fumarole emitting vapors through a hole in the ice cover, its crater completely filled with ice.

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51904. ÎATSKOVSKIĬ, A. I. Vulkan prodolzhaet zhit'. (Smena, Apr. 1957. god 34, no. 8, p. 18–19, illus.) Text in Russian. ***Title tr.:*** The volcano is still alive.

Ichinskiy Volcano (approx. 55°42′ N. 157°35′ E.), the highest point (3,621 m.) in western Kamchatka, was ascended Aug. 1956 by four alpinists, including the author. Considered extinct, the volcano disclosed an active fumarole on the ice-covered slope about 2,900 m., but no sign of activity in the crater at the summit. ***Copy seen:*** DLC.

51905. ÎATSUN, EVGENIĬ PAVLOVICH. Na l'dine cherez polîus; zapiski kinooperatora. Moskva, Molodaîa gvardiîa, 1957. 252 p. illus., map. Text in Russian. ***Title tr.:*** Across the North Pole on an ice floe; a cameraman's notebook.

Popular account of life and work on the drifting station North Pole-3 from the time it was set up, Apr. 9, 1954, till its abandonment more than a year later. He recounts the flight over the Arctic Basin, choosing the floe and establishing the station at 86° N. 175°45′ W. The personnel and its accommodation in tents and knock-down huts, the scientific observations and daily routine of work, food, entertainment, visiting wildlife, etc., are described. Local hops (with helicopter) for hydrological work, the drift

(Aug.–Sept.) in the vicinity of the North Pole, the struggle with melt-water in summer and with cracks and ice pressure in winter, transfer of the camp, storms and blizzards, etc. are chronicled, till the evacuation of the station by air on Apr. 20, 1955 at 85°59′ N. 31°42′ W. Each of the 22-man team, five of them veterans of the North Pole-2 drift of 1950–51, is characterized with notes on his previous arctic experience and training. Five sick men (p. 188) were replaced by relief personnel during the winter. Many events of the drift are related in humorous detail, e.g., the vegetable-growing experiments, the acquisition of a 240 kg. piano, etc. The text is amplified by some fifty photographs.

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51906. ÎAVNEL', A. A. Meteoritnoe veshchestvo s mesta padeniîa Tungusskogo meteorita. (Astronomicheskiĭ zhurnal, Sept.–Oct. 1957. t. 34, no. 5, p. 794–96, plate.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** Meteoritic matter at the site of the Tunguska meteorite.

Soil samples taken in 1927–30 by L. A. Kulik on the site of the Podkamennaya Tunguska meteorite were studied and two kinds of small metallic particles and magnetite (?) globules were found by microscope. Spectral analysis disclosed that the particles are composed of nickel-iron: the magnetite globules were blown out of the meteorite's surface during flight, and nickel-iron particles were formed by the explosion and evaporation on its fall. Similar metallic particles have been found at other such sites.

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51907. ÎAVNEL', A. A. O sostave Tungusskogo meteorita. (Geokhimiîa, 1957, no. 6, p. 553–56, table, plate.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** On the composition of the Tunguska meteorite.

Presents spectral analyses and microscopic study data on the substance of this meteorite (which fell June 30, 1908) from materials collected by L. A. Kulik. From these data and from the form and size of iron-nickel particles, it is considered an iron meteorite. Review of earlier work is included, with emphasis on that of E. L. Krinov, q.v. ***Copy seen:*** DLC.

ÎAZAN, ÎU., *see* Shubin, G. G., *and* ÎU. ÎAzan. Lesepromyslovoe khozîaĭstvo. *1958.* No. 54829.

51908. ***ICE,*** *news bulletin of the British Glaciological Society.* Cambridge, Eng., Jan. 1958–*in progress.*

Pub. twice a year (Jan. and July) in approx. 20 pages each number. Contains notes on field work, meetings, members, publications, etc. ***File seen:*** DGS.

ICHIHARA, TADAYOSHI, *see* Kawakami, T., *and* T. Ichihara. Japanese whale marking . . . 1956 and 1957. *1958.* No. 52209.

IFANOV, S. A., *see* Grechukhin, V. V., *and* S. A. Ifanov. Opyt beskernovogo bureniîa . . . *1958.* No. 51341.

IGNATENKO, V., *see Radio.* V Arktike . . . *1957.* No. 54194.

51909. IGNAT'EV, GRIGORIĬ MIKHAĬLOVICH. Novoe o prirode Grenlandii. (Problemy Severa, 1958. vyp. 1, p. 291–99.) 8 refs. Text in Russian. ***Title tr.:*** New data on the nature of Greenland.

Reviews the exploration of Greenland and summarizes the main results of recent investigations. During 1932–1937, 130 expeditions worked in the Greenland sector of the Arctic; in the post-war period, expeditions are fewer in number but their work is better coordinated among the United States (military exploration), Denmark (geology, cartography and meteorology) and Great Britain and France (exploration of the inland ice). New information on the structure, depth and mass of the inland ice (publications by A. Joset, J. J. Holtzscherer and A. Cailleux) is discussed, also the influence of the Greenland ice cover on weather conditions and the existence of stationary anticyclone over the icecap (W. H. Hobbs and J. Georgi), and the balance between present-day ice accumulation and ablation of ice sheet (A. Bauer and F. Loewe). ***Copy seen:*** DLC.

51910. IGOLKIN, NIKOLAĬ IVANOVICH. Obrazt͡sovo organizovat' zimnee soderzhanie avtomobil'nykh dorog. (Avtomobil'nye dorogi, Sept. 1958. god 21, no. 9, p. 4–6, illus.) Text in Russian. ***Title tr.:*** Efficient organization of winter maintenance of motor roads.

General winter conditions on highways and country roads are outlined, based on maintenance in different regions, including the Amur-Yakutsk highway in Siberia. The simplest and most effective snow removal was by wooden triangular scrapers with extended wings operated

in conjunction with a D–180B snow plow mounted on tractor S–80. Ditch digging with special equipment for drainage of water during snow melting is described.
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IGUMNOVA, Z. S., *see* Dadykin, V. P., *and others.* Ob usvoenii sveta . . . Tiksi. *1957.* No. 50410.

51911. IL'IN, I. N. Opyt sibirskaka. (Okhota i okhotnich'e khozяĭstvo, Jan. 1957, no. 1, p. 14–15, illus.) Text in Russian. ***Title tr.:*** Experience of a Siberian.

Describes two types of home-made traps for squirrel and sable.
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51912. IL'IN, V. Doroga na sever. (Sovetskiĭ soюz, 1957, no. 10 (92), p. 12–15, illus.) Text in Russian. ***Title tr.:*** Road to the North.

Pictorial account of a flight to Komi A.S.S.R., visiting the capital Syktyvkar, the oil center Ukhta, lumbering enterprises on the Pechora, the coal-mining town of Vorkuta and the (northernmost) coal mine "Khalmer-Iu;" notes helicopters used to spray reindeer with insect-repellants.
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IL'INA, I. V., *see* Polяnichko, Iя. I., *and others.* Iubileĭnaя . . . sessiя Karel'skogo . . . *1958.* No. 54055.

51913. IL'INSKIĬ, O. K. Proekt razmeshcheniя korableĭ pogody na Dal'nem Vostoke. (Akademiя nauk SSSR. Okeanograficheskaя komissiя. Trudy, 1958. t. 3, p. 20–23, table, map.) Text in Russian. ***Title tr.:*** Project on distribution of weather ships in the Far East.

The role of meteorology in shipping and fishing is stressed, and a plan outlined for placing meteorological and aerological floating stations at key points of the area, including 52° N. 150° E. and 57° N. 175° E. in the Okhotsk and Bering Seas. The aims of the stations in general, and those in the sub-areas in particular, are outlined.
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51914. ILLESH, VL. Na dne morskom. (Sovetskiĭ soюz, 1958. no. 11 (105), p. 20–23, illus. incl. color) Text in Russian. ***Title tr.:*** On the bottom of the sea.

Describes construction of the 5,500 km.² artificial Bratsk Sea, for which 334,000 hectares of virgin forests were cleared. Illus. show the Angara and hydroelectric station; erection of Postoyannyy (Permanent), first large settlement on the future seashore; logging operations; archeological finds, etc.
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51915. ILLING, WALTER. Erbitten Eisbrecherhilfe; Eisfahrt in der Ostsee. Leipzig, Brockhaus, 1957. 228 p. illus. Text in German. ***Title tr.:*** Requesting ice-breaker aid; ice navigation in the Baltic Sea.

Describes experiences of the 994-ton, 650-hp. *Carsten Russ,* and the 1,694-ton, 950-hp. *Theresia L.-M. Russ,* German freighters on which the author served as a radio officer in 1931–32. General descriptions of ice conditions and ice-breaking procedures are included. Some Russian, Finnish, and German ice-breaking vessels are mentioned, and their operations in the Baltic Sea described.
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51916. ILLINGWORTH, FRANK, 1908– . Canada's polar ports. (Shipbuilding and shipping record, Dec. 25, 1958. v. 92, no. 26, p. 839–40, illus.)

Notes recent efforts to improve arctic ports and establish new ones near mineral discoveries.
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51917. ILLINGWORTH, FRANK, 1908– . The development of trans-arctic routes. (Shipbuilding and shipping record, Aug. 21, 1958. v. 92, no. 8, p. 235–36, illus.)

Reviews development of navigational aids, and establishment of industrial and research centers, military bases, etc., which have accelerated utilization of transpolar shipping routes by both the United States and U.S.S.R.
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51918. INDIANA, UNIVERSITY. *Graduate Program in Uralic and Asian Studies.* Finland. New Haven, Printed by Human Relations Area Files, 1955. viii, 391 p., tables, maps. (Human Relations Area Files, Inc. Subcontractor's monograph, HRAF–2.) Approx. 70 refs. Prepared by the members of the faculty and staff of Indiana University's Graduate Program in Uralic and Oriental Studies. Author: Eeva K. Minn.

Handbook on sociological, political and economic aspects of Finnish life including that in the North. Lapps and Lapland are mentioned in chapters on: area and population distribution (1.8 p./sq. km. in 1950); ethnic groups; languages (2,345 Lappish-speaking in 1940); education; labor force (regional distribution of industry) and public welfare. Scattered

references are made throughout to the resettlement of Karelian refugees from the U.S.S.R. ***Copy seen:*** DLC.

51919. INDIANA. UNIVERSITY. *Graduate Program in Uralic and Asian Studies.* The Karelians. New Haven, Printed by Human Relations Area Files, 1955. xiv, 199 p., tables, maps. (Human Relations Area Files, Inc. Subcontractor's monograph HRAF–12.) Refs. Prepared by the members of the faculty and staff of Indiana University's Graduate Program in Uralic and Asian Studies. Author: Felix J. Oinas.

Discusses the history, distribution, social conditions, language, education, economy, collectivization, etc., of the Karelians, including those on Kola Peninsula (414 in 1926). Vital statistics on total population of towns and industrial centers are given including: Kandalaksha (10,599 in 1930), Belomorsk (9,086 in 1930), Kem' (8,814 in 1930), Kovda (2,541 in 1926) and Keret' (1,029 in 1926). Mineral resources including those of the Kem' and Kandalaksha regions are mentioned and forced labor camps discussed. ***Copy seen:*** DLC.

51920. INDIANA. UNIVERSITY. *Graduate Program in Uralic and Asian Studies.* The Lapps. New Haven, Printed by Human Relations Area Files, 1955. xii, 137 p., tables, maps. (Human Relations Area Files, Inc. Subcontractor's monograph, HRAF–3.) Approx. 90 refs. Prepared by the members of the faculty and staff of Indiana University's Graduate Program in Uralic and Asian Studies. Author: Eeva K. Minn.

Report, essentially sociological in character, on the Lapps of Scandinavia, Finland and U.S.S.R. (Kola Peninsula). Their history is reviewed, geographic distribution outlined and mapped, and their numbers, estimated at 34,000 in 1945, presented by country and region. Racial characteristics, languages and dialects, social organization and customs, folklore, education, and religious beliefs of the Lapps are outlined, culture and economy, agriculture and reindeer breeding. ***Copy seen:*** DLC.

51921. INDIANA. UNIVERSITY. *Graduate Program in Uralic and Asian Studies.* The Ostyak (Khanty) and the Vogul (Mansi). New Haven, Printed by Human Relations Area Files, 1955. xiii, 180 p., tables, maps (Human Relations Area Files, Inc. Subcontractor's monograph, HRAF–7.) Approx. 160 refs. Prepared by the members of the faculty and staff of Indiana University's Graduate Program in Uralic and Asian Studies. Author: Alo Raun.

Deals with the ethnographic, sociological, political and economic aspects of the Ob'-Ugrian peoples. Their racial origin, distribution, language, religious beliefs, social organization, hunting and fishing economy, etc., are described. Their strong acculturation and submission to Soviet rule are stressed, and their economic and political potentials discussed. Sources are cited at end of each chapter, an extensive bibliography appended and some of the listed publications reviewed. ***Copy seen:*** DLC.

51922. INDIANA. UNIVERSITY. *Graduate Program in Uralic and Asian Studies.* The Samoyed. New Haven, Printed by Human Relations Area Files, 1955. xiii, 225 p. tables, maps. (Human Relations Area Files, Inc. Subcontractor's monograph, HRAF–13.) Approx. 50 refs. Prepared by the members of the faculty and staff of Indiana University's Graduate Program in Uralic and Asian Studies. Author: Igor Kopytoff.

Reviews the history and geographic distribution of the Samoyeds (Nentsy, Sel'kupy, Entsy and Nganasans) living mainly in the Nenets, Yamal-Nenets and Taymyr National Districts. Vital statistics based mostly on 1926 data, are given in detail. Languages, pre- and post-Revolutionary social organization and clan system, collectivization and resettlement, acculturation, administration, etc., are dealt with in turn. Education, religious beliefs, folklore, living and working conditions are described, with selected statistical information of 1940–1954 on income, kolkhoz wages, etc. The forced labor camps within and bordering on the three National Districts are discussed. Maps showing population concentrations, transportation network, radio and meteorological polar stations, mineral resources and agricultural experimental stations are appended.

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51923. INDIANA. UNIVERSITY. *Graduate Program in Uralic and Asian Studies.* The Zyryans (Komi). New Haven, Printed by Human Relations Area Files, 1955. xiv, 157 p. table, maps. (Human Relations Area Files, Inc.

Subcontractor's monograph, HRAF–8b.) Approx. 40 refs. Prepared by the members of the faculty and staff of Indiana University's Graduate Program in Uralic and Asian Studies. Authors: Joseph Strmecki and others.

A handbook dealing primarily with sociological problems. The history, ethnic composition, language, social conditions, religion, education, economy, acculturation, etc., are reviewed. Forced labor camps, especially in the Vorkuta area, are discussed and estimated 1954 statistics for the Vorkuta camps given: approx. 105,000 inmates and 120,000 freed prisoners restricted to the area. Maps showing the distribution of population, political division, agricultural and industrial areas, and dialects of the Komi language are appended.

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INDRENIUS, ANDREAS ABRAHAMUS, *fl.* 18th century, *see* Larsen, E. L. The Eskimos . . . *1957*. No. 52662.

51924. INGEBRIGTSEN, S. Forsøk med potetsorter. (Forskning og forsøk i landbruket, 1956. bd. 7, hefte 5–6, p. 459–76, 5 tables.) 13 refs. State Experiment Station, Holt, Troms. Report no. 23. Text in Norwegian. Summary in English. ***Title tr.:*** Experiments with potato varieties.

Reports experiments with 20 varieties during the period 1945–1954. Soil, weather, crop management, tuber size, dry matter content, quality, economy of labor, and suitability for market are considered. Three varieties are recommended on the basis of tuber yield, two others for market where soil is especially suited for potato production, and a sixth variety for its table quality.

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51925. INGEBRIGTSEN, S. Forsøk med ulik rad- og setteavstand for potet og ulik settepotetstørrelse og forsøk med ulike sterk gjødsling og forskjellig setteavstand. (Forskning og forsøk i landbruket, 1953. bd. 4, hefte 2, p. 143–57, 5 tables.) 9 refs. State Experiment Station, Holt, Troms. Report no. 19. Text in Norwegian. Summary in English. ***Title tr.:*** Experiments with different sizes of seed potatoes and varied spacing of drills and sets, and experiments with different rates of fertilizers at varied seed set spacing.

Studies carried out on the Holt experimental farm at 69°39′ N., show that both tuber and dry matter yields are largest with spacing of 50–60 cm. between rows and 15 cm. between seed sets in the rows. When size of tubers and cost of seed and labor are considered, 20–25 cm. spacing in rows is economically favorable. Fertilization makes larger spacings more competitive. Dry matter content is highest from large seed tubers.

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51926. INGLE, DWIGHT JOYCE, 1907– . Endocrine mechanisms in adaptation to cold. (Federation proceedings. Symposium on metabolic aspects of adaptation of warm blooded animals to cold. Dec. 1958. v. 17, no. 4, p. 1064–65.) 6 refs.

Discussion of the role of the pituitary, adrenal and thyroid in heat production during cold-adaptation, adrenal-thyroid relation in heat production and author's experiments in this field.

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51927. INGLE, DWIGHT JOYCE, 1907– , *and* B. L. BAKER. Pathologic changes in the hearts and kidneys of sensitized rats exposed to cold. (Journal of laboratory and clinical medicine. Jan. 1957. v. 49, no. 1, p. 100–112, illus., tables.) 8 refs.

Account of experiments with animals sensitized by removal of one kidney and a diet containing 4 percent salt. Such animals when exposed to cold developed severe renal damage, and mild myocardial changes. A concomitant increase in food and salt intake were found to be, at least in part, essential in producing the pathological changes. The role of the endocrines in producing these conditions is not known.

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INGLE, DWIGHT JOYCE, 1907– , *see also* Crane, W. A. J., *and others*. Pathologic changes . . . rats . . . cold. *1958*. No. 50371.

51928. INGLIS, FRED. Water bubbles melt ice around Prescott and Ogdensburg ferries. (Canadian shipping, Apr. 1957. v. 28, no. 7, p. 52, illus.)

Describes experience with the Atlas-Copco system for opening channels in the ice by pumping compressed air through a perforated pipeline at the sea bottom. A combination of warm water and air bubbles is being used to keep a barge and suction pump ice-free during winter operations on Great Slave Lake.

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51929. INGSTAD, HELGE MARCUS, 1899– . Harald U. Sverdrup, in memoriam. (Polarboken 1957, p. 106–113, illus., port.) Text in Norwegian. ***Title tr.:*** Harald U. Sverdrup, in memorian.

Presents recollections of Sverdrup from Bergen where he was professor of meteorology, from Svalbard where he came on an expedition in 1933, from La Jolla where he was director of Scripps Institution of Oceanography, and finally from Oslo. A short formal biography is appended. ***Copy seen:*** DLC.

51930. INGSTAD, HELGE MARCUS, 1899– . Peter Freuchen, in memoriam. (Polarboken 1957, p. 157–60, port.) Text in Norwegian. ***Title tr.:*** Peter Freuchen, in memoriam.

Obituary, with notes on Freuchen's life (1886–1957), polar travels, published works, also some personal recollections. ***Copy seen:*** DLC.

51931. INNES, I. R., *and others.* The effects of lowering the bath temperature on the responses of the isolated guinea-pig ileum. (Journal of physiology, Aug. 1957. v. 137, no. 3, p. 396–409, illus.) 12 refs. *Other authors:* H. W. Kosterlitz *and* J. A. Robinson.

Account of investigation on the effects of lowered temperature of the organ both on the action of substances causing a contraction of longitudinal muscle, either directly or through nervous strictures. Gradual cooling affected ileal activity in roughly three overlapping steps. It also potentiated the action of some of the drugs tried (carbachol), inhibited them (nicotine, barium, substance P) or acted differently upon the same substance at different low temperatures.

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INOUYE, TOHRU, *see* Dowling, H. F., *and others.* Transmission of the common cold . . . *1958.* No. 50616.

51932. INTERNATIONAL BIBLIOGRAPHY OF SOCIAL AND CULTURAL ANTHROPOLOGY. Paris, UNESCO, 1958. 259. p. (International social science bibliographies. v. 1, Works published in 1955). Text in English and French.

Lists approx. 3,500 scientific works in nine broad groupings, with special attention to official government publications, and exclusion of unpublished materials and daily press. Many of the works deal with the far North. Author and subject indexes are appended. ***Copy seen:*** DSI.

51933. INTERNATIONAL CIVIL AVIATION ORGANIZATION. Report on the ICAO Conference on Air Navigation Services: Greenland and the Faroes, London, 20 April–12 May 1949. Montreal, Ronalds Co., 1951. 147 p., tables, map.

Reports meeting to draft an agreement for financing meteorological and telecommunications facilities provided, or to be provided, by Denmark in Greenland and on the Faeroes (Skuvanes Lorang Station); ten countries were represented. A sum to cover Denmark's outlay till 1950 and during 1950 was agreed upon. With 1950, Denmark is to be reimbursed for 95% of the approved cost of providing, operating, and maintaining the Loran services, and 90% of the corresponding Greenland services. Data on capital cost, and operation and maintenance expenses are tabulated for each station.

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51934. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Annual proceedings, v. 7, for the year 1956–57. Halifax, N.S., the Commission, Forrest Building, 1957. 76 p. illus., tables, maps.

Contains four parts, the first (p. 5–9) an administrative report by E. M. Poulsen on Germany's joining the Commission, officers, panel membership, publications, international cooperation; research and statistics, etc.; a financial statement is appended. The seventh annual meeting, May 20–25, 1957 is reported by T. de Almeida (p. 9–21): participants, agenda, publicity, budget and finances, research and statistics, panel meetings, etc. In pt. 3, summaries of research 1956 are presented by countries, viz:

Canadian research (p. 21–27) reported by W. Templeman and W. R. Martin dealt with hydrography and plankton, haddock, redfish, cod of Labrador Sea, Grand Banks, etc.

Danish research in West Greenland waters (p. 28–36) included distribution of cod eggs, fry and young; its age composition, tagging, etc., also redfish and wolffish, reported by P. M. Hansen; and hydrographic conditions, by F. Hermann.

French research: hydrographic sections and gear experiments on the Grand Banks of Newfoundland, is noted (p. 36) by J. Furnestin.

German research, as outlined by A. Bückmann and A. Meyer (p. 37–39), dealt with age composition of German

catches in West, South and East Greenland waters, fishing and spawning grounds, cod growth, etc.

Icelandic research off West Greenland is reported (p. 39–41) by: J. Jónsson on cod, age distribution of catches, growth, stocks, etc.; and J. Magnússon on redfish, catches, size distribution.

The Norwegian research report by B. Rasmussen (p. 41–48) covers fisheries of the West Greenland banks, hydrography, long-line fishery; bottom, pelagic, and hand-line fishery; purse-seining for cod; tagging and migration of cod; tagging of halibut.

Portuguese research as reported by M. Ruivo (p. 48–57) dealt with study of samples of commercial fisheries in West Greenland and Labrador waters, viz: cod-age and size distribution, growth, sex ratios, maturity, weight and size composition, etc.

Spanish researches were carried out on the Grand Bank; Dr. A. Rojo explains (p. 58–63) areas and size of fishery, size distribution of cod, its growth rate, age and sex distribution, food, etc., with similar data on haddock.

United Kingdom research report (p. 62–63) by C. E. Lucas and R. W. Wimpenny covers landings of cod, etc., by English trawlers.

United States research as reported (p. 63–68) by H. W. Graham, dealt with haddock, redfish, cod, hake, flounder; their biology, growth, size and age composition in catches, food, etc.; also hydrography in the Convention area. An appendix by R. Livingstone, Jr., deals with conversion values of total length to fork length in haddock.

Data of the various countries' research are summarized according to the Convention's sub-areas by E. M. Poulsen (p. 68–74). Scientists and laboratories of the 11 countries engaged in the Commission's activities are listed as pt. 4 of the year's proceedings.

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51935. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Annual proceedings, v. 8, for the year 1957–58. Halifax, N.S., the Commission, Forrest Building, 1958. 104 p. illus., tables, maps.

Contains four parts: Administrative report and financial statement (p. 5–9) by E. M. Poulsen on: Soviets joining the Commission, officers and personnel, newsletters and publications, panel membership, international cooperation, research, statistics, meetings, finances, etc. Pt. 2, report on the eighth annual meeting, June 9–14, 1958, by K. Sunnanå (p. 10–19) includes information on participants, agenda, budget, finance and administration; research techniques, statistics; meetings, etc. Pt. 3, summaries of research 1957 are presented by countries and subareas, viz:

Canadian research (p. 19–26) by W. Tempelman and W. R. Martin, dealing with redfish, haddock, cod, flatfishes, hydrography, tagging experiments, fishing methods, fish stocks, etc.

Danish research by P. M. Hansen (p. 27–38) on cod off West and East Greenland, redfish, spotted wolffish and cod-tagging in the same area. Hydrography of the eastern Labrador Sea and Davis Strait is covered by F. Hermann.

French research is summarized by J. Ancellin (p. 38).

German research, by J. Lundbeck and others (p. 39–42), includes a study of redfish, net selection, age composition of cod catches, etc.

Icelandic research, by J. Jónsson (p. 42–45), deals with age and length distribution of cod, age and sexual maturity, catches and bottom temperatures.

Norwegian research, by B. Rasmussen (p. 45–51), covers the hand-line fishery off West Greenland, physical conditions, cod investigations and tagging, tagging of halibut.

Portuguese research, by M. Ruivo and G. Quartin (p. 52–60), deals with the age and size composition of cod, growth in males and females, sexual development, organ weight, etc.

Spanish research, by A. Rojo (p. 61–73), concerns size and age distribution of cod, feeding, sex ratio, biometry, fish discarded, trawling studies; also haddock and pollock investigations, including size distribution, growth, etc.

USSR. research in recent years, reported by Ю. Ю. Marti (p. 73–74) deals mainly with redfish search and fishery 1954–1957 in the Grand Bank, Flemish Cap areas.

United Kingdom report, by C. E. Lucas and R. S. Wimpenny (p. 75), notes commercial fishing, sampling at markets and at sea, etc.

United States research as reported by H. W. Graham (p. 75–77) deals with tagging experiments, control; stocks of cod, halibut, redfish, etc.; plankton and benthal ecology.

Summaries of research reports according to subareas are presented by the Executive Secretary (p. 79–81).

Pt. 4 contains the selected papers from the 1958 annual meeting, that of J. R. Clark and others is abstracted in this Bibliography, under his name, q.v.

Holt, S. J. Collaboration between FAO and ICNAF, 1957–58 (p. 82).

Holt, S. J. A note on the simple assessment of a proposal for mesh regulation (p. 82–83).

CLARK, JOHN R., *and others.* Summary of gear selection information for the Commission area (p. 83–99).

Clark, John R., *and* F. D. McCracken. Observations on the cod trawl fishery in the Gulf of St. Lawrence during the spring of 1958 (p. 99–100).

Clark, John R. Underwater television observations on the effect of chafing gear on escapement of haddock (p. 101–102).

Couture, Lawrence H. ICNAF mesh regulation; operation of 10% annual exemption (p. 103–104).

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51936. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Statistical bulletin, v. 5, for the year 1955. Halifax, N.S., 1957. 52 p. illus., tables, map. Prepared by Ronald S. Keir.

Contains data on fisheries activities in the Convention area. Pt. 1 offers summaries of fisheries for the years 1952–55. Pt. 2 (p. 13–52) includes fisheries statistics for 1955 for the member nations (except Italy) and for Germany. The presentation in this part has been revised by placing greater emphasis on area and month of fishing activities.

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51937. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Statistical bulletin. v. 6, for the year 1956. Halifax, N.S., the Commission, Forrest Building, 1958. 58 p. illus., tables, map. Prepared by Ronald S. Keir.

Contains an introduction with list of contributors, map, etc. and, in pt. 1 (p. 7–14), a summary of fishing activities in the Convention area (approx. 40°–70° N. 40°–80° W.) for 1952–1956; number of boats active during 1956 and a list of species considered in this report. Pt. 2 gives statistics for 1956, of landings of the participant countries (except Italy); landings by species, area and gear; etc. Corrections to the previous volume are appended. ***Copy seen:*** DLC.

INTERNATIONAL CONGRESS OF ANTHROPOLOGICAL AND ETHNOGRAPHICAL SCIENCES. 5th, *Philadelphia,* **1956,** *see* Boriskovskiĭ, P. I. Paleoliticheskie zhilishcha . . . *1956.* No. 49846.

INTERNATIONAL CONGRESS OF ANTHROPOLOGICAL AND ETHNOGRAPHICAL SCIENCES. 5th, *Philadelphia,* **1956,** *see* Pershits, A. I. Problemy . . . pervobytnogo obshchestva . . . *1956.* No. 53937.

51938. INTERNATIONAL CONGRESS OF ZOOLOGY. 14th, *Copenhagen,* Aug. 5–12, 1953. Proceedings, Danish Science Press, Ltd. Copenhagen, 1956. 567 p. 2 plates, text maps, graphs, tables.

Contains lists of delegates, members, history of the Congress, and summaries of papers presented. Section meetings dealt with nomenclature, paleozoology, zoogeography, evolution and genetics of populations, cytology, morphogenesis, animal psychology and ethnology, comparative physiology, serology and paper chromatography, parasitology, nematology, terrestrial ecology, hydrobiology, terrestrial arthropods, etc., invertebrates, and vertebrates. The summaries, in general are extensive. Those on the North are listed in this Bibliography under the authors' names, q.v.

PAVLOVSKIĬ, E. N. Some considerations on the mammoth's ecological conditions.

SVETOVIDOV, A. N. The Atlantic origin of some groups of fishes.

HALL, E. R. Arctic to Tropics in America.

VIBE, C. The zoogeography of Greenland (No. 48737).

DUNBAR, M. J. The amphid fauna of Ungava Bay, subarctic Canada.

RAWSON, D. S. The profundal bottom fauna of Great Slave Lake.

KLOTS, A. B. Studies of New World arctic and alpine Lepidoptera.

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INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA, *see* Plankton Symposium, 1957. Contributions: Measurements of primary production . . . sea. *1958.* No. 54021.

51939. INTERNATIONAL GEOGRAPHICAL CONGRESS. 17th, Washington, D.C., Aug. 8–15, 1952. Proceed-

ings. Washington, D.C., 1957. 776 p., illus., maps, diagrs., tables. (International Geographical Union—National Research Council.) Refs.

Contains lists of officers and committees, minutes, etc.; texts or abstracts of papers presented, and index of authors. Several of the papers dealt with the far North, viz.:

O'Dell, A. C. The hinterland areas of Scottish and Scandinavian ports in relation to industrial development (p. 161–64). *Includes* discussion of railway mileage in comparison with population and area, for Scotland, Norway, Sweden, and Denmark, and mentions the Narvik-Luleå line; like most routes in northern Scandinavia, it follows valleys.

Ahlmann, H. W. Summary of reports from the Nordic countries, Commission on periglacial morphology (p. 207–208). *Notes* absence of distinctly periglacial features from Pleistocene glaciations except fossil sand dunes; occurrence of permafrost in isolated places; attention is paid to palses or peat formations.

Drummond, R. N., *and others.* Investigations in the boreal forest of Labrador-Ungava, 1948–1951 (p. 248–54). No. 44662.

Ray, L. L. Perennially frozen ground, an environmental factor in Alaska (p. 260–64). No. 47536.

Griffiths, T. M. Glacial geomorphology on the Mt. McKinley massif, Alaska (p. 331–36). No. 45296.

Lougee, R. J. A profile of post-glacial crustal upwarp in eastern North America (p. 357, title only). No. 52921.

Meen, V. B. The origin of Chubb Crater (p. 357–63). No. 36170.

Noyes, J. R. Transportation in Alaska (p. 713). No. 36510.

Lloyd, T. The Norwegian-Soviet boundary in Lapland (p. 533–38). No. 35936.

Zaborski, B. Geographical aspests of migrations of ethnic groups in northern Eurasia (p. 555–59). No. 49029.

Robinson, J. L. The northern extension of the pioneer fringe of agriculture on the Great Plains of Canada (p. 657–62). *Notes* extension of pioneer agriculture into the southern Mackenzie River valley, and the record of successful crops in the Yukon valley near Dawson and Whitehorse.

Enequist, G. The habitation of Sweden (p. 737–41). *Notes* sparse population of northern Sweden, interrupted by the industrial centers of Kiruna and Gällivare-Malmberget. ***Copy seen:*** DGS.

51940. INTERNATIONAL GEOGRAPHICAL UNION. Nineteenth congress, Norden, 1960; first circular, Jan. 1958: symposia and excursions. (*Its:* Newsletter, 1958. v. 9, no. 1, p. 11–20, text maps.) Text in English and French.

Lists subjects and locations of symposia, including: nature and economy of northern Norway, Tromsø; the high mountain region, Abisko; and excursions, including: physical geography, especially glaciology, Tromsø-Spitsbergen-Tromsø; glacial morphology, Boden-Norrbotten-Abisko; glaciology, Kiruna-Kebnekajse-Kiruna-Abisko; and Abisko-Kårsajökel-Abisko; physical and cultural geography of Finnish Lapland, Tornio-Kilpisjärvi-Tornio; Ofoten-Vesterålen-Lofoten-Helgeland-Trondheim. *Maps* show location of symposia and excursion routes.

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INTERNATIONAL GEOGRAPHICAL UNION, *see also* Dylik, J., *and* R. Raynal. Program prac komisji . . . *1958.* No. 50669.

51941. INTERNATIONAL GEOLOGICAL CONGRESS. 19th, *Algiers,* **1952.** Symposium sur les gisements de fer du monde. Alger, 1952. 2 v. illus., plates, maps (part fold.) and atlas volume. Refs. Text in French, English, German, Italian or Spanish. ***Title tr.:*** Symposium on the iron deposits of the world. Reviewed by P. A. Geijer (in Swedish) in Ymer, 1954, bd. 74, häfte 3, p. 182–95.

The inventory on world iron resources prepared for this congress comprises 71 reports from the various countries of Africa, the Americas, Asia, Europe, and Oceania; reports from China, the U.S.S.R. and a few other (communist) countries are lacking for world coverage. Several reports deal with far northern deposits and these are described under their authors' names, viz.:

PERCIVAL, F.G. World's iron ore resources.

TANTON, T. L. Iron ores in Canada.

KILLEEN, P. L. Iron deposits in the territories and overseas possessions of the United States and on certain islands under its jurisdiction.

MARMO, V. The iron ores of Finland.

POULSEN, A. O. The iron ore resources of Norway.

GEIJER, P. A., *and* N. H. MAGNUSSON. The iron ores of Sweden.
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51942. INTERNATIONAL GEOLOGICAL CONGRESS. 21st. "Norden," Aug. 1960. First circular. Copenhagen. The organizing committee, Mineralogisk Museum, June 1, 1958. 15 p., 2 text maps.

Meetings are to be held in Copenhagen Aug. 15–25, 1960, with field excursions in West Greenland: 14 days, Julianehåb and Ivigtut; northern Norway: 16 days, Trondheim to Kirkenes and return; Spitsbergen: 16 days; Kiruna-Torneträsk area: 7 days; Skellefte district, Kiruna-Gällivare-Pajala district: 10 days; northern Sweden: 10 days; eastern and northern Finland: 10 days. Revised version pub. in its second circular, Apr. 1, 1959. p. 6–21. ***Copy seen:*** DGS.

51943. INTERNATIONAL GEOPHYSICAL YEAR, 1957–1958. U.S. NATIONAL COMMITTEE. United States buildings for Antarctica. (Polar record, Jan. 1957. v. 8, no. 55, p. 333–37, diagr.)

The buildings are adapted from those at Dundas (i.e. Thule) air base and other arctic stations. The standard buildings are 20 ft. wide and 48 ft. long and are constructed of prefabricated modular panels 4 ft. wide, 8 ft. high and 4 in. thick. Snow sills are used in the foundations erected on permanent snow. Ventilation is provided by a blower fan at both ends of each building. Diesel oil driven "Jet-Heet" furnaces are used to heat buildings in which partitions interrupt an easy flow of heat. Special structures include a latrine-darkroom-laundry building constructed of 12 ft. wall panels to allow for overhead water-storage tanks; a balloon inflation shelter housing hydrogen-generating equipment; telescoping rawin and aurora towers; geomagnetic absolute and variation buildings; Quonset huts for workshops and storage. The buildings are connected by a series of tunnels constructed of wire poultry netting and burlap laid over a framework of timber. ***Copy seen:*** DLC.

51944. INTERNATIONAL PACIFIC HALIBUT COMMISSION. Regulation and investigation of the Pacific halibut fishery in 1956. Seattle, Washington, 1957. 27 p. illus., tables, maps. (*Its:* Report, no.25.)

Includes an historical outline of United States-Canadian cooperation in this field; activities of the Commission; 1956 regulations; statistics of landings; catches per unit fishing effort; open seasons; composition of catches; growth studies; tagging experiments and migration; sub-commercial size fishes, etc. An appendix (by W. H. Hardman and G. M. Southward) covers small halibut investigations of Sept. 1955, including distribution and composition of catches, food, etc.
Copy seen: DI.

51945. INTERNATIONAL SCIENTIFIC RADIO UNION. Information bulletin no. 101, Jan.–Feb. 1957. 100 p.

Includes (p. 40–43) data on the radio observation stations at Frobisher Bay (63°28′ N. 67°23′ W.), Godhavn (69°15′ N. 53°30′ W.), and Knob Lake (54°48′ N. 66°49′ W.): geomagnetic coordinates, characteristics measured, type of apparatus, frequencies and bandwidths, other stations of the network, operating schedule, publication of results, responsible authority, and date of report.
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51946. INTERNATIONAL SCIENTIFIC RADIO UNION. Information bulletin no. 103, May–June 1957. 33 p.

Includes (p. 14, 16) data on the radio observation stations at Thule, 76°33′ N. 68°50′ W., and Unalaska, 53°53′ N. 166°32′ W., stating geomagnetic coordinates, characteristics measured, type of apparatus, frequencies and bandwidths, other stations in the network, operating schedule, publication of results, and date of report. ***Copy seen:*** DLC.

51947. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. ASSOCIATION OF METEOROLOGY AND ATMOSPHERIC PHYSICS. Eleventh general assembly, Toronto, Sept. 1957. Report of proceedings, *pub.* London, 1958. p. 115–21, table, diagr. publication IAMAP no. 11/b, Symposium on polar meteorology.) Refs.

Contains opening remarks of chairman J. van Mieghem reviewing aims of the IGY meteorological program, basic differences between the two polar regions, and types (eight) of stations, and abstracts of the seven papers presented, five dealing with the Arctic, viz:

LAMB, H. H. Differences between the meteorology of the northern and southern polar regions. No. 52633.

NAMIAS, J. Synoptic and climatolog-

ical problems associated with the general circulation of the Arctic. No. 53490.

Reed, R. J., *and* W. J. Campbell. The arctic jet stream. *Describes* mean cross section through the arctic jet stream, at 500 mb. and about 70° N., based on two years' daily geostrophic wind profile data along 80° W. and 20° E.

Godson, W. L., *and* R. Lee. High level fields of wind and temperature over the Canadian Arctic. *Presents* results of study: of the time-smoothed field of temperature at 100 mb., of the winter arctic stratospheric jet stream, and of the vertical- and time-structure of the major warming epoch during the three winters considered, 1954–55 to 1956–57.

Girs, A. A. Variations over periods of years in the atmospheric circulation and changes of meteorological and ice conditions in the Arctic (9 refs.) *Discusses* relation between long-range cyclic changes in solar activity and "epochs" of 9–10 yrs. duration in atmospheric circulation, in other meteorological phenomena and in the hydrosphere. Possibility of determining causes of long-range climatic variations in the Arctic is stressed.

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51948. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. ASSOCIATION OF PHYSICAL OCEANOGRAPHY. Monthly and annual mean heights of sea-level 1952 to 1956 and unpublished data for earlier years. Liverpool, Eng., 1958. 78 p. (*Its:* Publication scientifique no. 19)

Presents tables of observations throughout the world, including those of the Norwegian stations Tromsø, Harstad, Kabelvåg, Vardø, Andenes, Evenskjaer, Narvik, Bodø, and Mo i Rana; the Finnish Kemi and Toppila; the Alaskan Seward and Ketchikan; and the Canadian station at Churchill. A list of stations, with coordinates, station authority, datum, years of observation, and daily number of readings precedes the table of sea-levels. ***Copy seen:*** DLC.

INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS, ASSOCIATION OF PHYSICAL OCEANOGRAPHY, *see also* Hachey, H. B. Canadian oceanography . . . *1957*. No. 51469.

51949. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. ASSOCIATION OF SCIENTIFIC HYDROLOGY. Eleventh general assembly, Toronto, Sept. 3–14, 1957. Report of proceedings, Commission on snow and ice. Gentbrugge, Belgium, 1958. 563 p., illus., diagrs., text maps, tables. (*Its:* v. 4, Snow and ice, publication no. 46.) Refs.

Contains brief account of proceedings, and texts or abstracts of papers presented. The following deal with arctic areas; those marked * are abstracted in this Bibliography under their authors' names.

Falkoner, G., *and others*. Glacial map of Canada. p. 11. Reviews preparation of No. 51142.

*BILELLO, M. A. A survey of arctic snow-cover properties as related to climatic conditions.

*MILNE, J. A. S. Snow surveying by Ontario Hydro.

*POTTER, J. G. Mean duration and accumulation of snow cover in Canada.

*WILLIAMS, G. P. Variability of physical characteristics of snow cover across Canada.

Mercanton, P. L. Rapport sur les variations de longuer des glaciers européens en 1953/54, 1954/55 et 1955/56. Includes variations of one Norwegian glacier (Osterdalsisen).

*IVES, J. D. Glaciation of the Torngat Mountains, northern Labrador.

*SHVETSOV, P. F. Geocryology and its main problems in the U.S.S.R.

*DIAMOND, M., *and* R. W. GERDEL. Radiation measurements on the Greenland ice cap. No. 44616.

*MILLER, M. M. Phenomena associated with the deformation of a glacier bore-hole.

*LANDAUER, J. K. On the deformation of excavations in the Greenland névé.

*MEIER, M. F. The mechanics of crevasse formation.

Brockamp, B. Reflektsionsseismische Wiederholungsmessungen auf dem Pasterzegletscher und ihre Bedeutung für die Feststellung von Gletscher- und Inlandeisschwankungen. p. 509–513. Compares variations of the Pasterze Glacier, in the eastern Alps, with those of the Greenland icecap.

*DUNBAR, MOIRA. Curious open water feature in the ice at the head of Cambridge Fiord.

*FINSTERWALDER, R. Scope, state and development of precise glacier surveys on the earth.

*AVSIUK, G. A. Les investigations glaciologiques en l'U.R.S.S.

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51950. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. ASSOCIATION OF SCIENTIFIC HYDROLOGY. Eleventh general assembly, Toronto, Sept. 3–14, 1957. Report of proceedings, Commission on surface waters. Gentbrugge, Belgium, 1958. 495 p., maps, diagrs., tables. (*Its:* v. 3, Surface waters, prevision, evaporation, publication no. 45.) refs.

Contains brief account of proceedings, and texts or abstracts of papers presented. The following deal with arctic areas and are abstracted in this Bibliography under their authors' names.

NEBIKER, W. A., *and* S. ORVIG. Evaporation and transpiration from an open lichen woodland surface.

KUZMIN, P. P. Hydrophysical investigations of land waters.

Copy seen: DGS.

INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. ASSOCIATION OF VOLCANOLOGY, *see* Lebedev, A. P. The Tunguska paleovolcanic formation. *1958.* No. 52709.

INTERNATIONAL WHALING STATISTICS, *see* Hvalrådet. International whaling statistics . . . *1930– in progress.* No. 51866

51951. INTOCCIA, ALFRED, *and* **L. Van MIDDLESWORTH.** Bile flow increased by cold adaptation. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 77.)

Report on experiments with rats exposed to 12° and 22° C. and injected I^{131}. The cold-adapted rats showed twice the normal rate of bile flow. Whether this accounts for the increased thyroxin excretion was not established.

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51952. IOFF, N. A. Vliîanie temperatury na polovoĭ tsikl u gol'îana. (Akademiîa nauk SSSR. Doklady, 1958. t. 118, no. 3, p. 621–24, illus.) 12 refs. Text in Russian. ***Title tr.:*** Effect of temperature upon the sexual cycle of *Phoxinus phoxinus* L.

Males and females of this fish kept at room temperature (ca. 20° C.) failed to develop breeding dress in the spring. However when exposed to near freezing temperatures at night and 8–10° in daytime (conditions resembling those in the open) gonads and breeding dress developed. ***Copy seen:*** DLC.

51953. IOFFE, ÎAKOV ABRAMOVICH. Puti razvitiîa i razmeshcheniîa fosfatnotukovoĭ promyshlennosti SSSR. (Udobrenie i urozhaĭ, July 1958. god 3, no. 7, p. 6–12.) Text in Russian. ***Title tr.:*** Development and distribution of the phosphate fertilizer industry in the U.S.S.R.

Includes remarks on the Kola Peninsula (Kirovsk) apatite deposits as the most important source of phosphates, but inconveniently located: 2165 km. average distance to transport apatite concentrates to the superphosphate-producing plants. ***Copy seen:*** DLC.

51954. IONIN, A. S. Nekotorye osobennosti dinamiki i morfologii beregov Beringova moriîa. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 55–65, illus. table, fold. map.) Text in Russian. ***Title tr.:*** Some dynamic and morphological features of the Bering Sea coasts.

Account of the coastal survey made during 1951–1954 by the *Geolog.* General and specific dynamic factors in the area are outlined. Types (20) of coasts along Chukotka, Kamchatka, the Commanders, Aleutians, and West Alaska are described, and their distribution mapped. Their evolution and marine forces shaping them are discussed, with a table classifying the coasts according to degree of being affected by the sea. Rate of coastal changes, etc., are also considered.

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IONIN, A. S., *see also* Budanov, V. I., *and others.* Present-day vertical movements . . . seacoasts. *1957.* No. 49977.

IONIN, A. S., *see also* Budanov, V. I., *and others.* Sovremennye vertikal'nye dvizheniîa beregov . . . *1957.* No. 49978.

IONIN, A. S., *see* Budanov, V. I., *and* A. S. Ionin. Sovremennye vertikal'nye dvizheniîa . . . *1956.* No. 49979.

51955. IONOVA, O. V. Ėtnograficheskie materialy ĪAkutskogo oblastnogo kraevedcheskogo muzeîa. (Sovetskaîa ėtnografiîa, 1957, no. 2, p. 178–79.) Text in Russian. ***Title tr.:*** Ethnographic materials of the Yakutsk local history museum.

Describes the collections and periodic exhibitions of the Yakutsk museum, founded in 1891. Some of its 2,628 items of ethnographic importance are discussed: hunting gear; wood, bark, leather and fur goods; musical instru-

ments; clothing, ornaments; etc. Lack of a special exhibit of the material culture of reindeer herders and hunters of the Yakut North is deplored.

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IONOVA, O. V., *see also* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Istoriîa ÎAkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957.* No. 49168.

51956. IRTEL, SERGIUS, *The Very Rev.* Alaska, the battlefield of orthodoxy. (Russian-orthodox journal, Feb. 1957. v. 30, no. 10, p. 4–5, 24, illus.)

Discusses the problems of the Russian Orthodox church, faced with the spread of Protestantism, appeals to young Orthodox men and women to become missionaries to the Tlingit Indians, to fight Protestant propaganda. An historical outline of Orthodoxy in Alaska and a sketch of the life and ethnological work of Fr. Veniaminov, are included. ***Copy seen:*** DLC.

51957. IRVINE, D. G., *and others.* Effects of dietary phospholipid and cholesterol on the temperature resistance of goldfish. (Canadian journal of zoology, Dec. 1957. v. 35, no. 6, p. 691–709, illus., tables.) 16 refs. *Other authors:* K. Newman *and* W. S. Hoar.

Account of experiments, including exposure to 1–2° C. In the latter case the cholesterol effect was most marked during early chilling. Resistance was closely correlated with increased tissue cholesterol and weakly correlated with the less modified tissue phospholipid. The relative effectiveness of the treatments varied with the season and with the duration of feeding. ***Copy seen:*** DSI.

51958. IRVING, LAURENCE, 1895– , *and* J. S. HART. The metabolism and insulation of seals as bare-skinned mammals in cold water. (Canadian journal of zoology, 1957. v. 35, p. 497–511, illus., tables.) 20 refs.

A study of metabolic rate in five harbor seals (*Phoca vitulina*) and two harp seals (*Phoca groenlandica*) over a temperature range of 25° to −10° C. in air and 20° to 0° in water. Body surface temperatures, critical temperatures and temperature gradients were also determined. Tissue temperatures and gradients reflected the metabolic response to cold. Metabolic economy in ice water was maintained by cooling the body surface to about 1° C.; this cooling provided protection comparable to that of fur of large mammals in coldest climate.

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51959. IRVING, LAURENCE, 1895– . Naming of birds as part of the intellectual culture of Indians at Old Crow, Yukon Territory. (Arctic, 1958. v. 11, no. 2, p. 117–22, table.) 2 refs.

Lists common, scientific and local native names for 103 species of birds found in this area. Recognition and naming of birds was done with great accuracy and completeness by the Kutchin Indian informant, suggesting the ability to be result of an anciently perfected system of intellectual culture. Comparison with North Alaskan Eskimo bird names disclosed only two of 91 species with the same name, indicating the paucity of intellectual culture exchanges in contrast to the more liberal material culture exchanges of these neighboring peoples.

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51960. IRVING, LAURENCE, 1895– , *and others.* On the melting points of animal fats in cold climates. (Physiological zoology, Apr. 1957. v. 30, no. 2, p. 93–105, illus., table.) 20 refs. *Other authors:* K. Schmidt-Nielsen *and* N.S.B. Abrahamsen.

Account of investigation of melting points of bone marrow fat and tissue fat from legs of six arctic species and some herbivores from temperate and tropical zones. It was found that fats of low melting point are selectively deposited in the distal parts of the extremities. This condition, apparently useful in cold weather, is not considered an adaptation to cold climate, witness its presence in the tropical and temperate forms.

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51961. IRVING, LAURENCE, 1895– . On the naming of birds by Eskimos. (Alaska. University. Anthropological papers, May 1958. v. 6, no. 2, p. 61–77, tables.) 17 refs.

Discusses and tabulates (with English equivalents) the names given to local bird species by Eskimos living in Anaktuvuk Pass and along the Kobuk River, Northern Alaska. Though few birds are hunted by these Eskimos, bird study is highly developed and is considered a cultural and intellectual distinction; this may account for the large number of species named: 90 of a possible 107 by Nunamiut (Anaktuvuk), and 103 of

122 by Kobuk Eskimos, altogether 84% of the local birds. These names are compared with those used along the coast east of Colville River, on Southampton Island and in Greenland. The names used in these widely dispersed communities have a high degree of similarity.
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IRVING, LAURENCE, 1895– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

51962. IRVING, WILLIAM N. An archeological survey of the Susitna Valley. (Alaska. University. Anthropological papers, Dec. 1957. v. 6, no. 1, p. 37–52, illus.) 22 refs.

A report on author's investigations conducted in 1953 for the University of Alaska in the area of Lakes Tyone, Susitna and Louise, forming part of the Susitna-Copper River watershed, a region to be affected by the proposed erection of Devil's Canyon Dam on the Susitna River. The geography, climate, food resources, etc., are sketched and the original population attributed to the Ahtena group of the upper Copper River country. The stone artifacts and house remains belonging to the post-contact, late pre-contact and early pre-contact periods (the latter probably antedating the Athabascan occupation) are described. Affinities are noted both to the arctic small tool and the boreal forest traditions. ***Copy seen:*** DLC.

51963. IRWIN, R. W., *and* **H. TIESSEN.** Note on an automatic start device for frost control by sprinkler irrigation. (Canadian journal of plant science, Jan. 1958. v. 38, no. 1, p. 118–19, illus.) Refs.

Description of equipment which automatically starts sprinkling at a pre-set, low temperature, thus saving low-growing vegetables or fruit from frost damage. It proved successful in experimental trials. ***Copy seen:*** DA.

51964. ISACHSEN, FRIDTJOV EIDE, 1907– . Harald Ulrik Sverdrup. (Società geografica italiana. Bollettino, Apr.–May 1958, serie 8, v. 11, fasc. 4–5, p. 161–63.) Text in Italian. Summary in English.

Obituary, his academic career, participation in arctic expeditions.
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51965. ISACHSEN, FRIDTJOV EIDE, 1907– . Gli studi geografici in Norvegia. (Società geografica italiana. Bollettino, Apr.–May 1957, serie 8, v. 10, fasc. 4–5, p. 165–71.) Text in Italian. Summary in English. ***Title tr.:*** Geographic studies in Norway.

Sketches recent Norwegian research in the field of physical geography, meteorology, oceanography, geomorphology, etc. The preparation of a topographic map of Norway, 1:100,000, is noted and a survey given of, mostly post-war, geographic and ethnographic publications, including those on arctic topics.
Copy seen: DLC.

51966. ISAEV, SERGEĬ IVANOVICH. Novoe o prirode polîarnykh siîanii. (Problemy Severa, 1958. vyp. 1, p. 133–48, illus., diagrs.) 29 refs. Text in Russian. ***Title tr.:*** New data on the nature of auroras.

Literature survey, reviewing from Soviet and foreign publications, some major contributions to the study of auroras since 1950. ***Copy seen:*** DLC.

51967. ISAEV, SERGEĬ IVANOVICH. Polîarnye siîaniîa. (Nauka i zhizn', Aug. 1957. god 24, no. 8, p. 33–34, illus., col. plate). Text in Russian. ***Title tr.:*** Auroras.

Head of the Murmansk Division of the Scientific Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation (Murmanskoe otdelenie Nauchno-issledovatel'skogo instituta zemnogo magnetizma, ionosfery i rasprostraneniîa radiovoln, NIZMIR) discusses its program of investigation in the U.S.S.R. during the IGY. Polar stations of Murmansk, Tikhaya and Tiksi Bays, Cape Shmidta and Dikson Island are to be equipped with special radar facilities for auroral observations.
Copy seen: DLC.

51968. ISAKSSON, OLOV. Sommarens fältarbete vid Norrbottens Museum. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1958, p. 114–24, illus.) Text in Swedish. ***Title tr.:*** Norrbotten Museum's field work in the summer of 1958.

Contains preliminary information on an investigation, undertaken by the author and three assistants, of old farm houses, furniture, textiles, implements, etc., mainly in the area between and along the Torne and Kalix Rivers in northern Sweden. Life in this region is undergoing rapid changes and old houses and cowsheds have largely disappeared where-

as other kinds of farm buildings remain to some extent. Överkalix parish proved to be of particular interest.

Copy seen: SPRI.

51969. ISHIDA, TAMOTSU. Acoustic impedance of snow layer. (Teion kagaku, 1956. ser. A, v. 15, p. 81–91, illus.) 4 refs. Text in Japanese. Summary in English.

Results of measurements according to Barnek's curve-width method of the specific normal acoustic impedances of snow layers with rigid-wall backing are reported. Resistance and reactance of the impedance and sound-absorption coefficients of snow samples were calculated for various sound frequencies and sample thicknesses. The acoustic model of new snow was found similar to a system with cavities and capillary tubes. Impedance characteristics of various thicknesses of new snow agreed with the input impedance of the electric C–R recurrent network terminated at its far end by an infinite impedance, which was analogous to the acoustic model.—From SIPRE. ***Copy seen:*** DWB.

51970. ISHIDA, TAMOTSU, *and* **H. SHIMIZU.** Determination of the resistance to air flow of snow layer, 2; portable σ-meter. (Teion kagaku, 1956. ser. A, v. 15, p. 63–71, illus.) 4 refs. Text in Japanese. Summary in English.

A portable mechanical analogue to the Wheatstone bridge for measuring the resistance of snow to air flow is described. The instrument consists essentially of narrow glass tubes (for consistent resistances), a variable leak-cock (for variable resistance), an inclined-tube alcohol manometer (instead of a galvanometer), and a rubber hand-bellows as a pressure source. The meter was found satisfactory in tests; it can be operated with ease by one person. ***Copy seen:*** DWB.

51971. ISHIHARA, YOSHIO, *and others.* Structure of sperm- and sei-whale insulins and their breakdown by whale pepsin. (Nature, *London,* May 24, 1958. v. 181, no. 4621, p. 1468–69, illus.) 7 refs. *Other authors:* T. Saito, Y. Ito, *and* M. Fujino.

Chemical analyses reported indicate that sei-whale insulin differs from sperm insulin "in that an *iso*leucine residue is replaced by an alanine and the three residues in positions 8–10 of the A chain are Ala. Ser. Thr." Whale pepsin was found to have a somewhat different specificity than swine pepsin. ***Copy seen:*** DLC.

51972. ISHKOV, A. A. Razvitie rybnoĭ promyshlennosti za 40 let Sovetskoĭ vlasti. (Rybnoe khozîâĭstvo, Nov. 1957. god 33, no. 11, p. 9–19, illus., tables.) 2 refs. Text in Russian. ***Title tr.:*** Development of the fishery industry in 40 years of Soviet rule.

Following the usual paean to Lenin and the Soviet Revolution, the author describes the backwardness of Russia's fisheries in the pre-Revolutionary times; first steps of modernization (in the Murman fisheries); developments in the Far East; mechanization and raising the output; the five-year plans; canning and other processing; effects of World War II; recent advances; present conditions; leading fishermen; aims, etc. A table showing total and regional catches for 1913–1956 discloses a 2.7-fold increase in landings (mostly since 1945). Arctic landings increased during that period 26 times, those in the Far East 6 times. ***Copy seen:*** DLC.

51973. ISKÎUL', N. V. Korally s Podkamennoĭ Tunguski. (Akademiîa nauk SSSR. Geologicheskiĭ muzeĭ imeni A. P. Karpinskogo. Trudy, 1957, vyp. 1, p. 84–102, 14 plates.) 22 refs. Text in Russian. ***Title tr.:*** Corals from the Podkamennaya Tunguska.

Presents a systematic description of corals from the 1877 collection of I. A. Lopatin on the Podkamennaya Tunguska below its tributary, the Chuna. Description, comparison, age and location are given for 25 species of fam. Povositidae, one Properidae, two Holystidae, three Syringoparidae, two Spongophyllidae, and one from the Actinostromidae family. Some new species are identified; all species are illus. by photos.

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ISRAEL, CHARLES E., *see* Fairley, T. C., *and* C. E. Israel. The true North . . . Captain Joseph Bernier. *1957.* No. 50832.

51974. ISTO, R. E. Alaskan geographic names. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1754–55) Abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958.

Describes system devised for geographic name data on mapping projects, and explains procedure for naming new

features. Alaskan names derive from many sources; at least half the features are still unnamed. ***Copy seen:*** DGS.

51975. ISTO, R. E. Climbs and expeditions; Mount Michelson, Brooks Range. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 93–95.)

Brief account of first ascent of Mt. Michelson (9239 ft.) highest peak in Brooks Range, by John P. Thomson, Fairbanks newsman, and the author.

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51976. ISTOMIN, IVAN GRIGOR'EVICH, 1917– . Legenda. (Druzhba narodov, Sept. 1958, no. 9, p. 142–47.) Text in Russian. ***Title tr.:*** A legend.

Old Nenets (Samoyed) legend on the disappearance and rescue of the sun, adapted with Lenin as chief hero. Translated from the original by the author, a prominent Nenets writer and folklorist.

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51977. ISTOMIN, IVAN GRIGOR'EVICH, 1917– . Stikhi. (Druzhba narodov, 1952, no. 1, p. 108–109.) Text in Russian. ***Title tr.:*** Poems.

Narrative poems on rural life. Translated from Nenets (Samoyed) by Petr Semynin. ***Copy seen:*** DLC.

ISTOMIN, IVAN GRIGOR'EVICH, 1917– , *see also* Novosibirsk. Oblastnai͡a biblioteka. Pisateli Sibiri . . . *1956*. No. 53669.

ISTOSHIN, B. V., *see* Alekseev, A. P., *and* B. V. Istoshin. Skhema postoi͡annykh techeniĭ Norvezhskogo i Grenlandskogo moreĭ. *1956*. No. 49240.

51978. ITIGIN, A. Svet na I͡Amale; putevye zametki. (Neva, Nov. 1957, no. 11, p. 137–42, illus.) Text in Russian. ***Title tr.:*** Lights on Yamal; travel notes.

Describes the Yamal-Nenets national district and its capital, Salekhard, noting the agricultural achievements of its kolkhozes, cattle and dairy farms. The history of the region, past and present customs, increasing acculturation, education and cultural achievements are reviewed. Several prominent Nenets men of letters are introduced: the educator and author of the first Nenets and Ostyak primers, Petr Efimovich Khatanzeev, the poet and painter Istomin, the writer I͡Ugan-Pelik and the woman-reporter Sėrnie Ladukėĭ.

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51979. ITKONEN, TERHO. Outakosken lapinmurteen vokaalisto. Helsinki, 1956. 49 p. (Suomalais-ugrilainen seura. Aikakauskirja, v. 58, no. 4.) 8 refs. Text in Finnish. ***Title tr.:*** Vocalism of the Lappish dialect of Outakoski.

An analysis of the vowel system of this dialect based mainly on author's field investigations in 1954 and 1955 among the Outakoski Lapps; they live along both banks of the Tana River, border stream between Norway and Finland from 68°45′ N. north to Tana Fjord on the Barents Sea coast.

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51980. ITKONEN, TOIVO IMMANUEL, 1891– . Lapin verotus ja kauppa ennen vanhaan. (Soumen muinaismuistoyhdistys. Suomen museo, 1943, *pub.* 1944. v. 50, p. 1–135, illus., tables, map.) Refs. Text in Finnish. Summary in German, p. 130–35. ***Title tr.:*** Taxes and commerce in Lapland in olden times.

Discusses the taxes in kind and/or currency levied on Lapps by Norway and Russia since the 9th century, and the tithes imposed later by the (Lutheran) church. Administrative problems, the trade and barter systems, exchange rates, etc., are dealt with and the development in the 18th century of a commercial language with mixed Scandinavian, Finnish, Russian and Lappish terminology is noted. Abridged German version of this paper was listed as No. 29816.

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51981. ITKONEN, TOIVO IMMANUEL, 1891– . Utforskningen av gamla Kemi Lappmark. (Suomen muinaismuistoyhdistys. Finskt Museum, 1954. t. 61, p. 97–110.) Refs. in text. Text in Swedish. ***Title tr.:*** Exploration of the old Kemi Lappmark.

Review of No. 32397 with extensive citations and discussion of specific points made by Tegengren. Orthographic errors in place names are pointed out; lack of personal field investigations and exclusion of some basic works in the study, are criticized. ***Copy seen:*** DLC.

ITO, YASUZO, *see* Ishihara, Y., *and others*. Structure of sperm- and sei-whale insulins . . . *1958*. No. 51971.

51982. IT͡SKOV, P. I. Metodika izmereniĭa temperatury v zheludke. (Fiziologicheskiĭ zhurnal SSSR, June 1957. t. 43, no. 6, p. 586–88, illus., table.) 5 refs.

Text in Russian. ***Title tr.:*** Method of recording temperature in the stomach.

Contains description of the apparatus, its calibration, and use in humans. Results from 30 healthy subjects are given, and comparisons made with skin temperature (arm pit) and with mouth and rectal temperatures.

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51983. ITZHAKI, S., *and* E. WERTHEIMER. Changes in carbohydrate metabolism of cardiac and striated muscle in hypothermic rats. (Circulation research, July 1957. v. 5, no. 4, p. 451–57, illus. tables.) 20 refs.

Hypothermia caused depletion of glycogen in heart muscle and diaphragm, with lesser effect in the gastrocnemius; a 50% increase in glucose utilization in heart slices, but not in the diaphragm; a slight fall in lactic acid formation in heart slices and a lowering in the rate of their endogenous respiration. The effect of thyroid on metabolism of both types of muscle was also investigated.

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51984. ĬUDANOV, I. G. Syr'evaĭa baza promysla sel'di v Severnoĭ Atlantike i assortiment drifternykh setei dliă ee lova. (Rybnoe khozĭaĭstvo, June 1958. god 34, no. 6, p. 20–27, tables.) Text in Russian. ***Title tr.:*** Resources of raw materials of the North Atlantic herring fisheries and an assortment of drift nets for their exploitation.

Contains information and figures on Soviet prognoses of catches from this area and their realization; reserves; size composition of herring catches, catch per fishing unit, effort, etc.; age class composition; estimates of the 'raw-material base' in the North Atlantic for 1958 (includes Greenland Sea, Norwegian and Barents Seas); fishing efficiency of various drift nets; recommended drift net for 1958.

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51985. ĬUDANOV, K. I. O primenenii poiskovoĭ gidroakusticheskoĭ tekhniki v Severnoĭ Atlantike. (Rybnoe khozĭaĭstvo, Dec. 1958. god 34, no. 12, p. 27–32, illus.) Text in Russian. ***Title tr.:*** On the application of the hydroacoustic searching technique in the North Atlantic.

Includes an analysis of the performance of the echosounder versus the hydrolocator in spotting herring shoals; their modes of operation and registration; types of these instruments, etc. To increase their efficiency author recommends developing a simple hydrolocator for fishing purposes and a single sensitivity standard.

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51986. ĬUDIN, B. A. Daĭkovyĭ kompleks shchelochnykh granitov raĭona r. Tsaga. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 127–39, illus., tables, diagrs., text map.) Text in Russian. ***Title tr.:*** The alkaline granite dike complex in the Tsaga River district.

Reports appearance and composition of alkaline granite dikes developed in the gabbro-labradorite massif in Kola Peninsula, approx. 67°45′ N. 35°30′ E. Variety and zonal distribution in the dike intrusions are noted. Aegirite-arfvedsonite- , aegerite-augite- , hastingsite- , and biotite-granite are described in detail; component and accessory minerals are indicated and reviewed. Texture, chemical composition, microstructure, and other properties are outlined. Assimilation and contact-metasomatic processes within these granites are discussed. Microscopic and spectral analyses are summarized.

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51987. ĬUDIN, B. A. O metamorfizme osnovnykh porod i kontaktovykh ĭavleniĭakh v raĭone nizhnego i srednego techeniĭa r. Iokan'gi. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova, 1958. p. 95–110, tables, diagrs., map.) 2 refs. Text in Russian. ***Title tr.:*** On the metamorphism of basic rocks and their contact effects in the lower and middle Iokanga River region.

Three basic rock types in this region (approx. 68° N. 39° E.) of northeast Kola are distinguished and treated in detail: augite-metagabbro, post-Bothnian olivine gabbro, and proterozoic diabase and gabbro-diabase. The effects of their contact with granites and contacts with acid rocks are discussed. These contacts lead to formation of a substantial zone of hybridic rocks and newly formed rocks. Metamorphism of granophyre in hybridic rocks is described and the type of this transformation is considered.

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51988. ĬUDIN, B. A. Shchelochnye granity raĭona oz. Purnach. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 108–116, tables, diagrs.,

text map.) Text in Russian. ***Title tr.:*** Alkaline granites of the Lake Purnach district.

Outlines the geologic structure of the area (approx. 66°50′ N. 38°20′ E.) southeast of Lake Purnach, an alkaline granite massif developed by Paleozoic intrusion. The massif, elipsoidal in form, about 44 km.^{2} in area, is illustrated by map and block diagram. Component minerals: plagioclase, microcline, quartz, arfvedsonite, aegirite and others are described. Texture and cleavage of these granites are characterized; chemical analyses, color, and physical properties analyzed, and the origin is discussed.

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ÎÛDOVNYÎ, E. G., *see* Saks, V. N., *and others.* Predvaritel'nye rezul'taty . . . îûrskikh . . . otlozheniĭ . . . Anabara . . . *1958.* No. 54522.

51989. ÎÛRLOV, K. T. Severnyĭ olen' v Zapadno-Sibirskoĭ nizmennosti. (Priroda, Dec. 1958. god 47, no. 12, p. 105–107, illus. map.) 2 refs. Text in Russian. ***Title tr.:*** The reindeer on the West-Siberian Plain.

Report on an air survey made in Dec. 1956 and Jan. 1957 over a 2,000 km. track. Limits of its habitat, nature of inhabitated area, aggregations (3–15), composition of herds, behavior, etc., are described. ***Copy seen:*** DLC.

ÎÛRLOV, K. T., *see also* Stroganov, S. U., *and* K. T. ÎÛrlov. Soveshchanie zoologov Sibiri. *1958.* No. 55201.

ÎÛSOV, B. V., *see* Avetisîan, G. A., *and others.* Nasha rodina . . . *1957.* No. 49441.

51990. ÎÛZHINA, Z. I. O zavisimosti mezhdu toksicheskimi svoĭstvami pochv Kol'skogo poluostrova i kolichestvom mikrobov-antagonistov k azotobakteru. (Mikrobiologiîa, July-Aug. 1958. t. 27, vyp. 4, p. 460–64, tables.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** Dependence of toxic properties of Kola Peninsula soils upon the quantity of microbes antagonistic to azotobacter.

Report on investigation which showed that the degree of toxicity to azotobacter in both cultivated and uncultivated soils often depends on the amount of inhibiting microbes present in these soils. Fungi and sporogenous bacteria were found to be the main azotobacter antagonists.

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51991. ÎÛZHINA, Z. I. Vyzhivaemost' azotobaktera v okul'turennykh i tselinnykh pochvakh Kol'skogo poluostrova. (Mikrobiologiîa, Mar.–Apr. 1958. t. 27, vyp. 2, p. 201–205, tables.) Text in Russian. Summary in English. ***Title tr.:*** Survival of azotobacter in cultivated and virgin soils of the Kola Peninsula.

Report based on a study of some 200 soil samples representing various covers of the area. Of the cultivated soils, the iron podsol and upper and transitional marshes were found to be most toxic to azotobacter whilst soils of the humus iron, humus podsol and low marshes were least toxic. Survival rate in virgin soils did not depend on the soil type, all being highly toxic. ***Copy seen:*** DLC.

51992. IVANENKO, E. F. Vliîanie narkoza na izmeneniîa temperatury kory bol'shikh polushariĭ golovnogo mozga. (Fiziologicheskiĭ zhurnal SSSR, Sept. 1957. t. 43, no. 9, p. 851–57, illus., table.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** Influence of narcosis on temperature changes in the cortex of cerebral hemispheres.

Following a series of anesthetics, temperature of rabbits' cortex was found to decrease, falling stepwise with more or less regular secondary peaks. This fall is preceded by an initial rise of the induction period. Levels of low temperature and its duration depend on the anesthetic used. Upon recovery, brain temperatures rose above initial level.

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IVAN'EV, L. N., *see* Arembovskiĭ, I. V., *and* L. N. Ivan'ev. Novoe obsledovanie Irkutskoĭ paleoliticheskoĭ stoîanki. *1953.* No. 49368.

IVAN'KO, T. ÎA., *see* Vol'sov, V. F., *and* T. ÎA. Ivan'ko. Opyt zalozheniîa fundamentov maloètazhnykh zdaniĭ . . . *1958.* No. 55870.

IVANOV, A., *see* Derîugin, M. K., *and* A. Ivanov. Predvaritel'nyĭ obzor . . . *1937.* No. 50521.

51993. IVANOV, A. I. Novye dannye po stratigrafii permotriasovykh êffuzivnykh obrazovaniĭ Taĭmyrskogo poluostrova. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 67, Sbornik stateĭ po geologii Arktiki, vyp. 7, p. 36–47, illus., fold. cross-section, text map) Text in Russian. ***Title tr.:*** New data on the

stratigraphy of Permian-Triassic effusive formations of the Taymyr Peninsula.

Presents the results of investigation by the author in 1954 in geologic mapping of the Vostochnaya Uboynaya and Malaya Pura River basins and in examination of the cross-section in the eastern part of the Lyly plateau. Due to lack of organic characteristics of the effusive formations of Taymyr, their age has been in question. The Lyly cross-section is claimed to be complete and to bear well preserved Triassic flora. Interpretation of this cross-section distinguishes effusive-tuffaceous and upper basaltic stages of the formation which is believed to have developed between the upper Permian and lower Triassic periods.

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51994. IVANOV, A. M. O vertikal'noĭ zonal'nosti v diabazovom komplekse svity Imandra-Varzuga na Kol'skom p-ove. (Akademiîa nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiîa, 1958. no. 3, p. 28–30, illus.) Ref. Text in Russian. ***Title tr.:*** On vertical zonality in the diabasic complex of the Imandra-Varzuga series in Kola Peninsula.

The complex consists mainly of diabases, amygdaloids, porphyrites and gabbro diabases. Characteristics of their stratification, vertical zonality and gradual variation are discussed.

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51995. IVANOV, A. M. Shchelochnye granity verkhov'ev r. Strel'ny. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 86–107, illus., table, diagrs., fold. map.) Text in Russian. ***Title tr.:*** Alkaline granites of the upper Strel'na River.

Presents map and outlines geologic structure of this region (66°50′N. 37°50′E.). Stratigraphic cross-section is evaluated and characterization is given of adjacent country rocks: biotite gneiss, amphibole-biotite gneiss, amphibolite, actinolite shale, oligoclase gneiss-granite and others. Through contact with adjacent rocks, the alkaline granites occurring here are gneissose-granites, which are treated in detail. Their form and zonal structure are described; texture features and cleavage outlined; microstructure and optical constants examined. Petrographic characteristics, component minerals, chemical composition and other features are outlined. ***Copy seen:*** DLC

51996. IVANOV, A. M. Shchelochnye granity Zapadnykh Keĭv. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 19–65, illus., tables, diagrs., maps, incl. 1 fold.) Text in Russian. ***Title tr.:*** Alkaline granites of Zapadnyye Keyvy.

Presents a comprehensive outline of the geologic structure and a petrographic and petrologic description of the Zapadnyye Keyvy (approx. 67°30′–68° N. 35°25′–37°15′ E.), based on the author's and others' work. The large intrusion of alkaline granites, extending over an area of 3,000 km.^{2}, is treated in detail. The main component minerals are: aegirite, alkalic amphibole, plagioclase, microcline and quartz; accessory minerals: orthite, sphene, fluorite, zircon, astrophylite, hematite, aenigmatite, and magnetite. They are characterized and the quantitative mineralic composition is presented. Crystallization and chemical composition of these alkaline granites, are outlined. Texture features, fractures, microscopic structure are studied and illustrated by diagrams. Nature, age, and history of the intrusion are discussed. ***Copy seen:*** DLC.

51997. IVANOV, A. P. *and* **A. E. KOMAROVA.** Peplovye tufy nizhnego triasa severnoĭ chasti khrebta Orulgan. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informaîsionnyĭ biûlleten', 1958, vyp. 10, p. 31–36, illus., table.) 5 refs. Text in Russian. ***Title tr.:*** Ashen tufa of the Lower Triassic in the northern part of the Orulgan Range.

Describes ashen tufa found in the left bank of the D'akhtar-Taas River (approx. 69°20′ N. 130° E.) in northwest Yakutia, by the 1957 Orulgan expedition of the Institute of Geology of the Arctic. A cross-section of the formation is presented and the stratigraphic position of the tufa clarified. Its petrography and mineralogy are dealt with and data presented. Geologic mapping of this region is reported. ***Copy seen:*** DGS.

51998. IVANOV, B. I. ÎA. M. Sverdlov v Turukhanskoĭ ssylke. (Akademiîa nauk SSSR. Institut istorii. Istoricheskiĭ arkhiv, Sept.–Oct. 1956, no. 5, p. 169–73.) 2 refs. Text in Russian. ***Title tr.:*** ÎA. M. Sverdlov's exile to Turukhansk.

Author's recollections of his 1915–1916 encounters with this revolutionist during Sverdlov's exile to Monastyrskoye (now

Turukhansk), including their visits to the winter camps of his Ostyak friends. The latters' hospitality, food tastes (tea mixed with fish oil), etc., are noted.

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51999. IVANOV, B. V. Konferent͡siia po razvitiiu proizvoditel'nykh sil Vostochnoĭ Sibiri. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia, 1958. no. 9, p. 142–44.) Text in Russian. ***Title tr.:*** Conference on development of resources in East Siberia.

Reports conference called by the Academy of Sciences, Gosplan and Council of Ministers of the R.S.F.S.R. at Irkutsk, Aug. 18–26, 1958; it followed preliminary provincial conferences held Aug. 11–15 in Krasnoyarsk, Irkutsk, Yakutsk, etc. Three main addresses are summarized (A. A. Trofimuk on development of science in Siberia, S. A. Khristianovich on progress of a scientific center being built near Novosibirsk, P. I͡A. Antropov on utilization of mineral resources); problems discussed in 13 sections of the conferences are listed, including development of industry and transportation in Krasnoyarsk Province and Yakutia. ***Copy seen:*** DLC.

IVANOV, D. U., *see* Tavrovskiĭ, V. A., *and others.* Pervye itogi reakklimatiza͡tsii sobolia . . . *1958.* No. 55340.

IVANOV, E., *see* Vinkman, M., *and* E. Ivanov. Probuzhdenie bogatyria. *1958.* No. 55822.

52000. IVANOV, IŪRIĬ. V kratere vulkana. (Fizkul'tura i sport, 1957. god 27, no. 10, p. 9–11, illus.) Text in Russian. ***Title tr.:*** In the crater of the volcano.

Account of a climb in summer 1957 of Klyuchevskaya Sopka (4,850 m.) in central Kamchatka, and descent into the crater. The volcanic and fumarolic activities are described and some data given on glacier cover, incline of cone, crater diameter, eruptions, etc.

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52001. IVANOV, IŪRIĬ. Za tysi͡achi kilometrov ot Moskvy. (Fizkul'tura i sport, Dec. 1958. god 28, no. 12, p. 7, illus.) Text in Russian. ***Title tr.:*** Thousands of kilometers from Moscow.

Describes the national sport events taking place among the reindeer herders and hunters during the winter fair at Esso, the administrative center of this predominantly Lamut (Tungus) district in central Kamchatka: reindeer sledge (narta) racing over a 30 km. tundra handicap course, reindeer roping, and wrestling, a free-style fight originating in the single combat custom of tribal warfare. ***Copy seen:*** DLC.

IVANOV, IŪRIĬ, *see also* Temin V. V kratere Avach-gory. *1957.* No. 55373.

52002. IVANOV, IVAN TIKHONOVICH. Konstrukt͡sii sbornykh fundamentov. Moskva, Izd-vo "Moskovskiĭ rabochiĭ," 1957. 56 p. illus., tables, diagrs. Text in Russian. ***Title tr.:*** Construction of assembled foundations.

Method is described in detail for selecting suitable foundation for various kinds of ground (sandy, pulverized, loamy, argillaceous, or their combination) and buildings. Attention is given to ground water, depth of ground freezing and to the thermal condition of the foundations of heated and non-heated buildings, which cause ground heaving and deformation of the construction. Different types of the ground-reinforcing piles, pillars and base insulation are discussed with illus. Approved data for composition and properties of materials and for methods of construction are given.

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52003. IVANOV, IVAN TIKHONOVICH. Usilenie osnovaniĭ, fundamentov i sten zhilykh zdaniĭ. Moskva, Izd-vo Ministerstva kommunal'nogo khozi͡aĭstva RSFSR, 1955. 160 p. illus., 48 tables, diagrs., map. 14 refs. Text in Russian. ***Title tr.:*** Reinforcement of ground bases, foundations and walls of residential buildings.

Causes of deformation of old and new buildings are analyzed and methods of repair are described. The causes are classified as natural (age, poor drainage, appearance of ground water, excessive freezing, effect of nearby construction, etc.), and those due to errors in design or in building methods. Foundation deformation and ground sagging or heaving, with and without excavation, are studied. Loads and stresses are computed and analyzed in relation to the geographic location (map p. 38) and climatic conditions. Method of foundation reinforcement is selected according to local conditions. Building foundations are partially or totally replaced by sections; they may be reinforced by the injection of liquid cement or sodium silicate into the disintegrating masonry,

or among loose stone of the foundation, or into the ground itself, beneath or alongside. In the case of ground water appearing, or of defective drainage (sewer or other water), new drain walls and channels are built. The standards for allowable stresses, properties of materials and specifications for other parts of the construction are given in tables which include frost-resistance data for stones, gravel, bricks, siliceous and magnesia cements, etc.

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52004. IVANOV, M. I. Novoe o proiskhozhdenii plovuchikh ledîanykh ostrovov. (Priroda, July 1958. god 47, no. 7, p. 94–97, illus., graph., diagr.) Ref. Text in Russian. ***Title tr.:*** New information on the origin of floating ice islands.

Ice investigations at the drift stations North Pole-4 and 6 are discussed, the latter located on a typical ice island, 82 sq. km. in area and 6.5–12.5 m. thick. Its undulating surface is similar to the folded structure of the land floe around Ellesmere Island, where these structural features are associated with compression; data on salinity, structure, strength, and temperature collected in April–May 1957 approximated similar data for polar ice. Mud and debris in the ice distinguish North Pole-4 and 6 from ordinary ice fields and indicate their land-floe origin.—From SIPRE.

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52005. IVANOV, SERGEĬ VASIL'EVICH. Starinnoe zimnee zhilishche ul'cheĭ. (Akademiîa nauk SSSR. Muzeĭ antropologii i ėtnografii. Sbornik, 1951. t. 13, p. 60–124, illus., tables, diagrs.) Approx. 40 refs. Text in Russian. ***Title tr.:*** Ancient winter dwellings of the Ul'chi.

A study of Tungus and Gilyak housing in the lower Amur region based on author's investigations in summer 1927. The semi-subterranean houses, similar to those of the Eskimos, Aleuts and Kamchadals, large frame houses used by several families of the same patriarchal group, and, finally, the Russian one-family log cabin are described. The building material and technique, heating and furnishing are dealt with, and floor plans given. The religious rites connected with the erection of a new house are compared with those of the northern Tungus (Evenki), Golds and Voguls.

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52006. IVANOV, V. Za Polîarnym krugom. (Grazhdanskaîa aviatsiîa, Nov. 1958. god 15, no. 11, p. 18–23, illus.) Text in Russian. ***Title tr.:*** Beyond the Arctic Circle.

Tribute to personnel at Nadezhda, the airport of Noril'sk. ***Copy seen:*** DLC.

52007. IVANOV, V. B. Neobychaĭnyĭ stolb izmorozi. (Problemy Arktiki, 1958, vyp. 3, p. 113–14, illus.) Text in Russian. ***Title tr.:*** An unusual pillar of rime.

A column of rime 5 m. high and 1.5 m. wide was observed by the author on May 15, 1950, on Churlyanis Glacier Dome, Hooker (Gukera) Island, Franz Joseph Land. The rime had accumulated during the winter around a weathervane post, abandoned in the fall of 1949, and it was thickest (1 m.) on the northeast side, exposed to the prevailing wind.

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52008. IVANOV, V. I. K voprosu o fil'tratsii vody v merzlykh gruntakh. (*In:* Materialy po laboratornym issledovaniîam merzlykh gruntov, sbornik 3, 1957. p. 149–62, illus., tables, graphs, diagrs.) 12 refs. Text in Russian. ***Title tr.:*** Water penetration through frozen ground.

"The problem is examined on the basis of earlier investigations and experiments with silty clay soil (18% clay) of low plastic limit (22.4%). Samples 4 cm. in diam. and 20 cm. long of different moisture contents were subjected to d.c. at 40–160 v. for 3–125 hr. after freezing at −20° C. Moisture content and water-film thickness decreased near the anode while the amount of bound water increased near the cathode. Permeability variations were associated with the temperature and moisture changes, and, since the experimental data resembled the theoretical, electrical methods should prove useful in permeability studies."—SIPRE. ***Copy seen:*** DLC.

52009. IVANOV, V. M. Novyĭ bystrokhodnyĭ dizel'-elektricheskiĭ kitoboets. (Rybnoe khozîaĭstvo, Aug. 1957. god 33, no. 8, p. 12–16, diagr. table.) Text in Russian. ***Title tr.:*** A new, fast, diesel-electric whaler.

Describes a new type of vessel, three of which took part in the operations of the flotilla *Slava* during the 1956–57 season in the Antarctic. Information includes: size, displacement, type of propelling machinery, horsepower, speed, etc.; body structure, quarters; electric generators

and machinery; steam supply, steering system, lifeboats, etc.

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52010. IVANOV, V. M. O gidrometeorologicheskom rezhime severnoĭ chasti Atlanticheskogo okeana. (Problemy Arktiki, 1958. vyp. 4, p. 5–14, tables, maps.) 6 refs. Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** On the hydrometeorological regimen of the northern part of the Atlantic Ocean.

A study of relations between ice conditions, water and air temperatures, and hydrometeorological processes in different parts of the North Atlantic. The region of Davis Strait, southern Greenland, and Iceland waters is under consideration, with water-surface temperatures from other parts of the North Atlantic also utilized. Year-round conditions are mathematically analyzed and formulated. Supremacy of hydrological factors is claimed. ***Copy seen:*** DLC.

52011. IVANOV, V. V. Gidrotermy ochagov sovremennogo vulkanizma Kamchatki i Kuril'skikh ostrovov. (Akademiîa nauk SSSR. Laboratoriîa vulkanologii. Trudy, 1956, vyp. 12, O vulkanizme, geologii i gidrotermakh Kamchatki, p. 197–217, illus., diagr., 10 tables.) 32 refs. Text in Russian. ***Title tr.:*** Thermal waters in the present volcanism centers on Kamchatka and the Kuril Islands.

Study of fumarolic hot springs based in part on author's investigations in Kamchatka 1950–51 and on the Kurils in 1953–54; those of sub-surface and deep formation are distinguished; the fumarolic waters of both types are characterized by acidity, sulfatic or chloro-sulfatic composition with total absence of carbonates, presence of free sulfuric acid, high content of Fe^{2+}, Al^{3+} and sometimes NH_4^+, with predominance of CO_2 and H_2S in absorbed gas. Data tables show temperature, chemical composition of water and absorbed gas, and amount of ions. Water samples were taken from the main Kamchatka volcanoes, and several on the Kurils. ***Copy seen:*** DLC.

52012. IVANOV, V. V. Osnovnye stadii gidrotermal'noĭ deîatel'nosti vulkanov Kamchatki i Kuril'skikh ostrovov i svîazannye s nimi tipy termal'nykh vod. (Geokhimiîa, 1958, no. 5, p. 473–85, tables.) 19 refs. Text in Russian. Summary in English. ***Title tr.:*** The main stages of hydrothermal action of the volcanoes of Kamchatka and the Kuril Islands and the types of thermal waters connected with them.

Outlines the interdependence between volcanic gases, vapor and underground water; the main stages of volcanic hydrothermal activity; and types of thermal waters in the zones of active volcanic hearts. Based on their interaction with underground waters, two groups of volcanic gases are distinguished: "fumarolic" and "solfataric". Four stages of volcanic hydrothermal activity are characterized. Three genetic types of thermal waters are outlined: acid sulfate, acid sulfate-chloride and alkaline chloride. Each type is treated in turn and its chemical composition is shown. Comparison is made with thermal waters of New Zealand, Iceland, and Italy.

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52013. IVANOVA, A. M., *and others.* Geologicheskoe stroenie Polîarnogo Urala i Paĭ-Khoîa. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiîa Sovetskoĭ Arktiki, 1957. p. 58–96.) Text in Russian. *Other authors:* V. I. Ustrîtskiĭ, *and* Îu. E. Moldavantsev. ***Title tr.:*** The geological structure of the Polar Ural and Pay-Khoy.

Outlines latest data on relief, stratigraphy, volcanism, tectonics, and mineral resources of this region, including the Vorkuta and the northern Bol'shezemel'skaya Tundra (66°33′ N. 61°–68° E.) coal areas. Recent geological investigations and the institutions and scientists involved in them are stated. The geologic systems best developed in this region are Devonian, Carboniferous, Permian and Quaternary. Volcanic activity appeared mainly in the Lower and Middle Paleozoic. The principal tectonic role was played by the Ural anticline. The main mineral resource of this region is the coal of the Pechora basin; other ore and non-ore minerals indicated are mentioned. The geologic map in scale 1:2,500,000 accompanying the volume covers this area. ***Copy seen:*** DLC.

52014. IVANOVA, E. N., *and others.* Pochvenno-geograficheskoe raîonirovanie SSSR. (Pochvovedenie, Oct. 1958. no. 10, p. 1–11, tables, map.) Text in Russian. *Other authors:* P. A. Letunov, N. N. Rozov, V. M. Fridland, *and* S. A.

Shuvalov. ***Title tr.:*** Division of the U.S.S.R. into soil-geographic regions.

Paper delivered to the first Conference of the All-Union Society of Pedologists (in 1958?). Several institutes of the Academy of Sciences have been working on subdivision of the U.S.S.R. into natural zones in 1939–43, and since 1954; their results are summarized and the proposed division into natural bioclimatic zones is shown (map); the polar (cold) belt of arctic and subarctic zones, comprises six "provinces:" Kol'skaya, Kaninsko-Pechorskaya, Severo-Sibirskaya, Chukotsko-Anadyrskaya, Ural'sko-Novozemel'skaya, Taymyrskaya, Chukotskaya. Principles of the division are discussed. Scientific zoning is important for administrative purposes and economic planning in the area.

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52015. IVANOVA, EVG. Za vysokuû idelnost', za tvorcheskiĭ rost. (Na severe dal'nem, 1955, vyp. 2, p. 192–204.) Text in Russian. ***Title tr.:*** For a high intellectual level, for creative development.

Outlines the rise of a local literature in Magadan Province: works of the first Chukchi poet and writer, IUriĭ Sergeevich Rytkhêu (b. 1930); publications about Chukotka and Chukchis by Russian authors, T. Semushkin, N. Maksimov, N. Shundik, A. Koptiâeva, I Kratt and A. Semenov; establishment of the Magadan Province Publishing House; etc. Several issues of a symposium *Literaturnaiâ Kolyma* and the first issue of an almanac *Na severe dal'nem* are reviewed.

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52016. IVANOVA, S. S. Kachestvennaiâ i kolichestvennaiâ kharakteristika bentosa Onezhskogo zaliva Belogo Moriâ. (Akademiiâ nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po izucheniû Belogo moriâ, 1957. vyp. 1, p. 355–80, tables, maps.) 19 refs. Text in Russian. ***Title tr.:*** Qualitative and quantitative character of the benthos in the Onega Bay of the White Sea.

Account based on material collected in 1952, also repeatedly since 1946. Earlier studies are reviewed and data given on species making up the benthos. Its main faunistic complexes, their biomass and occurrence, species composition of the complexes, quantitative distribution of the benthos, and distribution of species are treated in turn. The Bay was found to be rich in benthonic forms (mostly boreal or arcto-boreal) but rather poor in quantity. ***Copy seen:*** DLC.

52017. IVANOVA, T. N. Kukisvumchorr-IUksporskoe apatito-nefelinovoe telo. (*In:* Akademiiâ nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova, 1958. p. 25–94, tables, cross-sections, map.) 44 refs. Text in Russian. ***Title tr.:*** The Kukisvumchorr-Yukspor apatite-nepheline body.

Excerpt from a comprehensive work on the structure, petrography and geochemistry of the alkaline massifs of Khibiny. The apatite-nepheline rocks discovered in 1921 have been studied by various scientists, and their works are evaluated. The structure of apatite-nepheline, its magnetic textures, petrographic and mineralogic characteristics, chemical analysis, crystallization and crystallic properties are presented in detail; and its genesis is outlined.

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52018. IVANOVA, T. N., *and* **E. K. KOZLOV.** O differentsiatsii v gorizontal'nom napravlenii v osnovnykh porodakh Monchegorskogo plutona. (Akademiiâ nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiiâ, 1958. no. 3, p. 3–14, illus., tables, diagrs., map.) 18 refs. Text in Russian. ***Title tr.:*** On a differentiation in horizontal direction in the basic rocks of Monchegorsk pluton.

Describes the geologic structure of this rock body in south-central Kola Peninsula, which comprises three massifs: Soncha, Nyud and Poaz; and outlines the differentiation procedure in them. The structural-geologic map shows a recognizable mineral sequence having a west-east direction: piroxenite, feldspar-pyroxenites, melanocratic norites and gabbro norites. In the same direction there is increase of plagioclase in the olivine-bearing rock. Such changes are the results of horizontal differentiation, which is treated in detail and illustrated.

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52019. IVANOVSKIĬ, ALEKSANDR IGNAT'EVICH. Sel'skokhozâĭstvennoe osvoenie Kraĭnego Severa. Moskva, Izdvo "Znanie," 1958. 48 p. illus., tables, maps. (Vsesoûznoe obshchestvo po rasprostraneniû politicheskikh i nauchnykh znaniĭ, ser. 4, no. 22, 23.) Refs. Text in Russian. ***Title tr.:*** Development of agriculture in the far North.

The far North represents 40% of the

U.S.S.R. and 59% of the R.S.F.S.R. Agricultural progress achieved there during the Soviet period is outlined: activities of scientific institutions, with the Institute of Agriculture of the Far North at their head, of experimental stations and state and subsidiary farms in the tundras and taiga of Kola Peninsula, Komi and Yakut A.S.S.R. and in Arkhangel'sk, Tyumen', Krasnoyarsk and Magadan Provinces (p. 4–14). The natural zones, their soils and climate conditions are characterized (p. 14–21). Features of plant growth in the North, development of local potato, vegetable and forage supply bases are outlined (p. 21–48). Text maps show distribution of the arctic zones (p. 15), northern limit of agriculture in 1926 and in 1958 (p. 20), and northern limits of potato cultivation and forage crops in 1958 (p. 25). Data on average and record yield of potato and vegetable crops, in various areas are included. ***Copy seen:*** DLC.

IVENS, VIRGINIA, *see* Hanson, H. C., *and others.* Coccidia . . . geese and swans. *1957.* No. 51574.

52020. IVERSON, JOHN L. Technical note no. 48; Pacific ocean perch; proximate composition. (Commercial fisheries review; U.S. Fish and Wildlife Service. Dec. 1958, v. 20, no. 12, p. 22–24, illus., table.) 4 refs.

This fish, *Sebastodes alutus* ranging from southern California to northwestern Alaska could be utilized commercially in Alaska, as trial fishing and its good qualities show. Chemical composition of its fillets was 17.6% protein, 1.3% oil, 79.0% moisture, and 1.2% ash.

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52021. IVES, JOHN DAVID. Geomorphological investigations in the Torngat Mountains of northeastern Labrador-Ungava. (Arctic, 1957. v. 19, no. 4, p. 243–44.)

Reports summer 1957 field work, continuing that reported in No. 52022. Features representing late-Pleistocene limits of trunk glaciers flowing eastward from a continental ice cap were studied. A chronology of the final emergence from the last ice sheet, and of ice-dammed lakes was constructed. Conclusions: the Torngat Mts. were influenced during late-Pleistocene times by two distinct glaciations, separated by an interglacial period of considerable intensity. The final glaciation is tentatively correlated with the Wisconsin of central North America; the earlier one is uncertain, possibly equivalent to the Illinoian, or of post-Sangamon age. ***Copy seen:*** CaMAI.

52022. IVES, JOHN DAVID. Glaciation of the Torngat Mountains, northern Labrador. (Arctic, 1957. v. 10, no. 2, p. 67–87, map, illus.) 22 refs.

Considers role of these mountains in glaciation of Labrador-Ungava, assessing particularly events in late-Wisconsin times with respect to final disappearance of both continental and local ice masses. Conflicting theories are discussed, and evidence presented, based on physiography and findings from summer 1956 field work, including unmistakable erratics on summits at 4,000–5,000 ft. The highest summits were completely submerged by eastward moving continental ice during the Wisconsin glaciation; local glaciers never reached significant dimensions; rapid melting *in situ* of thick masses of ice occurred during the final Wisconsin stages. Two or three separate glacial periods are recognized from the morphology of the area. Instantaneous glaciation of a large area of the Labrador-Ungava Plateau probably initiated a continental ice sheet in northeastern North America at the onset of each glacial period. *Also pub.* in International Union of Geodesy and Geophysics, Association of Scientific Hydrology, 11th assembly report of proceedings 1958, v. 4, p. 372–86.

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52023. IVES, JOHN DAVID. Mountain-top detritus and the extent of the last glaciation in northeastern Labrador-Ungava. (Canadian geographer, 1958. no. 12, p. 25–31, illus.) 16 refs.

Presence of mature mountain-top detritus ("a specific type of boulder field formed by disintegration of bedrock *in situ* by frost-shattering") may indicate the persistence of ice-free areas (nunataks) during the last glaciation. If the time required for its mature development was longer than the post-glacial period, the areas where it is found were not covered by the ice. Evidence from studies in 1956–1957, described in some detail, indicates that the detritus was initiated before the last glaciation. High-level erratics found in the Torngat Mts. appear to have been deposited by an earlier glaciation. Application of this concept to other parts of Labrador and northern Canada is considered; it

may be of use in evaluating extent and thickness of the last ice sheets.
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IVLEV, V., *see* Nikol'skiĭ, G., *and others.* Notes . . . Atlantic salmon investigations . . . *1958.* No. 53605.

52024. IVLEVA, L. Silosnye kul'tury perspektivnye dlia Kraĭnego Severa. (Sel'skoe khoziaĭstvo Sibiri, 1958, no. 4, p. 38–44, tables.) Text in Russian. ***Title tr.:*** Promising silage crops for the far North.

The farmers of Khanty-Mansi National District, as a rule, ensilage only wild grasses that affect the silage negatively. Since 1954, experiments are being carried out at the local agricultural experimental station and on the collective farm "Put' k kommunizmu" in selection and cultivation of proper forage crops. Results are reported on preparing silage from corn, cabbage and sunflower; the superiority of corn for this purpose is stressed.
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IZBEKOVA, A. A., *see* Akademiia nauk SSSR. IAkutskiĭ filial. Istoriia IAkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957.* No. 49168.

52025. IZHEVSKIĬ, G. K. Dopolnenie k dokladu P. A. Moiseeva. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy, 1958. t. 3, p. 135–37.) Text in Russian. ***Title tr.:*** Supplement to the report of P. A. Moiseev.

Supplements No. 53358, and deals with the role of plankton in fish distribution; scientific aid rendered to fisheries so far; plans for the future; shortages in research, etc. ***Copy seen:*** DLC.

52026. IZHEVSKIĬ, G. K. O zablagovremennom opredelenii tipa rezhima Barentseva moria. (Rybnoe khoziaĭstvo, Dec. 1957. god 33, no. 12, p. 48–55, illus., table, map.) Text in Russian. ***Title tr.:*** On advance determination of the type of regimen in the Barents Sea.

Annual fluctuation in fish-catches of this area is considerable, and depends upon weather conditions affecting the sea temperature. A similar dependence is cited from cod fisheries in Norwegian waters and the rhythmicity of catches in Barents Sea is compared with the temperature rhythm of the Gulf Stream in the Florida straits and in other areas of the Atlantic. By using the median temperature of January on the Kola meridian (33° E.), it should be possible to predict the prospects of the coming year's codfisheries in the Barents Sea.
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52027. IZ"IUROV, IVAN. Ogni tundry. (Druzhba narodov, Feb. 1958, no. 2, p. 206–211.) Text in Russian, translated by B. Nevskaia from Komi (Zyryan). ***Title tr.:*** Tundra lights.

Describes the discovery and exploitation of the Pechora coal basin, with selected statistical data for 1932–55 on output of the Vorkuta mines. The town of Vorkuta (pop. approx. 150,000), its housing, schools and institutes, health services, mine installations, etc. are dealt with. ***Copy seen:*** DLC.

52028. IZVEKOV, M. V. Bystro pogruzhaiushchaiasia planktonnaia set' Nansena. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 113–116, illus.) Text in Russian. ***Title tr.:*** A fast sinking Nansen plankton net.

The insufficiencies of this type of net especially in long, deep hauls, are analyzed and an improved version described which sinks quickly thus shortening operation time; it also is less prone to drifting than the original type.
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52029. IZVEKOV, M. V. Iz zapisok gidrologa. (*In:* Burkhanov, V. F. Cherez okean na dreĭfuiushchikh l'dakh, 1957. p. 247–82, illus.) Text in Russian. ***Title tr.:*** From a hydrologist's notebook.

Drifting station North Pole-4, its life and work in 1954–1955 are sketched by the hydrologist of its first team: the flight from Tiksi Bay to the camp, personnel, the tent used: KAPSh-1 (kruglaia arkticheskaia palatka Shaposhnikova, Shaposhnikov's round arctic tent, type 1). The oceanographic work is noted, including ice-drilling, IU. K. Alekseev's automatic current meter (p. 257–58); also the aerological and magnetic observations. Health conditions, visits of wildlife, etc., recreation, are described. A helicopter trip was made to the camp of North Pole-2, abandoned in 1951; and the return flight back to the mainland Apr. 17, 1955. ***Copy seen:*** DLC.

JAAKKOLA, KAARLO A., *see* Lagercrantz, E. Lappische Volksdichtung . . . *1957–58.* No. 52621.

52030. JAASUND, ERIK. Marine algae from northern Norway, II. (Botaniska notiser, 1957. v. 110, no. 2, p. 205–231, 10 illus.) 28 refs.

Contains descriptions of *Halosiphon* n. gen., *H. tomentosa* (=*Chorda tomentosa*) n. comb., *H. altae* n. sp., and *Myrionema corunnae* emend.; also critical notes and distributional data on four other sea weeds collected from 22 stations (69°–71° N. 16°–28° E.) along the Troms and Finnmark coast of Norway. Pt. I of this work: No. 22903.

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52031. JAATINEN, S., *and* **W. R. MEAD.** The intensification of Finnish farming. (Economic geography, Jan. 1957. v. 33, no. 1, p. 31–40, 9 text maps.)

Includes maps showing for northern Finland: types of woodland 1850; relative densities of tractors, grain harvesters and milking machines, increase in number of farms 1941–1950; reclamation of arable land 1941–1950; forest areas classified as inaccessible in 1952; proposed railway and motor routes. Northern areas are not specifically mentioned in the text.

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52032. JACKMAN, ALBERT HAVENS, 1908– . The physiography of the Big Delta region, Alaska. Worcester, Mass., Clark University, 1953. 152 p. 16 illus., 34 plates, 6 maps incl. 1 fold., 7 diagrs., table.) 44 refs. Ph.D. dissertation.

Two old glaciations in this region (64°10′ N. 145°50′ W.) are distinguished; relative position, orientation, and appearance of moraines, differences in sedimentation of kettle lakes, young and old glaciated surfaces, are dealt with; stream dissection, age of outwash deposits, and stream terraces are also considered. Present vegetation, glaciers, frost action, drainage patterns, landforms, and aggradation on the north slope of the high Alaska Range are discussed. Discussion is elucidated by 34 air photographs.

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52033. JACKSON, ALEXANDER YOUNG, 1882– . A painter's country, the autobiography of A. Y. Jackson. Toronto, Clarke, Irwin, 1958. xv, 170 p. col. plates, maps on end papers.

Recounts events, impressions, reflections on his life, travels and work as Canadian-landscape painter, including his trips with the Eastern Arctic patrol on the *Beothic* 1927 and 1930, to the Yellowknife and Eldorado areas 1928, 1938, 1949, 1950, and on the Alaska Highway in 1943. The 12 reproductions of his paintings include several of far northern localities. ***Copy seen:*** DLC.

JACKSON, B. H., *see* Carlson, L. D., *and others.* The . . . effects of ionizing radiation and low temperature . . . metabolism, longevity . . . rat . . . *1957.* No. 51031.

JACKSON, GEORGE GEE, *see* Dowling, H. F., *and others.* Transmission of the common cold . . . *1958.* No. 50616.

52034. JACKSON, HARTLEY HARRAD THOMPSON, 1881– . The return of the vanishing musk oxen. (Smithsonian Institution. Annual report 1957, *pub.* 1958. p. 381–89, illus.) Reprinted from Audubon magazine, Nov.–Dec. 1956, Jan.–Feb. 1957.

Presents information on past and present number of musk oxen (high estimate now: 20,000, mostly on arctic islands); its physical appearance and name; food; disposition and behavior; development and growth; enemies and defense against them. The transfer in 1930 of 34 musk oxen from Greenland to Alaska and the six-year study carried out at the Alaska Experimental Station by C. H. Rouse and L. J. Palmer, are described in detail. The experiment discouraged domestication or commercial use, but demonstrated successful adaptation. The musk oxen, transferred from the Station to Nunivak Island in 1936, maintain their rate of increase as in Greenland. ***Copy seen:*** DLC.

52035. JACKSON, WILLIAM D. Impact of global concepts of military planning. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 1–3.)

Introductory statement in symposium: the problems involved in developing containers for use in the Arctic are complex, and require research on technical aspects of packaging and preservation of supplies. Strategy requires that the Army be equipped for full-scale operations above the Arctic Circle. ***Copy seen:*** DLC.

52036. JACOBI, HANS. Nogle betragtninger over Jakobshavnsfiskernes økonomiske og erhvervsmaessige vilkår. (Grønland, Oct. 1958, nr. 10, p. 368–76, illus., maps.) Text in Danish. ***Title tr.:*** Some reflections on the economic and occupational conditions of the Jakobshavn fishermen.

Compares the earning possibilities of fishermen and hired workers at this West Greenland town, to the disadvantage of

the former. Considering the hazards and hardships of the work, outlay for gear, transport, etc., the fishermen's income is too low. An undesirable imbalance between the two categories of workers can result. ***Copy seen:*** DLC.

52037. JACOBSEN, JACOB PETER, 1877–1946. The Atlantic Current through the Faroe-Shetland channel and its influence on the hydrographical conditions in the northern part of the North Sea, the Norwegian Sea, and the Barents Sea. (International Council for the Exploration of the Sea. Rapports et procès-verbaux, Hydrography, 1943. v. 112, p. 5–47, 17 tables, 7 text maps, 22 diagrs.) refs.

Part E, p. 23–32, discusses the geographical distribution of Atlantic water (T=10.2° C., S=35.45°/$_{oo}$) in the Norwegian Sea and adjacent waters; both vertical and horizontal extent are described in text and illus. on maps and cross sections. Vertical distribution was determined by means of a TS diagram plotted for six series of stations located 61°–75° N. 0.5° W.–32° E. Considerable dilution and mixing take place.

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JACOBSEN, S. A., *see* Pool, J. L., *and others.* Mechanism . . . centrally induced cardiac irregularities . . . hypothermia. *1958.* No. 54076.

52038. JACOBSON, F. H. Changing and constant temperatures of the rat as thermoregulatory stimuli. (American journal of physiology, Aug. 1958. v. 194, no. 2, p. 297–302. illus., tables.) 16 refs.

Low, constant, body temperature induced peripheral vasoconstriction which further increased when the temperature began to fall, unless heat production rose instead. Vasoconstriction fell initially when body temperature began to rise. Heat production always increased when a low body temperature was made to fall further. ***Copy seen:*** DLC.

JACOBSON, SHERWOOD A., *see* Purpura, D. P., *and others.* Hypothermic potentiation . . . cardiac irregularities. *1958.* No. 54170.

52039. JACOBSSON, FOLKE. Vinterförvaring av höstupptagna planter. (Skogen, *Stockholm,* Apr. 1, 1955. årg. 42, nr. 7, p. 126–27, illus. table.) Text in Swedish. ***Title tr.:*** Winter storage of seedlings lifted in the fall.

In northern Sweden spring comes suddenly; nursery plants must be lifted before they start vegetating, sorted and stored in ice houses till planted, all in a short period of time. An experimental lifting-sorting, etc. was attempted in the fall of 1953. The plants stored in specially equipped snow caves were transferred in spring to regular ice houses until planted. The advantages of this method, still in the experimental stage, are enumerated. ***Copy seen:*** DA.

52040. JAEKEL, WALTER. Erz über Narvik. (Orion, Aug. 1957. Jahrg. 12, no. 8, p. 613–15, illus.) Text in German. ***Title tr.:*** Ore over Narvik.

Account of the Kiruna iron ore deposits, their quantity and quality, mining, and transport to Narvik. The loading and shipping equipment in Narvik and its management are illustrated and discussed.

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52041. JÄRNEFELT, HEIKI. Zooplankton und Humuswasser. Helsinki, 1956. 14 p. tables, diagrs. (Suomalainen tiedeakatemia. Toimituksia (Annales), sarja A, IV, biologica, no. 31.) Text in German. ***Title tr.:*** Zooplankton and humus water.

The relationship between zooplankton and humus water in Finnish lakes was investigated. Nutrition, light, depth of occurrence, seasonal changes, and the presence of phytoplankton and algae are considered. Relative abundance of *Rotatoria, Cladocera, Diaptomus, Nauplius, Copepoda,* and *Cyclops* are tabulated for five categories of lakes grouped according to water characteristics. Several arctic lakes are included. ***Copy seen:*** DGS.

52042. JÄRVI, T. H. Über eingeführte Maränenbestände in einigen Kleingewässern der Gegend von Rovaniemi in Nordfinnland. Helsingforsiae, 1955. 74 p. 7 tables, 2 diagr., 6 text maps. (Acta zoologica fennica, no. 89.) 23 refs. Text in German. ***Title tr.:*** On whitefish introduced into some small water bodies in the vicinity of Rovaniemi, northern Finland.

Contains an annotated list of freshwater bodies in the Rovaniemi district; historical notes; determination and size of whitefish (*Coregonus*) from selected basins. Data are also supplied on the activity of the Kaihua Breeding Institute in propagation of coregonoid fishes and their introduction into various lakes and ponds of the region for the years 1932–53.

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52043. JAKOBSEN, KNUD. Grønlands flora 1857–1957. (Grønland, Mar. 1957. nr. 3, p. 100–105, illus.) Text in Danish. ***Title tr.:*** Greenland's flora 1857–1957.

Lists and describes the most important works published in Denmark and notes the main contributors, from Jens Vahl who traveled in Greenland 1828–1836, to date. The first flora by Johan Lange 1857 comprised 320 species of vascular plants, based mainly on Vahl's observations; the latest (No. 49796), lists 581 species. ***Copy seen:*** DLC.

JAKOBSEN, KNUD, *see also* Böcher, T. W., *and others.* Grønlands flora. *1957.* No. 49796.

52044. JAKOBSON, ROMAN, 1896– , *and others.* Paleosiberian peoples and languages; a bibliographical guide. New Haven, HRAF Press, 1957. 224 p. (Human Relations Area Files. Behavior Science bibliographies). *Other authors:* G. Hüttle-Worth *and* J. F. Beebe.

An exhaustive list of source materials on peoples of eastern, mainly northeastern Asia. The references, 2,363 in number, some annotated, are to books, articles, or pertinent sections of them, also unpublished archival sources. They are grouped thus: bibliographic (83) and general works (688) on several Paleosiberian peoples; those on Gilyaks (315); the Chukchi group comprising Chukchis, Koryaks and Kamchadals (986); the Yukaghir (125), and Yenisean (166) groups. The materials are in part scientific studies or scholarly works, but mostly records of travelers, officials, business men, etc. Some 20 languages are represented, though native materials slightly so. A short sketch (p. 218–22) on Paleosiberian languages is appended. Review with discussion of author's linguistic and ethnic classifications by I. S. Vdovin in *Sovetskaĭa ėtnografiĭa,* 1959, no. 2, p. 175–78.

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52045. JALAS, JAAKKO. Chromosome studies in *Thymus,* I; somatic chromosome numbers with special reference to the Fennoscandian forms. (Hereditas, 1948. bd. 34, häft. 4, p. 414–34, 10 illus., text map.) 36 refs.

Chromosome numbers of 12 (including all Scandinavian) species of herbaceous genus *Thymus* are given: 2n=24, 28, 30 and 54. The different forms of *T. serpyllum* are studied, its ssp. *tanaënsis* (2n=24) occurs in the Kuusamo and Utsjoki regions of northern Finland. *T. drucei,* earlier regarded as a subspecies of *T. serpyllum,* is advanced to species rank. On the basis of chromosome morphological and phylogenetic data, it is assumed that chromosome number 2n=24 observed in *T. serpyllum* is secondary, being derived through fusion of chromosomes from the primary basic number 14. ***Copy seen:*** DLC.

JAMUH, GEORGE, *see* Harrison, T., *and* G. Jamuh. Pigmy sperm whale . . . *1958.* No. 51605.

52046. JANES, T. H. A survey of the iron ore in Canada during 1956. Ottawa, May 3, 1957. 83 p., text map, tables, diagrs. (Canada. Dept. of Mines and Technical Surveys. Mines Branch. Mineral resources information circular M.R. 22.)

Detailed report on 1956 production, trade and developments in this industry. Types of ores, specifications, markets and blast furnace capacity in Canada, and world production are given. Companies producing, developing and exploring iron ore in Canada during 1956, are described and properties (in production, under development, under exploration) are located on map. Total 1956 production (20,112,778 long tons) and value ($156,327,885) gained 26% and 24% over corresponding figures for 1955; chiefly the result of increased output by the Labrador-New Quebec mines near Schefferville (p. 36–41). Exploration was underway in several areas in Quebec-Labrador (p. 64–71) and in Northwest Territories (p. 83). ***Copy seen:*** DGS.

52047. JANNASCH, HANS-WINDEKILDE. Reunion with Mikak. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 84–85, ports.)

Tells of portraits of three Labrador Eskimos, Mikak, Attiuick, and Caubvik, painted in England in the 18th century. ***Copy seen:*** DGS.

52048. JANSSEN, S., *and* G. GRUPP. Untersuchungen über die Temperaturverteilung in der Niere des Hundes. (Naunyn-Schmiedeberg's Archiv für experimentelle Pathologie and Pharmakologie, 1957. Bd. 230, Heft 3, p. 245–56, illus.) 15 refs. Text in German. ***Title tr.:*** Investigations on temperature distribution in the dog kidney.

With the uninterrupted circulation, the minimal temperature was located in the

area of big vessels of the cortex-medulla zone. From here it rises steeply towards the cortex and slightly towards the center. Interruption of circulation causes a doubling of the temperature gradient in the cortex, which suggests different heat production in the various zones of the kidney. ***Copy seen:*** DNLM.

JANSSEN, S., *see also* Grupp, G., *and* S. Janssen. Untersuchungen. . . Wärmebildung der Niere. *1958.* No. 51408.

52049. JANSSON, CHARLES ANTON, 1880– . Zwei neue Microhymenopteren aus Schweden: *Batrachencyrtus callidii* nov. gen. nov. sp.; Chalcidoidea, Encyrtidae; *Aphanogmus annulicornis* nov. sp.; Proctotrupoidea, Calliceratidae. (Entomologisk tidskrift, 1957. Årg. 78, häfte 1, p. 71–74, illus.) Text in German. ***Title tr.:*** Two new microhymenopters from Sweden: *Batrachencyrtus callidii* n. gen., n. sp., Chalcidoidea, Encyrtidae; *Aphanogmus annulicornis* n. sp., Proctotrupoidea, Calliceratidae.

Includes descriptions of *Batrachencyrtus* n. gen. and *B. callidii* n. sp. native to Pajala in Norrbotten.

Copy seen: DLC.

JÁRAI, ISTVÁN, *see* Donhoffer, S., *and others.* Über die Lokalisation der erhöhten Wärme-produktion . . . *1957.* No. 50601.

JÁRAI, ISTVÁN, *see* Donhoffer, S., *and others.* Über die Periodizität der chemischen Wärmeregulation . . . *1957.* No. 50602.

JÁRAI, ISTVÁN, *see* Szegvári, G., *and others.* Largactil hatása . . . *1957.* No. 55299.

JÁRAI, ISTVÁN, *see* Szegvari, G., *and others.* Die Wirkung des Chlorpromazins . . . *1958.* No. 55300.

52050. JASPER, R. L., *and others.* Comparison of tissue respiration in mice exposed to heat and cold. (American journal of physiology. Nov. 1958, v. 195, no. 2, p. 285–87, illus., table.) 7 refs. *Other authors:* M. E. Denison, M. X. Zarrow, *and* W. A. Hiestand.

Report on oxygen uptake of liver, kidney and brain slices of these animals. In general both groups showed certain similarities: maximal O_2-increase from controls was after 72-hr. exposure to cold or heat; lowest uptake, after 48-hr. exposure. ***Copy seen:*** DNLM.

52051. JASPER, R. L., *and* **H. M. LEVY.** Hormonal control of fat infiltration into livers of cold-exposed rats. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 67.)

Account of experiments with female rats. The effects of uni- and bi-lateral adrenalectomy and demedullation, of hypophysectomy, ACTH, hypophysectomy-adrenalectomy and of replacement therapy were studied. An integrated pituitary adrenal relationship is indicated. ***Copy seen:*** DLC.

JASPER, R. L., *see also* Cremer, B., *and others.* Oxygen uptake of tissue . . . shivering . . . *1958.* No. 50377.

JAULMES, CHARLES, *see* Stupfel, M., *and others.* Actíon du gaz carbonique. *1957.* No. 55209.

52052. JAWOROWSKI, ZBIGNEW. Opasnye medvedi. (Vokrug sveta, Nov. 1958, no. 11, p. 41–42, illus.) Text in Russian. ***Title tr.:*** The dangerous bears.

Notes work of the Polish polar station at Hornsund Fjord (76°50′ N. 15°30′ E.) in Vestspitsbergen, 1957–58: purpose of the station, collaboration with the Soviet station at Barentsburg, visits of polar bears, author stricken from infected bear, help rendered by the ice-breaker *Lenin.* Translated from Polish.

Copy seen: DLC.

52053. JEGHERS, HAROLD, *and* **H. MARRARO.** Hypervitaminosis A, its broadening spectrum. (American journal of clinical nutrition, July–Aug. 1958. v. 6, no. 4, p. 335–39.) 20 refs.

A discussion of incidence of hypo- and hyper-vitaminosis A in the United States; symptoms of chronic hypervitaminosis A in children and adults, differential diagnosis and therapy. Acute hyper-vitaminosis A (as met among arctic explorers), its symptoms, experimental elucidation, teratogenic effects, etc.

Copy seen: DNLM.

52054. JELETZKY, JURJIZ ALEXANDER, 1915– . Geological history of Aklavik Range, northeastern Richardson Mountains, N.W.T. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1593.) Abstract of a paper presented at the Society meeting in St. Louis, Nov. 6–8.

Lists sequence of this area (approx. 68° N. 135°30′ W.) which forms part of

a north to north-northeast-trending anticlinorium with a core of Paleozoic and older Jurassic rocks. ***Copy seen:*** DGS.

52055. JELETZKY, JURJIZ ALEXANDER, 1915– . Uppermost Jurassic and Cretaceous rocks of Aklavik Range, northeastern Richardson Mountains, N.W.T. Ottawa, 1958. 84 p. fold. map, tables, diagr. (Canada. Geological Survey. Paper 58–2.) 40 refs.

Describes an unusually thick and complete succession of predominantly marine uppermost Jurassic and early to mid-Lower Cretaceous shale-siltstones and sandstones which outcrop in the Aklavik Range. The area studied (June–Sept. 1955) is roughly rectangular, 5 to 8 mi. wide and 20 mi. long, 67°55′–68°12′ N. 135°20′–135°38′ W.; its physical features are discussed, noting good water transport. Stratigraphy, thickness, contacts, are described; age and correlation with formations in other parts of northwestern Canada and Alaska are indicated and the correlation graphically shown. Data from selected sections are summarized in table. Map, scale 1 in.=1 mi., shows geology and selected sections.
Copy seen: DGS.

52056. JELLINEK, H. H. G. Adhesive properties of ice. Wilmette, Ill., Sept. 1957. iv, 20 p. illus., tables, graphs. (U.S. Army. Corps of Engineers. Snow Ice and Permafrost Research Establishment, Research report 38.) 24 refs.

"Shear tests of the system snow-ice/stainless steel gave pure adhesive breaks down to a temperature of about —13° C., where a sharp transition to cohesive breaks was observed. Adhesive strength of the system was a linear function of temperature and independent of cross-sectional area and height of samples in the ranges tested. Shear tests of the system ice/polystyrene gave pure adhesive breaks, with adhesive strength decreasing linearly with temperature to —15° C. and independent of cross-sectional area. Tensile tests of the system ice/polystyrene revealed a linear relation between adhesive strength and temperature in the range —2° C. to —25.5° C. regardless of cross-sectional area and rate of stress application. The test results are interpreted on the basis of an assumed liquidlike layer at the interface."—Author's abstract.
Copy seen: CaMAI.

JELLINEK, HARRY, *see* Hársing, L., *and others.* The effect of hypothermia on ischaemic changes . . . kidney. *1956.* No. 51606.

52057. JELLISON, WILLIAM LIVINGSTON, 1906– , *and* K. C. MILNER. Salmonellosis (bacillary dysentery) of fur seals. (Journal of wildlife management, Apr. 1958. v. 22, no. 2, p. 199–200.) 3 refs.

Report on isolation of *Salmonella enteritidis* from blood and viscera of five out of twelve sick fur-seal pups, *Callorhinus ursinus.* The animals were from the Pribilof Islands herds. Lice from one animal also harbored the pathogen.
Copy seen: DLC.

52058. JENKINS, ALAN C. Arctic boatbuilder. (Norseman, Sept.–Oct. 1957. v. 15, no. 5, p. 310–14.)

Recounts experience visiting a Lapp fisherman and boatbuilder on the Tana River frontier of Finland and Norway: the countryside, clothing, food and daily life of the modern Lapps, their mixture of old-fashioned superstition and progressiveness in technical matters, etc.
Copy seen: DLC.

JENKINS, DALTON, *see* Ferguson, A. T., *and others.* The effect of hypothermia . . . hemorrhagic shock. *1958.* No. 50874.

52059. JENKINSON, A. F. Standard deviation of the height of the 500-mb. surface over the North Atlantic. (Meteorological magazine, Aug. 1957. v. 86, no. 1022, p. 245–49, 4 text charts.)

The 1500 G.M.T. charts (of the British Meteorological Office, Central Forecasting Office) for each day of Jan., Apr., July, Oct. 1949–1953 were used for values of contour height at points of the network 35° N., 65° N., 80° W., 30° E. Values of the standard deviation σ_{500} were computed for each point of the network, plotted on four charts (Jan., Apr., July, Oct.), and isopleths drawn. These charts include Greenland Sea, Denmark Strait, Labrador Sea, Davis and Hudson Straits, eastern Hudson Bay.
Copy seen: DWB.

52060. JENNESS, DIAMOND, 1886– . The corn goddess and other tales from Indian Canada. Ottawa, 1956. 111 p., illus., map. (Canada. National Museum. Bulletin no. 141; Anthropological ser. no. 39.)

Includes four Eskimo tales dealing with witchcraft, zoomorphism, etc.

Copy seen: DLC.

52061. JENNESS, DIAMOND, 1886– . Dawn in arctic Alaska. Minneapolis, University of Minnesota Press, 1957. 222 p. illus., sketch maps.

A popular account, based on author's diary, of his first year (1913–1914) spent in northern Alaska, between Point Barrow and Demarcation Point. His trek to Point Barrow with V. Stefansson and four other expedition members after leaving the ice-bound *Karluk* off Colville River, his life among the Eskimos, and archeological excavations of house sites on Barter Island are described. His humane insight into the life of the North Alaskan Eskimos is apparent in the account of family matters, trapping and fishing, food and clothing, housing, relation to strangers, customs, beliefs, etc. Reviewed by Cornelius Osgood in *American anthropologist*, Dec. 1957. v. 59, p. 1095–1096, and L. Faĭnberg in *Sovetskaîa ėtnografiîa*, 1959, no. 3, p. 181–82.

Copy seen: DLC.

52062. JENNESS, DIAMOND, 1886– . The Indians of Canada. Ottawa, Queen's Printer, 1958. 452 p. illus. (7 col.), maps inc. fold. in pocket. (Canada. National Museum. Bulletin 65. Anthropological series, no. 15). Approx. 200 refs.

Fourth edition, identical with third listed as No. 40590. ***Copy seen:*** DLC.

JENNESS, JOHN L., *see* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958*. No. 50694.

52063. JENSEN, AD. E. Adolf Friedrich †; *22. April 1914 † 25. April 1956. (Paideuma; Mitteilungen zur Kulturkunde, Nov. 1956. v, 6, Heft 4, p. 189–93.) Text in German.

Obituary of this German ethnographer with a listing of his (9) publications.

Copy seen: DSI.

52064. JENSEN, ARNE, *and* **A. HAUG.** Geographical and seasonal variation in the chemical composition of *Laminaria hyperborea* and *Laminaria digitata* from the Norwegian coast, Oslo, 1956. 8 p. illus., map. (Norsk institutt for tang- og tareforskning. Rapport no. 14) 11 refs.

A study of conditions in these algae at four localities along the Norwegian coast, three of them in the Arctic. The chemical composition of the fronds only varied throughout the year: laminarin and alginic acid increased during summer and fall due to photosynthesis, leading to a drop in alginic acid and ash; production of protein increased in winter and spring. Despite the great geographical distance, there was no difference in this annual chemical cycle between the algae of the four stations, excepting one unexplained case. ***Copy seen:*** DA.

JENSEN, ARNE, *see also* Larsen, B., *and* A. Jensen. The determination of nitrate . . . *1957*. No. 52660.

JENSEN, BIRGER, *see* Hemmingsen, A. M., *and* B. Jensen. The occurrence of *Tipula* . . . *1957*. No. 51678.

52065. JENSEN, FRIMER. Station Nord. (Atuagagdliutit: Grønlandsposten, Jan. 30, 1958. Ukiut 98-iat, nr. 2, p. 12–13, illus.) Text in Danish and Eskimo. ***Title tr.:*** Station Nord.

Photographs showing life and work at this North Greenland meteorological station. ***Copy seen:*** DLC.

52066. JENSEN, HENRY. On the beat-distribution in group-microseisms. København 1957. 27 p. illus., tables, diagrs. (Denmark. Geodaetisk Institut. Meddelelse no. 34.) 23 refs. Summary in French and German.

The annual variation for microseismic amplitude and period in Scoresbysund (East Greenland) and Copenhagen is given. It is shown that the beat-interval is logarithmic-normally distributed with only one parameter, for which the simple mean may be chosen. The mean value of the beat-interval is proportional to the period in the carrier-wave. The beat-interval is greater in the vertical records than in the horizontal. This may be explained by assuming a Love-component in the microseisms. ***Copy seen:*** DLC.

52067. JENSEN, L. A. Spaendende og nervepirrende tid for den grønlandske fåreholder; fåreholdernes vinterfodringsproblemer. (Atuagagdliutit: Grønlandsposten, Feb. 27, 1958. Ukiut 98-iat, nr. 4, p. 8–9, 24.) Text in Danish. ***Title tr.:*** Exciting and nerve-racking times for the Greenland sheep farmer; the winter feeding problems of the sheep farmers.

Outlines the present situation and plans for the future. Ideally 400 hectares of cultivated land are required to winter feed the present stock of some 20,000 sheep. A hundred hectares is the present objective to be supplemented by fodder re-

serves from good years, and other feeding stuffs, such as seaweed, fish and fish offal. Intensified cultivation projects are being carried out by the agricultural stations.
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52068. JENSEN, OLAF. Elektrisk forkoksing av Svalbard-kull og fremstilling av jernsvamp. (Teknisk ukeblad, June 28, 1956. årg. 103, nr. 26, p. 589–92.) Text in Norwegian. ***Title tr.:*** Electrical coking of Svalbard coal and production of spongy iron.

Defends plans presented in 1940 for electrical coking of coal from the Longyear mines and utilization of the wastegas as reducing agent in production of spongy iron. The coking plant is suggested to be built at Notodden, southern Norway, where electrolytic hydrogen, also necessary for production of spongy iron, is readily available from Norsk Hydro. Both processes, however, seem to be considered inapplicable by the government. ***Copy seen:*** DLC.

52069. JENSEN, ORLA BRANDT. Planøkonomi eller liberalisme i Grønland? (Grønland, Mar. 1957. nr. 3, p. 87–99, illus.) Text in Danish. ***Title tr.:*** A planned or free economy in Greenland?

A centrally directed economy planned by the state is preferable to free private enterprise, in view of Greenland's social structure. ***Copy seen:*** DLC.

52070. JENSEN, ORLA BRANDT. Planøkonomi som redskab i opbygningen af det grønlandske samfund? (Grønland, Apr. 1957. nr. 4, p. 142–51, illus.) Text in Danish. ***Title tr.:*** A planned economy as a tool in building up Greenland society?

The economy hitherto has not been consistently planned and co-ordinated for all spheres as necessary for successful and harmonious development, e.g. wages have been raised comparable with Danish wages but not prices for Greenland products. There is a plan to concentrate population but none to differentiate prices and wages according to economic activity in the large community and in the settlements that ought to be abandoned; houses have been planned and built without analysis of the families' capacity and desire to pay for them.
Copy seen: DLC.

52071. JENSEN, OTTO. Om udvaelgelse og uddannelse af grønlandstjenestens personale. (Grønland, Nov. 1957, nr. 11, p. 430–35.) Text in Danish. ***Title tr.:*** On the selection and training of personnel for the Greenland service.

Stresses the desirability of careful testing, not practicable at present because of few applicants and other factors. Training of personnel (none at present) along with a general orientation and information program are also discussed.
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52072. JENSEN, PALLE. Planerne for industri- og havneanlaeg i Jakobshavn. (Atuagagdliutit: Grønlandsposten, Aug. 29, 1958. Ukiut 98-iat, nr. 18, p. 4–5, illus.) Text in Danish and Eskimo. ***Title tr.:*** Plans for an industrial plant and harbor at Jakobshavn.

Contains details on project to build a shrimp- and halibut-processing plant and extend the harbor at this West Greenland port (sketch appended). The large waves caused by glacier calving at the bottom of Jakobshavns Isfjord presented a special problem. Construction was started in 1957.
Copy seen: DLC.

JENTOFT, VIRGINIA, L., *see* Rausch, R. L., *and* V. L. Jentoft. Studies . . . helminth fauna of Alaska, 31 . . . propagation . . . *1957*. No. 54239.

52073. JESPERSEN, POUL, 1891–1951. On the quantities of macroplankton in the North Atlantic. København, C. A. Reitzel, 1954. 12 p. maps (Denmark. Danmarks fiskeri- og havundersøgelser. Meddelelser, ny ser. bd. 1, no. 2.)

Report on collections made in 1947, 1948 and 1950 by the R/S *Dana* between 50° and 65° N. Total number as well as numbers of the common forms, in day and night hauls, were determined. Temperature, salinity and P were also determined. The waters southeast of Greenland and northwest of Iceland were found to be particularly rich in macroplankton.
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JESSEN, HANS, *see* Abel, H., *and* H. Jessen. Kein Weg durch das Packeis . . . *1954*. No. 49099.

52074. JETTMAR, KARL, 1917– . Mongolide Schädel in der Frühbronzezeit Mittel- und Nordeuropas? (Archiv für Völkerkunde, 1954. Bd. 9, p. 8–20, illus., map.) Refs. Text in German. ***Title tr.:*** Mongoloid skulls in the early bronze age of middle and north Europe?

Discusses (p. 10–17) the theories of east-west Mongoloid and west-east Euro-

poid migrations in the stone and bronze ages based on Debets's, Okladnikov's and Rudenko's investigations of the Ob', Lena and Lake Baykal regions. The culture centers of the second millennium B.C. (including lower Ob' and Lena sites) are indicated on sketch map and some typical artifacts reproduced. The possibility of a Mongoloid infiltration through the taiga and tundra zones of Siberia to northern Russia and thence to middle Europe is suggested.

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JEŽKOVÁ, D., *see* Holub, A., *and others.* Development of chemical thermoregulation in piglets. *1957.* No. 51798.

JOCHELSON, VLADIMIR IL'ICH, 1855–1937, *see* Angere, J. Jukagirisch-deutsches Wörterbuch . . . *1957.* No. 49326.

52075. JØRGENSEN, C. A., *and others.* The flowering plants of Greenland; a taxonomical and cytological survey. København, 1958. 172 p. illus., tables. (Danske videnskabernes selskab. Biologiske skrifter, bd. 9, nr. 4.) About 500 refs. *Other authors:* T. Sørensen *and* M. Westergaard.

Following introductory sections on past botanical exploration of Greenland, and on materials and methods, a revised list of the flowering plants is presented comprising 437 species. Taxonomic and cytological notes are supplied with each species. The authors have counted the chromosomes of 237 species from different parts of Greenland and present an analysis of these counts and of those known before, together with (p. 108–140) a tabular summary of the chromosome numbers of these plants.

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52076. JØRGENSEN, JØRGEN. Nordafar A/S. (Grønland, Sept. 1957. nr. 9, p. 330–39, illus.) Text in Danish. ***Title tr.:*** The Nordafar Company.

This Norwegian-Danish-Faroese company was formed in 1953 in order to expand and operate the international fishing station at Faeringehavn (63°41′ N. 50°34′ W.) West Greenland. The work, buildings, equipment, etc., at the port are described in detail. The station valued at about 6.5 million D. kr.; its wharves about 230 m. long cover an area of some 6,000 m². Fishing methods in different seasons are outlined.

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52077. JØRGENSEN, OLAF. Grønne Ejlande, nivåqbeboernes forårsfangstplads. (Atuagagdliutit: Grønlandsposten, Dec. 5, 1957. Ukiut 97-iat, nr. 25, p. 16–18, illus.) Text in Danish and Eskimo. ***Title tr.:*** Grønne Ejlande, the spring hunting ground of the inhabitants of Nivâq.

Life on this island in Disko Bay, West Greenland. ***Copy seen:*** DLC.

52078. JØRSTAD, FINN A. Ablationstäler und Ufertäler. (Petermanns geographische Mitteilungen, 1957. Jahrg. 101, Heft 2, p. 98–100, 3 illus.) 18 refs. Text in German. ***Title tr.:*** Ablation and trench valleys.

Contribution to the terminology and understanding of valleys which develop by the melting of glaciers. Ablation valleys appear between rock and melting ice and are caused by reflection (e.g. in Greenland). Another kind of valley, called by Workman *maidan** and by La Touche *trenche*, appears between rock and moraine, or between two moraines; it has nothing to do with reflection and ablation. Both kinds of valley are described and illustrated, differences between them are stressed. Such valleys are different in age and origin and should be distinguished. ***Copy seen:*** DLC.

52079. JØRSTAD, IVAR, 1887– , *and* J. A. NANNFELDT. Additions and corrections to "Enumeratio Uredinearum Scandinavicarum." (Botaniska notiser, 1958. v. 111, no. 1, p. 306–318.) 20 refs.

A few of these additions to No. 45666 are fungi from the Pechenga region and Kola Peninsula. ***Copy seen:*** DLC.

52080. JØRSTAD, IVAR, 1887– . Parasitic fungi, chiefly Uredinales, collected in the Rocky Mountains by Johannes Lid. (Nytt magasin for botanikk, 1958. v. 6, p. 141–53, illus.) 12 refs.

Treatment of a collection of about sixty parasitic fungi and their hosts, mostly from western Alberta, including a few extending to Alaska.

Copy seen: DA.

52081. JØRSTAD, IVAR, 1887– . Storsopper på frukttraer og baerbusker i Norge; ved- og barkboende heterobasidiomyceter og aphyllophoracéer. (Friesia, 1948. bd. 3, hefte 5, p. 352–76,

*Geographical journal, March, 1905, v. 25, p. 245–268.

2 illus., table.) 21 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Lignicolous and corticolous Heterobasidiomycetae and Aphyllophoraceae on fruit trees and small fruits in Norway.

Contains an annotated list of 41 fungus species, some producing stem rot on living fruit trees (plum, cherry, apple, red currant, etc.) and some living saprophytically. The finds listed were all made in southern Norway where fruit trees are cultivated, with one exception, viz. *Phellinus ribis* found in Nordland province. ***Copy seen:*** DA.

52082. JØRSTAD, IVAR, 1887– . Various rust species from Europe, North America and Australia. (Nytt magasin for botanikk, 1957. v. 5, p. 32–32.)

Contains an annotated list of 19 species from Europe, eight from North America and four from Australia, with distributional data and notes on the hosts. *Puccinia arenariae* on *Minuartia peploides* is recorded in Labrador (White Bear River), and *P. hieracii* (=*P. tarazaci*) on *Taraxacum* sp. was collected at Godhavn in Greenland. ***Copy seen:*** DA.

JOHANNESSEN, T. WERNER, *see* Hesselberg, T., *and* T. W. Johannessen. The recent variations . . . climate . . . *1958*. No. 51707.

JOHANNSEN, B. S., *see* Føyn, E., *and* B. S. Johannsen. Om skismøring. *1944*. No. 50940.

52083. JOHANSEN, A. C., *and* **A. KROGH.** The influence of temperature and certain other factors upon the rate of development of the eggs of fishes. (International Council for the Exploration of the Sea. Publications de circonstance 1914, no. 68, p. 1–44, illus., tables.) 12 refs.

A study on the influence of temperatures in the range −3° to +20° C. upon the rate of development of plaice and cod eggs. The influence of individual variation, temperature limits in development, number of day-degrees required for development of the principal stages (in the plaice) are determined and discussed. A final section deals with the effect of O_2-pressure upon the development of plaice eggs. ***Copy seen:*** DI.

52084. JOHANSEN, ASBJØRN. Kan vi dyrke molter? (Norsk myrselskap. Meddelelser, Feb. 1951. årg. 49, nr. 1, p. 12–17.) Text in Norwegian. ***Title tr.:*** Can we cultivate cloudberry?

Describes baked-apple-berry (*Rubus chamaemorus*, with its high antiscorbutic quality as a crop for bogland of low agricultural value. Commonly found in four different sites, it responds to fertilization, and financially it would compete well with grass crops. Its cultivation is likened to the cranberry industry in America. It seeds itself if not completely harvested. ***Copy seen:*** DA.

52085. JOHANSEN, HALFDAN D. Kvedfjord sparebank, Borkenes, 1880–1955. Oslo, Fabritius, 1955. 98 p. 59 illus., text map. Text in Norwegian. ***Title tr.:*** Kvedfjord savings bank, at Borkenes, 1880–1955.

Jubilee publication of the Kvaefjord commune bank at Borkenes, a village on Hinnøy in Lofoten: a social and economic history of the community from the time of the Crimean war. Though fishing is important, agriculture has always been the leading occupation and the community has had commercial stability. Growth of the bank is linked with population growth, world crises, also local and regional conditions and developments. The bank personnel, regulations, and financial role in community life are recorded.

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52086. JOHANSEN, HANS CHRISTIAN, 1897– . Die Vogelfauna Westsibiriens, Teil 3 (Non-Passeres); Fortsetzung 2–3, Falconinae-Aquilinae I (Aquila-Circus). (Journal für Ornithologie, Apr. 1957. Bd. 98, Heft 2, p. 155–71; July 1957. Heft 3, p. 262–78.) 11 refs. Text in German. ***Title tr.:*** The avifauna of Western Siberia, part 3; continuation 2–3, Falconinae-Aquilinae I: Aquila-Circus. cf. No. 45803.

Contains data on the taxonomy, life habit, ecology, and geographic distribution of 22 birds, some species extending over the Aretic Circle.

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52087. JOHANSEN, HANS CHRISTIAN, 1897– . Die Vogelfauna Westsibiriens, Teil 3 (Non-Passeres); Fortsetzung 4, Aquilinae II (Accipiter-Aegypius); Fortsetzung 5, Gressores-Steganopodes. (Journal für Ornithologie, Oct. 1957. Bd. 98, Heft 4, p. 397–415; Jan. 1958, Bd. 99, Heft 1, p. 67–80.) Text in German. ***Title tr.:*** The avifauna of Western Siberia, pt. 3; continuation 4, Aquilinae II: Accipiter-Aegypius; continuation 5, Gressores-Steganopodes.

Contains data on taxonomy, life habits,

ecology and geographic distribution of 27 birds, some of the species extending north of the Arctic Circle. Previous parts of this basic work are listed as No. 45803, and *supra*. ***Copy seen:*** DSI.

52088. JOHANSEN, HARALD. On the relation between meteorological conditions and total amount of ozone over Tromsö. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 187–94, diagrs.)

Variations during the period May 1941–Oct. 1941 were studied at the Aurora Observatory, Tromsø. The correlations between total ozone and various meteorological elements such as tropopause height, upper-air temperature, and potential temperature are tabulated. The results indicate that dynamical processes are of great importance to the connection between ozone and weather. "Variation of five-day means of ozone studied in relation to five-day means of pressure and temperature at 6 km. disclosed that the ozone content varies inversely to the upper cold troughs and warm ridges."

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52089. JOHANSSEN, J. KRAFT. Aktieselskabet Sydvaranger. (Teknisk ukeblad, Apr. 7, 1955. årg. 102, nr. 14, 15, p. 283–93, 309–314, illus., diagrs.) Text in Norwegian. ***Title tr.:*** Sydvaranger Ltd.

Development of mining and refining at the company's plant in South Varanger since 1906 is reviewed. Reconstruction from 1948 of the war-damaged plant is described. Production resumed in 1952, is planned at one million tons of slick a year. The largest deposits are at Bjørnevatn (69°40′ N. 30° E.), others slightly further south. Surface mining only is done at present, several million tons of surface deposits are to be provided by the drainage of Bjørnevatn lake. The slick production process is discussed; auxiliary plants and housing conditions are described. The company employs about a thousand people, as compared with about 1,800 before World War II.

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JOHANSSON, BENGT, 1870– , *see* Biörck, G., *and* B. Johansson. The influence of anoxia . . . hypothermic electrocardiogram of hedgehog and man. *1957*. No. 49747.

JOHANSSON, BENGT, 1870– , see Haeger, K., *and others.* Electrocardiographic studies . . . *1957*. No. 51476.

52090. JOHANSSON, OSCAR WILHELM, 1878– . Ergänzende Beiträge zur Kenntnis des jährlichen Temperaturganges in Europa. Helsingfors, 1957. 49 p. tables. (Finska vetenskapssocieteten. Commentationes physico-mathematicae, t. 17, nr. 3.) Refs. Text in German. ***Title tr.:*** Supplementary contributions to the knowledge of the annual range of temperature in Europe.

Survey of previous work, and analysis of spring and fall temperatures for Europe as a whole, with detailed discussion of studies on Norway. ***Copy seen:*** DGS.

JOHN, HORST, *see* Vogel, G., *and others.* Über . . . Aktionspotential . . . Ranvierschen Schnürringes. *1958*. No. 55851.

JOHN, KATHERINE, *see* Brøgger, A. W., *and* H. Shetelig. Vikingeskipene . . . *1950*. No. 49936.

52091. JOHNSEN, ARNE ODD. Norwegens Anteil am neuzeitlichen Walfang. (Nauticus, 1941. Jahrg. 24, p. 246–62, illus.) Text in German. ***Title tr.:*** Norway's share of present-day whaling.

Traces development of Norwegian whaling. When Greenland whaling declined about 1860, the catching continued along the Finnmark coast and reached its peak (1,287 whales) in 1885; then extended west and south along the coast. Sven Foyn, inventor of the harpoon-gun and the first modern whaling boat, established his first base in Vardø in 1860. Norwegian activities in the North Pacific began in 1900; and the first Antarctic base was established in 1904; comparative data are given of Norway's share in the whaling and oil production. ***Copy seen:*** DLC.

JOHNSON, ARTHUR, 1903– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

52092. JOHNSON, ARTHUR MONRAD, 1878– . A revision of the North American species of the section *Borophila* Engler of the genus *Saxifraga* (Tourn.) L. (Minnesota studies in plant science, Jan. 1923, no. 1, p. 1–109, 19 plates.) 32 refs. *Pub. also as:* Research publications of the University of Minnesota. Studies in the biological sciences, no. 4.

Contains discussion of the proposed classification, keys, and a systematic annotated list of about fifty species

(ten, and three varieties new), with synonyms, descriptions, data on distribution and lists of specimens; 15 are recorded in all sections of Alaska, the Aleutian and Commander Islands.

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JOHNSON, ARTHUR MONRAD, 1878– , *see also* Rich, E. E. Moose Fort . . . 1783–85 . . . *1954*. No. 54303.

52093. JOHNSON, FRED. Manitoba mining review. (Canadian mining journal. Feb. 1958. v. 79, no. 2, p. 112–115, Text map, illus.)

Annual survey, 1957, stressing railway extension and development in Thompson-Moak Lake area: the Sipiwisk-Thompson line was completed, the 22-mile Moak Lake mine branch line is to be built in 1958. International Nickel, Rio Canadian Exploration, Hudson Bay Mining and Smelting, and Sherritt Gordon Mines, etc. are developing claims in northern Manitoba. ***Copy seen:*** DGS.

52094. JOHNSON, FREDERICK ASHBY, 1903– . Water power possibilities of Sheep Creek, Carlson Creek, Lake Dorothy and Turner Lake near Juneau, Alaska. Washington, D.C., 1957. 49 p. illus., 4 maps incl. 2 fold., 2 diagrs., 19 tables. Mimeographed. (U.S. Geological Survey. Reports, open file series, no. 424.) Refs. in text.

Preliminary report on hydroelectric power possibilities of four sites, all within 20 mi. of Juneau; one of a series (No. 39313, 40616, 41402, etc.) to help classify lands in the public domain for hydroelectric power purposes. Information is provided concerning climate, streamflow, topography, and other factors affecting the operation of power plants. Topographic features (map at scale 1:24,000) and possibilities of each storage site are described, including discharge data, problems of acquisition of rights, location of transmission lines, suitability of site for construction of dam. Location and possibilities of each power site are suggested. Tables summarize data on capacity (acre-ft.), reservoir altitude (ft.), mean flow (cfs), mean head (ft.), and continuous power (kw.).

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52095. JOHNSON, HARRY McCLURE. Winter microclimates of importance to Alaskan small mammals and birds. Mar. 1957. 145 p. illus., table (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–2.) 50 refs.

A study of macro- and microclimatic conditions and zones and their utilization during the winter by a series of small mammals and birds of the Interior and the Arctic Slope and Coast. In general, the animals avoided the severe conditions of the coldest zones (the snow surface) by retreating to warmer, usually the subnivean, zones. Temperatures in the warmest subnivean zones were usually 20° to 25° F. even during cold snaps, and 25° to 30° during warmer periods. Temperature gradients across a snow cover of two feet were as high as 90° to 100° F. When occasionally the birds fed on the cold (−60° to −70° F.) snow surface they showed adaptive behavior.

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52096. JOHNSON, HELGI. Geology and related engineering problems at Thule, Greenland. (New York Academy of Sciences. Transactions, May 1957. ser. 2, v. 19, no. 7, p. 635–40.)

Text of illustrated lecture presented to the Section of Geology and Mineralogy of the Academy Dec. 3, 1956. Location, access, climate and geology of the Thule area are described as of 1951, when author was observer with Operation Blue Jay. Engineering problems resulting from geologic conditions and from the ubiquity of permafrost are discussed. Buildings and facilities of the air base, water supply, etc. are briefly considered.

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52097. JOHNSON, J. B., *and* D. A. SHINN. Application of metals in aircraft at low temperatures. (*In:* U.S. National Bureau of Standards. Circular, May 7, 1952. no. 520, p. 97–111, tables, diagrs.) 14 refs.

The minimum temperatures that may be encountered by an aircraft are −80° F. on the ground and −130° F. at high altitudes. The relationship of properties of metals as determined by conventional laboratory tests (to −320° F.) and those selected by the aircraft designer, is discussed; laboratory data and field experience both indicate that the metals are safe for low-temperature operation.

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JOHNSON, MARGARET C., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

JOHNSON, PHYLLIS TRUTH, 1926– , *see* Scanlon, J. E., *and* P. T. Johnson. On some microtine-infesting *Polyplax* . . . *1957*. No. 54591.

JOHNSTON, D. R., *see* Cremer, B., *and others.* Oxygen uptake of tissue . . . shivering . . . *1958.* No. 50377.

JOHNSTON, D. R., *see* Davis, T. R. A., *and others.* Shivering and non-shivering thermogenesis in man. *1958.* No. 50463.

JOHNSTON, GORDON, *see* Löve, D., *and others.* Plant collection from interior Quebec. *1958.* No. 52893.

52098. JOKI, AULIS JOHANNES, 1913– . Kai Donners kleinere Wörterverzeichnisse aus dem Jurak-, Jenisseiund Tawgy-Samojedischen, Katschatatarischen und Tungusischen. Helsinki, 1956. 27 p. (Suomalais-ugrilainen seura. Aikakauskirja, v. 58, no. 1.) Refs. in text. Text in German. ***Title tr.:*** Kai Donner's minor word lists from the Yurak-, Yenisey- and Tawgy-Samoyed, Kachintsy-Tatar, and Tungus.

Lists, with German translations and patois variants, approx. 400 words in Samoyed and in the Narym, Taz and Chum Tungus dialects, as recorded by Kai Donner during his 1911–13 and 1914 field trips to Siberia.

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52099. JONES, E. W. *Didymodon spitsbergensis* and *Bryum pauperidens,* two new mosses from Spitsbergen. (Revue bryologique et lichénologique, 1951. n. ser., t. 20, p. 122–25, 2 illus.) 2 Refs.

Describes two species named by H. N. Dixon in a collection made by A. Acock during his ecological work on the coastal bogs at Klaas Billen Bay (cf. No. 35).

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JONES, EDWARD, *see* Simpson, C. J. W., *and others.* North ice . . . *1957.* No. 54901.

52100. JONES, N. C. H., *and others.* Factors affecting the viability of erythrocytes stored in the frozen state. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 476–97, illus., tables.) 25 refs. *Other authors:* P. L. Mollison *and* M. A. Robinson.

A study of post-transfusion survival of human red cells stored at −20° and −45° C. In the first case survival was 75% and 45% after six and 24 months respectively; metabolism was almost arrested but ATP content diminished with storage time, reducing the viability of the cells. Storage at −45° C. caused only very slow deterioration of the erythrocytes, so that losses after one year's storage were not significantly higher than those after a few weeks. ***Copy seen:*** DNLM

JONES, RICHARD D., *see* Berne, R. M., *and others.* Myocardial hypothermia . . . elective cardiac arrest. *1958.* No. 49693.

JONES, RICHARD D., *see* Berne, R. M., *and others.* Oxygen consumption . . . hypothermic . . . heart. *1958.* No. 49694.

JONES, RICHARD D., *see* Cross, F.S., *and others.* Localized cardiac hypothermia . . . arrest. *1958.* No. 50394.

52101. JONES, STUART E. Charting our sea and air lanes. (National geographic magazine, Feb. 1958. v. 111, no. 2, p. 188–209, 22 illus. (17 col.), 2 text maps.) 3 refs.

Popular description of work of the U.S. Coast and Geodetic Survey, including aerial photomapping activities in the Aleutians, based at Cold Bay, Alaska Peninsula; also charting, depth-finding, bottom-sampling operations of the Survey ship *Pathfinder* in Bering Sea.

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JONES, T. H., *see* Mardoian, M. G., *and others.* Winterization of construction equipment . . . *1957.* No. 53128.

JONES, THEODORE INSLEE, 1922– , *see* De Weese, J. A., *and others.* Myocardial metabolism . . . hypothermia . . . *1958.* No. 50537.

52102. JONSGÅRD, ÅGE, *and* **P.HØIDAL.** Strandings of Sowerby's whale *Mesoplodon bidens,* on the west coast of Norway. (Norsk hvalfangst-tidende, Sept. 1957. årg. 46, nr. 9, p. 507–512, illus., table, diagr.) Text in Norwegian and English. 9 refs.

Two females (mother and calf) found on Gossen Island (approx. 62°40′ N. 06°50′ E.) in Romsdal, Apr. 1957, are described in detail, with measurements. Previously known strandings of the species are reviewed. The following conclusions are drawn from the examination of the animals: mating and birth in this whale take place in late winter or spring; the gestation period is about one year; at birth the calf is six to seven feet long; it sucks for about one year and at weaning is probably about ten feet long.

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52103. JONSGÅRD, ÅGE. Taxation of fin whales, *Balaenoptera physalus* (L), at land stations on the Norwegian west coast. (Norsk hvalfangst-tidende, Sept.

1958. årg. 47, nr. 9, p. 433–39, tables, diagrs.) Text in Norwegian and English.

Survey based mainly on figures from Steinshamn (approx. 62°45′ N. 06°30′ E.) the only whaling station operating continuously during 1946–1957. The total catch (392 in 1946, 92 in 1957) and number of whales taken by each vessel declined during the period. Average length and percentage of mature whales seem also to have diminished. The fin whales off Norway and round the Faroes belong to the same stock, so figures are given for the latter area as well and these too show a falling tendency. The taxation of fin whales in these areas together should be limited to about 300 animals per season, to prevent further reduction of the stocks. ***Copy seen:*** SPRI.

JONSSON, ERNST, *see* Wiklander, L., *and others.* Studies on gyttja soils . . . *1950.* No. 56035.

JÓNSSON, JÓN, *see* International Commission NW Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

JÓNSSON, JÓN, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

52104. JOPPICH, GERHARD, *and* **J. STOERMER.** Das EKG bei unterkühlten Frühgeborenen. (Monatsschrift für Kinderheilkunde, July 1957. Bd. 105, Heft 7, p. 264–67, table) 15 refs. Text in German. ***Title tr.:*** ECG in hypothermic premature infants.

Following a review of literature on ECG during hypothermia, the author analyses eight cases of hypothermic premature babies, with temperatures ranging between 34.9 and 33° C. The anomalies of electrocardiograms as compared with those of normothermic prematures, are discussed.

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52105. JORDAL, LOUIS H., *d.* **1951.** Plants from the vicinity of Fairbanks, Alaska. Contributions to the flora of Alaska, no. 1. (Rhodora, June 1951. v. 53, no. 630, p. 156–59.) *Pub. also* as: Paper No. 937 from the Dept. of Botany, Univ. of Michigan.

Lists about 50 species collected during a few days in July 1950 around Ladd Air Force Base, a few of species not reported previously from Alaska. Contributions no. 2 was listed as No. 23025.

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52106. JORDAN, GEORGE F. Pamplona searidge 1779–1957. (International hydrographic review May 1958. v. 35, no. 1, p. 147–57, text maps, diagrs.) 14 refs.

Contains account of its discovery by the Spaniard Don Ignacio Arteaga, the confusion resulting from its inaccurate location and lack of reports during the 19th century; the recent identification of a shoal in the Gulf of Alaska, 30 miles off Cape St. Elias, as the 15-mile-long submarine ridge. Morphological implications of the ridge's presence are discussed.

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52107. JORGENSEN, PAUL T. Naval weather service in Alaska. (Weatherwise, Oct. 1958, v. 11, no. 5, p. 172–73, 181, sketch map.)

Describes Fleet Weather Central Kodiak; its operations and services to the Navy and to Alaskans, collecting data and issuing forecasts on weather and ice conditions. ***Copy seen:*** DWB.

52108. JOSEPH B. WARD & ASSOCIATES, *Seattle.* The Ward index of consumer prices in seven Alaskan cities. Prepared for the Alaska Resource Development Board. Seattle, Nov. 15, 1957, *and* Nov. 15, 1958. 2 v.: 78, 73 p. tables, charts. Mimeographed.

Annual survey (cf. No. 45831) in Nome, Fairbanks, Seward, Anchorage, Juneau, Sitka, and Ketchikan. Average prices in Aug.-Sept. are listed for approx. 200 items grouped as: food, housing, clothing, transportation, medical and personal care, recreation, other goods and services. Comparisons are made with 1956 prices (base period) and between the Alaskan and Seattle prices. Though lower for certain items, 1957 and 1958 prices generally were higher; also Alaskan cities' prices generally were higher than Seattle.

Copy seen: CaMAI.

JOUANY, JEAN-MICHEL, *see* Stupfel, M., *and others.* Action du gaz carbonique . . . *1957.* No. 55209.

52109. JOUBIN, FRANC R. Uranium developments, Canadian round-up. (Canadian mining journal, Apr. 1957. v. 78, no. 4, p. 88–91, table). Paper presented at the 25th annual convention of the (Canadian) Prospectors and Developers Association, Toronto, 1957.

Contains general account of developments in the uranium industry of Canada, with special attention to the important districts; Port Radium, Marian River, Beaverlodge, Blind River, and Bancroft. Text is supplemented by tabular data on production, capital expenditure, operating costs, approx. district grade, lb. U_3O_8/ton. A warning of possible problems and a generally optimistic outlook for the future are presented.

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52110. *JOURNAL OF GLACIOLOGY.* Instruments and methods: ice drills and corers. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 30, 2 illus., diagr.)

A drill designed by the Snow, Ice and Permafrost Research Establishment is depicted; one in. (25.4 mm.) diam., it cuts wet or dry glacier ice at 0.5mm./min. A coring auger, also shown, for shallow or deep drilling in névé and ice, cuts a core of three in. (7.62 cm.) diam., 0.5 m. length; it has been used with up to 31 one-meter extension rods. ***Copy seen:*** DGS.

52111. JOURNAUX, ANDRÉ, *and* **F. TAILLEFER.** Les mines de fer de Schefferville. (Cahiers de géographie de Québec, Oct. 1957. année 2, no. 3, p. 37–61, 3 illus., 4 text maps, 2 tables.) 11 refs. Text in French. Summary in English. ***Title tr.:*** The iron mines of Schefferville.

Physical geography of the Knob Lake region, 360 mi. north of the St. Lawrence is described; abundant reserves and high quality of ore make extraction profitable. Geology of the deposits, ore extraction (open pit method) and transport are dealt with. Operations are suspended from late-Nov. to mid-Apr. Ore production 12 million tons in 1956, is to reach 20 million in a few yrs. Schefferville has a population of 1,630, and some 1,870 "seasonal" inhabitants and Indians. Selected census data given include wages, living cost, housing. Indian inhabitants, town life and administration, etc., are discussed. ***Copy seen:*** DLC.

52112. JOURNAUX, ANDRÉ, *and* **F. TAILLEFER.** Les villes minières du Labrador. (Association de Géographes Français. Bulletin, Dec. 1957. no. 269–70, p. 43–57, graphs.) Text in French. ***Title tr.:*** The mining towns of Labrador.

Analysis of human geography and settlement resulting from the Burnt Creek (54°49′ N. 66°53′ W.) and Knob Lake (54°48′ N. 66°48′ W.) mining by the Iron Ore Co. of Canada. Physical environment and mining conditions are described with personnel data. Wages, housing and living standards (including budgets) are discussed. The growth and development of the town of Schefferville is traced with consideration of its municipal organization and problems of providing community facilities. Its population which includes Indian migrants has 70% in the 20–40 age group, and 75–80% men in summer. Its social, intellectual and religious life, and enterprises other than mining are discussed. The growth of Seven Islands on the Gulf of St. Lawrence from fishing village to port for shipping ore is discussed and its age-sex ratios compared with Schefferville. ***Copy seen:*** DLC.

52113. JUDE, JAMES RODERICK, 1928– , *and others.* Differential cardiac warming during hypothermia. (Surgical forum 1957. v. 7, p. 294–97, illus.) 2 refs. *Other authors:* J. P. Fauteaux *and* L. M. Haroutunian.

Account of experiments with dogs made hypothermic to 26°–28° C. and submitted to cardiac occlusion, auriculotomy or ventriculotomy. Selective coronary perfusion with warm arterial blood reduced to nearly zero ventricular fibrillation in these cases. ***Copy seen:*** DNLM.

52114. JUDE, JAMES RODERICK, 1928– , *and others.* Hypothermic myocardial oxygenation. Randolph AFB, Texas, May 1957. 12 p. illus., tables. (U.S. Air Force. School of Aviation Medicine. Report no. 57–13.) 12 refs. *Other authors:* L. M. Haroutunian *and* R. Folse.

Account of determinations of coronary blood flow during hypothermia in dogs with careful control of ventilation so as to maintain arterial blood pH at 7.45 to 7.56. The results indicate that O_2-supply to the left ventricular myocardium is sufficient down to a body temperature of 20° C. ***Copy seen:*** DNLM.

52115. JUDE, JAMES RODERICK, 1928– , *and others.* Hypothermic myocardial oxygenation. (American journal of physiology, July 1957. v. 190, no. 1, p. 57–62, illus. tables.) 23 refs. *Other authors*: L. M. Haroutunian *and* R. Folse.

Report on conditions in dogs cooled to 20° C. as compared with normothermic controls. Coronary blood flow changes per unit weight of left ventricle, myocardial O_2-consumption, coronary A-V

oxygen differences, total body O_2-consumption, cardiac output, calculated ventricular work, pulmonary and peripheral vascular resistance are analyzed and discussed. ***Copy seen:*** DLC.

JUDE, JAMES RODERICK, 1928– , *see also* Otis, A.B., *and* J. R. Jude. Effect of body temperature on pulmonary gas exchange. *1957.* No. 53811.

JULIAN, P. R., *see* Panofsky, H. A. A., *and others.* A study . . . tropospheric and stratospheric flow. *1958.* No. 53853.

52116. JULIN, ERIK. On a liciniate-leaved form of *Filipendula ulmaria* (L.) Maxim. (Svensk botanisk tidskrift, July 2, 1958. bd. 52, häfte 1, p. 193–95, 2 illus.)

Contains a description of *F. u.* f. *laciniata* n. f. in Haparanda, Norrbotten, Sweden. ***Copy seen:*** DA.

52117. JULIN, ERIK. Polemokorer vid Haparanda. (Botaniska notiser, July 27, 1958. v. 111, no. 2, p. 449–54.) 10 refs. Text in Swedish. Summary in English. ***Title tr.:*** Polemochores in Haparanda.

Contains an annotated list of 62 plants found near a military camp established in Norrbotten during the last war. Of these 62 taxa, *Festuca rubra* var. *commutata* is new to Norrland, 16 are missing or rare in the region, and the rest are strange in the biotope. Most of them came in hay from the southern part of the country. The term polemochore (polemochorous) is proposed for such plants in preference to anthropochorous, to signify war rather than human agency as the factor in distribution. ***Copy seen:*** DLC.

52118. JULIN, ERIK. Stortjärn, an extremely rich fen in Norrbotten, northern Sweden. (Svensk botanisk tidskrift, Nov. 1958. bd. 52, häfte 3, p. 397–408, 2 plates, 4 tables.) 9 refs.

Study of a fen in the coastal region of Norrbotten, between the parishes Nedertorneå and Nederkalix. Its abundance of springs and the vegetation are shown, the latter with sample plots (1 m^2) and degrees of cover according to the Hult-Sernander scale; plants (approx. 125) are listed. The region is subjected to light grazing by cattle, especially in the marginal areas. ***Copy seen:*** DA.

JULIN, ERIK, *see also* Hedlin, B., *and others. Stratiotes*-sjöar . . . *1957.* No. 51645.

JURCZYK, WITOLD, *see* Bentke, K., *and others.* Badania czynnościowe nerek . . . *1957.* No. 49657.

JURCZYK, WITOLD, *see* Stengert, K., *and others.* Zmiany składu krwi . . . *1957.* No. 55149.

52118A. JURY, HAROLD L. An application of terrestrial photogrammetry to glaciology in Greenland. (Photogrammetric engineering, June 1957. v. 23, no. 3, p. 543–50, diagrs.) 3 refs.

Describes a method of producing topographic maps of a moving glacial ice cliff surface by terrestrial photogrammetry, developed during investigations (1955?) at Nunatarssuak (76°40′ N. 67°35′ W.). A straight base line was selected at 100-150 m. distance from the cliff and nearly parallel to it. Control targets were established on the ice cliff surface and their positions with respect to the base line were determined by triangulation. Overlapping photographs were taken from several points along the base line, and techniques were developed for using the photographs to compile topographic maps with the Kelsh plotter. Changes in cliff position were determined by comparing two maps based on data obtained at different times. ***Copy seen:*** DLC.

52119. JUSTIN-BESANÇON, L. Le refroidissement; les hypothermies accidentelles profondes chez l'adulte. (Sociedade das sciéncias médicas de Lisboa. Jornal, 1957. t. 121, no. 6–7, p. 350–74, illus. tables.) Ref. Text in French. ***Title tr.:*** Chilling; deep accidental hypothermias in the adult.

Study of a case of accidental hypothermia in a man of 49, with a core temperature of 23.5° C.: the appearance and symptoms of the patient; temperature and its course during rewarming; clinical course; progress of rewarming; physiological observations (blood composition and leucocytes, pH of blood, coagulation, etc., kidney function, etc.); sequelae and complications; therapy and prognosis. ***Copy seen:*** DNLM.

JUSTYNA, M., *see* Bober, S., *and others.* Zmiany elektrokardiograficzne . . . *1957.* No. 49782.

52120. KABALIN, S. I. T͡Sennye porody v lesnykh kul'turakh Novosibirskoĭ oblasti. (Lesnoe khozi͡aĭstvo, Mar. 1958. god 11, no. 3, p. 45–48.) Text in Russian. ***Title tr.:*** Valuable species in the silviculture of Novosibirsk Province.

Results of a recently completed survey and species classification are described in detail. Five forest zones are characterized: marshland with birch and pine, forest-steppe with fertile soil, steppe with complex soils and occasional marshlands, Ob River basin, and Salair Ridge (Altay) and rough taigas. Typical forest cultures, Siberian larch, common pine, Siberian fir, spruce, poplar, birch, aspen and oak, are characterized and their distribution indicated.

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52121. KABAN'KOV, V. Ĭ̂A. K voprosu o vozraste drevnikh tolshch severo-vostoka Sibirskoĭ platformy. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik po geologii Arktiki. vyp. 6, p. 38–41, cross-section) 3 refs. Text in Russian. ***Title tr.:*** On the question of age of the old stratum in the northeastern Siberian platform.

Contribution to the question, still open, of the age and stratigraphic dependence of the Lower Cambrian stratum in the northeast Siberian platform (69°–71° N. 118°–124° E.), hitherto impossible of determination for lack of faunal characteristics. This stratum was investigated in an Olenek River region uplift on the basis of spores. Seven spore species are indicated, and considered by B. V. Timofeeva as Precambrian-Paleozoic. Cross-sections of the old Paleozoic stratum of the Siberian and Russian platforms are compared; this undetermined stratum in the northeast Siberian platform, it is suggested, developed also in the Paleozoic era and should be considered as an independent stratigraphic unit. ***Copy seen:*** DLC.

52122. KABAN'KOV, V. Ĭ̂A. Rezul'taty geologorazvedochnykh rabot po poiskam nefti v Leno-Olenekskoĭ oblasti. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958. p. 120-33, table, cross-sections, map.) 5 refs. Text in Russian. ***Title tr.:*** The results of geologic exploration for oil prospecting in the Lena-Olenek province.

Outlines the stratigraphy, lithologic characteristics and the results of geologic and geophysical exploration for oil and gas in the area 70°–73° N. 118°–128° E. More detailed investigations were made in two sections: around Tyumyati (approx. 71°55′ N. 123°50′ E.), and in the Ulakhan-Yuryakh district on the left bank of the Olenek River, near its mouth (approx. 73° N. 119°40′ E.). For both of these sections a summary is given of the core drillings and deep test wells. Rock composition porosity, permeability and other properties are reviewed. Test results of bitumen, gas and water are presented. Various factors indicating good possibilities for oil and gas are discussed; further, more complex investigations are urged. ***Copy seen:*** DGS.

52123. KACHADOORIAN, REUBEN, 1921– . Engineering geology of a segment of the Denali Highway. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 52–55.)

Results of geologic examination of parts of the Healy A–1, Healy A–2, and Mt. Hayes A–6 quadrangles, Alaska, made during the 1953 field season by a four-man party from the U.S. Geological Survey. Detailed mapping was carried out adjacent to the highway route, with emphasis on factors affecting construction. General geology is described; glacial deposits are noted; major construction problems will probably arise in areas of silty till. Non-glacial unconsolidated sediments are locally important in planning the highway; gravelly alluvium is the only one suitable for road foundation. ***Copy seen:*** CaMAI.

KADENSKIĬ, A. A., *see* Leont'ev, L. N., *and* A. A. Kadenskiĭ.

52124. KAFANOVA, M. Kak sozdavalas' karta. (Ogonëk, Mar. 1957. god 35, no. 12, p. 25–26, illus.) Text in Russian. ***Title tr.:*** How the map was made.

Popular account of the preparation of a new map of U.S.S.R. at scale 1:100,000, based on interviews: with Elizaveta Ivanovna Ardab'eva, editor of the Main Administration of Geodesy and Cartography, who stressed the importance of air surveys in wiping out former "white spots" [little-/or unknown areas]; with A.M. Starostin on his work of determining 25 astronomical points in the 50,000 sq. km. area around the town of Noril'sk and at Lake Pyasino (69°44′ N. 87°48′ E.). Changes in the map are noted as due to current economic development in many areas. ***Copy seen:*** DLC.

KAHN, ALAN, *see* Abramson, D. I., *and others.* Relationship . . . tissue temperature and oxygen uptake . . . resting. *1958.* No. 49107.

52125. KAISER, ALLEN. A Canadian bush operator. (Aircraft, July 1956. v. 18, no. 7, p. 58–59, 122–23, illus.)

Reviews development of Austin Airways Ltd., formed in 1934 and now operating 20 small aircraft in non-scheduled cargo-and-passenger flights, partly in the southern Hudson Bay area. Types of aircraft and main base points are given.

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52126. KAJIKURI, HISASHI, *and others.* Effect of hypothermia and of chlorpromazine on survival after tourniquet shock. (Annals of surgery, Nov. 1957. v. 146, no. 5, p. 799–807, tables.) 16 refs. *Other authors:* H. B. Shumacker, Jr., *and* A. Riberi.

Account of experiments with mice. No rationale is seen for the use of hypothermia, chlorpromazine or both in the management of hemorrhagic or traumatic shock. Only for protection of vital organs during periods of ischemia is hypothermia indicated. ***Copy seen:*** DNLM.

KAKHANA, M. M., *see* Gerasimovskiĭ, V. I., *and others.* O sootnoshenii niobiia i tantala . . . *1957.* No. 51152.

52127. KALADZE, R. A. K metodike izmereniia kozhnoĭ temperatury. (Fiziologicheskiĭ zhurnal SSSR. June, 1957. t. 43, no. 6, p. 588–89, illus.) Text in Russian. ***Title tr.:*** Method of measuring skin temperature.

Describes apparatus, superseding another model. It is for quick and accurate recording of body-surface temperatures. Comparisons with standard methods are discussed. ***Copy seen:*** DNLM.

KALECHITS, EVGENIĬ VITAL'EVICH, *see* Nekrasov, V. K., *and* E. V. Kalechits. Stroitel'stvo avtomobil'nykh dorog . . . *1957.* No. 53536.

52128. KALELA, AARNO. Über die Waldvegetationszonen Finnlands. (Botaniska notiser, 1958. v. 111, no. 1, p. 353–68, 8 text maps.) 24 refs. Text in German. ***Title tr.:*** On the forest vegetation zones of Finland.

The forest zone limits of Finland are correlated with isotherms and vegetation subdivisions according to Hult, Norrlin, Linkola and other specialists. Five or six zones proposed by various authorities from southernmost Finland to the tree line are discussed. ***Copy seen:*** DLC.

52129. KALELA, OLAVI. Die neuzeitliche Ausbreitung des Kiebitzes, *Vanellus vanellus* (L.) in Finnland. Helsinki, 1955. 80 p. 16 illus. (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Eläintieteellisiä julkaisuja, v. 16, no. 11) 178 refs. Text in German. Summaries in English and Finnish. ***Title tr.:*** Recent spread of the lapwing, *Vanellus vanellus* (L.), in Finland.

The lapwing, which breeds in meadows and on cultivated land up to the 66° N. and occurs occasionally in the Enontekio region of Finnish Lapland and the Petsamo region, has spread rapidly since 1890. The spread is evidently connected with recent changes in climate and with certain factors influencing the reproductive rate, mortality, and dispersion of this bird. The rising spring temperature in Finland is conducive to increase of its population: there is less mortality at the end of the migration period, immigrants and birds starting to breed have increased in number; and fewer females, having lost their first clutches, stop breeding.

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52130. KALENOV, A. D. K geokhimii skandiia v zone gipergeneza. (Geokhimiia, 1958. no. 2, p. 130–33, tables.) 5 refs. Text in Russian. Summary in English. ***Title tr.:*** On the Geochemistry of scandium in the zone of hypergenesis.

Describes leaching of scandium from scandium-bearing minerals in their oxidation zone. Samples of orthite were taken from Alakurt (approx. 66°50′ N. 32°22′ E.) in northern Karelia and of wolframite from the steppe of Kazakstan. This phenomenon warrants study to ascertain the manner of scandium entrance into the wolframite and orthite lattice, also to aid prospecting for new scandium deposits. ***Copy seen:*** DLC.

52131. KALESNIK, STANISLAV VIKENT'EVICH. Obshchiĭ vzgliad na razvitie nekotorykh otraslei geografii v SSSR za gody Sovetskoĭ vlasti. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Sept.–Oct. 1957. t. 89, no. 5, p. 389–410.) Over 100 refs. Text in Russian. ***Title tr.:*** General survey of the development of some branches of geography in the U.S.S.R. during the years of Soviet rule.

Paper occasioned by the 40th anniversary of the Soviet regime. Of 35 universities in the U.S.S.R., 27 offer geography and 16 have geography departments; 66 (out of 204) pedagogical institutes include geography in their teacher-training pro-

gram, and there are now some ninety thousand geography teachers. Soviet publications in this field include great atlases: *Bol'shoĭ sovetskiĭ atlas mira*, 1937; *Morskoĭ atlas*, 1950–58; *Atlas mira*, 1954, etc.; and basic monographs on geomorphology, glaciers, glaciology, snow and permafrost, climatology, oceanography, hydrography and hydrology, soil science, phytogeography, zoogeography, and zoning (selected works noted, p. 394–404, in each field). Local history societies have increased from 160 in 1917, to 1756, regional branches and sections have grown from 10 to 90, while the Geographical Society's membership has increased eightfold (to 8,000). Many special studies and publications relating to exploration in this period, including description and development of arctic and subarctic areas, are referred to throughout the paper. ***Copy seen:*** DLC.

52132. KALEŤSKAÍA, MARIÍA SAMOĬLOVNA, *and* **A. D. MIKLUKHO-MAKLAĬ.** Nekotorye cherty chetvertichnoĭ istorii vostochnoĭ chasti Pechorskogo basseĭna i zapadnogo sklona Polárnogo Urala. Moskva, Izd-vo Akademii nauk SSSR, 1958. 68 p. illus., tables, diagrs., 2 fold. maps. (Akademíía nauk SSSR. Institut geografii, t. 76. Materialy po geomorfologii i paleogeografii SSSR. vyp. 20.) 71 refs. Text in Russian. ***Title tr.:*** Some features of the Quaternary history of the eastern part of the Pechora basin and the western slope of the Polar Ural.

Presents results of field investigation and laboratory studies on Quaternary geology of the region approx. 66°–68° N. 64°–66° E., as carried out in 1955 by the Institute of Geography of the Academy of Sciences of the U.S.S.R and the Pechora coalgeology trust. Orography of the region is reviewed. Quaternary stratigraphy is extensively treated. Petrography of rocks is outlined. Geomorphology and the development of relief are discussed. Stratigraphic and morphologic maps and pollen analyses spectra are included. ***Copy seen:*** DLC.

52133. KALINENKO, V. O. Novaía zhelezobakteriía reki Enisei. (Mikrobiologiía, 1945. t. 14, vyp. 4, p. 292–96, illus.) 4 refs. Text in Russian. ***Title tr.:*** A new iron bacterium of the Yenisey River.

A description of a new species *Leptothrix issatchenkoi* n. sp., its morphology and developmental stages in life and cultures. Some physiological and biochemical characteristics are also discussed. ***Copy seen:*** DLC

52134. KALINKO, M. K., *and* **I. E. SHIRÍAEV.** Neftegazonosnost' severa Sibiri. (Sovetskaía geologiía, Dec. 1958, god 1, no. 12, p. 69–87, cross-section, map.) 11 refs. Text in Russian. Summary in English. ***Title tr.:*** Oil and gas possibilities of northern Siberia.

Reviews oil and gas prospects of the region between the Ural and Pay Khoy on the west and the Verkhoyansk Ridge in the east, and from the Arctic Circle north to the coast. The data derive from investigations by Glavsevmorput', the Institute of Geology of the Arctic, and authors' field studies. The stratigraphy and tectonics are outlined in respect to oil and gas prospects. Ten main geologic structures are distinguished and characterized in turn. The depressions have the most promising prospects. The regions are summarized according to their oil possibilities. Oil in economic amounts may be found in Permian and Triassic deposits and gas in lower Cretaceous. Directions and methods for continuing oil research are discussed. ***Copy seen:*** DLC.

52135. KALINKO, M. K. Perspektivy nefte-gazonosnosti severa Sredneĭ Sibiri. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Neftegazonosnost' severa Sibiri, 1958. p. 183–214, tables, maps.) 14 refs. Text in Russian. ***Title tr.:*** Prospects for oil and gas in north Central Siberia.

Evaluates and summarizes prospects in the 2,000,000 km.^{2} area 66°–130° E. between the Arctic Circle and Kara and Laptev Seas. Sinian and Cambrian, Devonian, Permian, and Mesozoic deposits are analyzed in respect to oil and gas prospects; and zones (distinguished as: possible, probable, clarification required, without prospects, supposed, established, with bitumen in rocks, liquid fuel in depth, gas in the bore holes, etc.) are mapped. Zones of established prospects are the Anabar-Khatanga interfluve, Olenek district, and Ust'-Yenisey district; the Taymyr depression and Siberian platform are considered probable zones, the Tungusska syncline requires clarification. Various types of investigations are outlined and data are given. Nowhere has oil or gas been found as yet in commercial quantity, but this is

attributed to insufficient exploration, methods not quite adequate, and to lack of deep boring. ***Copy seen:*** DGS.

52136. KALINKO, M. K. Rezul'taty poiskov i razvedki nefti i gaza v raĭone Anabaro-Khatangskogo mezhdurech'îa, Nordvikskiĭ raĭon. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958. p. 134–70, tables, fold. cross-section, text map.) 10 refs. Text in Russian. ***Title tr.:*** The results of prospecting and exploration for oil and gas in the region of the Anabar-Khatanga interfluve, Nordvik district.

Presents a comprehensive account of prospecting in this 50,000 km.² area between the Khatanga and Anabar Rivers from 72° N. north to the Laptev Sea. An oil outcrop was first known here in 1804, possible production was indicated in 1926, and prospecting work has been carried on during the 1934–1953 period. Beside geologic, gravity and seismic surveys, 381 core drillings, and 38 deep test wells have been made. Stratigraphy and tectonics of the area are reviewed. Oil and gas prospecting is reported for seven different structures in turn, with tabular summary of the results. Physical and chemical properties of oil, gas and ground water are described. Five oil-bearing localities (Nordvik, Yuzhno Tigyan West, Yuzhno Tigyan East, Il'insk, and Kozhevnikov) are considered promising, despite the fact that the present oil output is insignificant. ***Copy seen:*** DGS.

52137. KALINKO, M. K. Skhema tektoniki Anabaro-Khatangskogo mezhdurech'îa. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 294–99, text map.) 3 refs. Text in Russian. ***Title tr.:*** Outline of the tectonics of the Anabar-Khatanga interfluve.

Reviews V. V. Belousov, N. S. Shatskiĭ, and others' tectonic divisions of this region (approx. 71°–75° N. 103°–128° E.) and presents his own: eight zones instead of the five hitherto distinguished. Each zone, its boundaries, main features and subdivision, is summarized and shown on map. The new division corresponds with that in N. S. Shatskiĭ's tectonic map of the U.S.S.R. 1952, but is more detailed to meet requirements of this region. ***Copy seen:*** DLC.

KALINKO, M. K., *see also* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Nefte-gazonosnost' severa Sibiri. . . . *1958.* No. 52751.

KALITA, E. D., *see* Borovik-Romanova, T. F., *and* E. D. Kalita. O t̂sezievorubidievom mikroklin-pertite . . . *1958.* No. 49853.

KALIŪZHNYĬ, VL. A., *see* Bobrievich, A. P., *and others.* Muassanit v kimberlitakh . . . *1957.* No. 49784.

KALLIO, ARVO, *see* Buswell, A. S., *and* A. Kallio. Flowers . . . *1954.* No. 50024.

52138. KALLIO, PAAVO, *and* **Y. MÄKINEN.** Untersuchungen über die Flora von Utsjoki in Nordfinnland, II. (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Tiedonannot (Archivum), 1957. v. 12, no. 1. p. 12–29, 5 illus.) 34 refs. Text in German. ***Title tr.:*** Observations on the flora of Utsjoki of northern Finland, II. In sequence to No. 46215.

Contains a geographical sketch of the region, the northwest section of Utsjoki parish extending to 69°58′ N. About three hundred vascular plants are listed with notes; seven are new to the flora of Inari Lapland. ***Copy seen:*** DLC.

KALM, PEHR, 1716–1779, see Larsen, E. L. The Eskimos . . . *1957.* No. 52662.

52139. KALUGINA, A. A. Sostav i raspredelenie vodorosleĭ u beregov Solovetskogo arkhipelaga. (Botanicheskiĭ zhurnal, Feb. 1958. t. 43, no. 2, p. 270–77, 4 illus.) 15 refs. Text in Russian. ***Title tr.:*** Composition and distribution of coastal algae of the Solovetskiye Islands.

The cultivation of industrial algae on these White Sea islands, approx. 65° N. 35°30′ E., was studied by writer and collaborators. Five types of littoral and sublittoral zones were identified. These and their sea-weeds are discussed and the data summarized in tables. This flora comprises at present 115 species and 36 forms: 54 brown, 41 red, 20 green; 16 are new to White Sea flora. An introductory sketch is included of earlier work and of the physical conditions in these islands. ***Copy seen:*** DLC.

52140. KALUGINA, A. A. Sostav i raspredelenie vodorosleĭ u Zimnego berega Dvinskogo zaliva Belogo morîa. (Botanicheskiĭ zhurnal, Apr. 1957. t. 42, no. 4,

p. 628–34, 4 illus., 2 tables.) 9 refs. Text in Russian. ***Title tr.:*** Composition and distribution of algae on the Zimniy coast of Dvinskiy Bay of the White Sea.

Contains data on the geographic and marine biological characteristics of the region, investigated in Aug. 1955 on the research vessel *Professor Mesiatsev* of the White Sea Biological Station. The algal flora of six localities is described generally, with tabulation of statistical and other data (frequency and local distribution) of the 42 species collected. Some algal species common in the White Sea flora (*Fucus serratus, Laminaria digitata, Alaria* sp., etc.) are absent in this region; the littoral of the so-called Zimniy coast (65°50′ N. 40°30′ E.) is almost devoid of algae, which are found chiefly in the sublittoral zone; the zonal distribution of the region is very unstable.

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52141. KAMENSKIĬ, E. V., *and* **V. P. POMUKHIN.** K voprosu o tipe sudna dlia aktivnogo rybolovstva v Atlantike. (Rybnoe khoziaĭstvo, Dec. 1958. god 34, no. 12, p. 32–35, illus. table.) Text in Russian. ***Title tr.:*** The type of boat for active fishing in the Atlantic.

A critique of the large freezing trawler (BMRT) engaged on the fishing grounds of the Barents and Greenland Seas, and of its efficiency as compared with smaller types. It proved uneconomic for use in far-off grounds and less versatile than the smaller boats of the types *Okean* or *Pioner*. Several new types under construction are discussed.

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52142. KAMINER, BENJAMIN, *and* **R. E. BERNSTEIN.** Electrocardiographic and plasma potassium responses elicited on cooling the chest wall of man. (Circulation, Apr. 1957. v. 15, no. 4, p. 559–67, illus., tables.) 31 refs.

Report on investigation of ten African and ten European healthy male students. Cooling of their anterior chest wall resulted in depression and inversion of the T wave in leads V_1 to V_4, accompanied by a lowering of plasma potassium. Since cooling of other localized areas did not have such effects it is claimed that cooling of the heart influenced both repolarization and plasma potassium.

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KAMINSKAIA, L. R., *see* Metelitsa, V. I., *and others.* Issledovanie gazoobmena pri gipotermii. *1956.* No. 53248.

KAMIYA, YOSHIKO, *see* Yoshida, S., *and* Y. Kamiya. Latitude effect . . . intensity decrease . . . *1953.* No. 56140.

52143. KAMPMANN, PER, 1892– . La mine de plomb de Mesters Vig, Groenland. (Nature, *Paris*, Mar. 1957. no. 3263, p. 113, illus.) Text in French. ***Title tr.:*** The Mesters Vig (Greenland) lead mine. Excerpt from an article in *Revue danoise.*

Describes lead mining activities at Mesters Vig, East Greenland (72° N.) with annual mean temperature of −9° C. The mining village has a population of 50–150; a power station, laboratory, hospital, airfield, and nearby port have been constructed. Processing is carried on in subterranean rooms cut in the rock. The first shipments were made in summer 1956, extraction is expected to continue for a six- to seven-year period yielding approx. 20,000 tons of concentrated lead per yr. Prospecting is in process in other areas in the vicinity. ***Copy seen:*** DLC.

52144. KAMSHILOV, MIKHAIL MIKHAĬLOVICH. Materialy po biologii lichinok usonogikh rakoobraznykh vostochnogo Murmana. (Akademiia nauk SSSR. Kol'skiĭ filial. Murmanskaia biologicheskaia stantsiia. Trudy, 1958. t. 4, p. 56–67, illus. tables.) 15 refs. Text in Russian. ***Title tr.:*** Materials to the biology of larval Cirripedia of the eastern Murman.

Outline of the biology of the larval stages of *Balanus balanoides* and three other related barnacles. Duration of the planktonic stage, productivity, variation in number of nauplii in upper waters, vertical distribution, proportion in plankton, phototaxis, etc., are discussed.

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52145. KAMSHILOV, MIKHAIL MIKHAĬLOVICH. Murmanskaia biologicheskaia stantsiia. (Priroda, Mar. 1957. no. 3, p. 59–63, 4 illus.) Text in Russian. ***Title tr.:*** The Murman Biological Station.

The history, organization, facilities, and equipment of this station are outlined, with brief notes on the geography and hydrobiology of Dal'ne Zelenetskaya Bay and on its ichthyological, planktonic and benthic characteristics. The importance of the station for the development of the Barents Sea fishery is stressed. ***Copy seen:*** DLC.

52146. KAMSHILOV, MIKHAIL MIKHAĬLOVICH. Nauchnye problemy

pribrezhnogo rybnogo promysla Barent͡sova morîa. (Akademiîa nauk SSSR. Murmanskaîa biologicheskaîa stant͡siîa. Trudy, 1957. t. 3, p. 5–19.) 28 refs. Text in Russian. ***Title tr.:*** Scientific problems of shore fisheries of the Barents Sea.

Contains a history of the Murmansk biological station with an outline of its activities (since 1952, scientific basis of fisheries), followed by information on schooling and migration of shore fishes; scientific basis for increasing fishery resources, viz: reconnaissance of new fishing areas, their exploration and utilization; acclimatization of new species, particularly of Pacific herring.

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52147. KAMSHILOV, MIKHAIL MIKHAĬLOVICH. Nekotorye novye dannye o zooplanktone Belogo morîa. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniîu Belogo morîa, 1957. vyp. 1, p. 305–314, illus. tables, maps.) 8 refs. Text in Russian. ***Title tr.:*** Some new data on the zooplankton of the White Sea.

A study of the biomass of this plankton in 1952, its seasonal fluctuation and comparisons with corresponding conditions in the Barents Sea. The zooplankton of Mezen Bay during July 1952 is described, including its species composition, forms dominant in different zones, etc. ***Copy seen:*** DLC.

52148. KAMSHILOV, MIKHAIL MIKHAĬLOVICH. Nekotorye teoreticheskie itogi issledovaniĭ Murmanskoĭ biologicheskoĭ stant͡sii. (*In:* Akademiîa nauk SSSR. Murmanskaîa biologicheskaîa stant͡siîa. Zakonomernosti skopleniĭ . . . 1958. p. 259–69.) 18 refs. Text in Russian. ***Title tr.:*** Some theoretical results of investigations of the Murmansk Biological Station.

Presents (on the basis of studies listed in No. 49184) an outline of differences between the eastern and western sections of the Murman coastal zone, and the deep-water trough separating them; causes of these differences; biological quantitative and qualitative differences; result on fisheries; effect of fishing upon biological productivity; prospects of fisheries development. ***Copy seen:*** DLC.

52149. KAMSHILOV, MIKHAIL MIKHAĬLOVICH, *and* **Ė. A. ZELIKMAN.** O vidovom sostave zooplanktona pribrezhnîa vostochnogo Murmana. (Akademiîa nauk SSSR. Kol'skiĭ filial. Murmanskaîa biologicheskaîa stant͡siîa. Trudy, 1958. t. 4, p. 41–44.) 7 refs. Text in Russian. ***Title tr.:*** Species composition of the littoral zooplankton of eastern Murman.

A list arranged in taxonomic order, including meroplanktonic forms, with notes on their frequency. One hundred forty-four species and two variants are thus tabulated, mostly crustaceans, coelenterates, worms.

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52150. KAMSHILOV, MIKHAIL MIKHAĬLOVICH, *and others.* Plankton pribrezh'îa Murmana. (*In:* Akademiîa nauk SSSR. Murmanskaîa biologicheskaîa stant͡siîa. Zakonomernosti skopleniĭ . . . 1958. p. 59–102, illus., tables, maps.) 85 refs. Text in Russian. *Other authors:* Ė. A. Zelikman *and* M. I. Roukhiîaĭnen. ***Title tr.:*** Coastal plankton of the Murman.

Following a review of plankton research in the Barents Sea and of the methods used, authors deal with the phytoplankton (p. 62–69), its composition, seasonal changes in quantity and in proportion of neritic versus oceanic forms, seasonal changes in main groups (diatoms, phaeocystis). Seasonal changes in the biomass of the zooplankton and in that of the mass species are discussed. The biology of *Calanus finmarchicus* in the area and seasonal and locational changes in its quantity are described (p. 77–99). Some species of euphausiids and other planktonic invertebrates are treated in a similar manner, and general problems of zooplankton production, qualitative changes and economic aspects discussed.

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52151. KAMSHILOV, MIKHAIL MIKHAĬLOVICH. Produkt͡siîa *Calanus finmarchicus* Gunner v pribrezhnoĭ zone vostochnogo Murmana. (Akademiîa nauk SSSR. Kol'skiĭ filial. Murmanskaîa biologicheskaîa stant͡siîa. Trudy, 1958. t. 4, p. 45–55, illus. tables.) 17 refs. Text in Russian. ***Title tr.:*** Production of *Calanus finmarchicus* Gunner in the coastal zone of the eastern Murman.

Account based on five years' investigations leading to an accurate appraisal of food resources for plankton-eating fish. Seasonal and year-to-year changes in number, changes in size and weight (in mg.), also in biomass, actual production, effects of consumption by fish, etc., are

established. The weight of herring this crustacean is able to feed in the Barents Sea is estimated at 0.76 million tons.

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52152. KAMSHILOV, MIKHAIL MIKHAĬLOVICH. Zooplankton pribrezhnoĭ zony Barent͡sova morʹi͡a. (Akademii͡a nauk SSSR. Murmanskai͡a biologicheskai͡a stant͡sii͡a. Trudy, 1957. t. 3, p. 53–74, illus. maps.) 42 refs. Text in Russian. ***Title tr.:*** Zooplankton of the coastal zone of the Barents Sea.

A study of conditions in a 20-mile-wide belt of this area, based on vertical hauls from the surface to the bottom. Quantitative and qualitative seasonal changes are considered and their effects on herring movements analyzed. Two centers initiating plankton production were noted and ctenophores as major consumers, hence competitors of herring, established. Year-to-year changes in plankton development were also noted and their effects on the growth of herring are discussed.

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52153. KANAEV, A. Atomnye ėlektrostant͡sii. (Neva, Feb. 1957, no. 2, p. 219, illus.) Text in Russian. ***Title tr.:*** Atomic power stations.

Describes the projected building by 1960 of five atomic power plants and the proposed use of atomic energy for ships including ice-breakers and whalers.

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KANAEV, NIKITA PETROVICH, *see* Akademii͡a nauk SSSR. ĪAkutskiĭ filial. Ocherk . . . i͡akutskoĭ . . . literatury. *1955.* No. 49169.

52154. KANAEV, V. F. Submarine mountains in the Kurile range area. (Pacific Science Congress, 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 112–13.)

Describes these mountains, 49 of them including 26 volcanoes found during the Russian Institute of Oceanology's investigations, 1949–1956. The submarine volcanoes, some active, are usually conical and up to 2,500 m. in height with summits at depths of from 60 to 2,260 m. The slope gradient, 17°, corresponds to that of the surface volcanoes of the range; both surface and submarine volcanoes are characteristically situated in linear direction both along and across the range. Several of the underwater mountains have flat tops.

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KANAEV, V. F., *see also* Bezrukov, P. L., *and others.* Novye dannye . . . stroeniĭa podvodnogo rel'efa. *1957.* No. 49709.

52155. KANAKI, VASILIĬ GAVRILOVICH, 1910– . Ėkspedit͡sii Arkticheskogo instituta v 1957 godu. (Problemy Arktiki, 1958. vyp. 4, p. 103–104.) Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Expeditions of the Arctic Institute in 1957.

Notes the more important of 22 expeditions: the new drifting station North Pole-7, headed by V. A. Vedernikov; relief of North Pole-6 by a new team under V. M. Driat͡skiĭ; setting up of automatic meteorological stations by various parties, one headed by ĪU. K. Alekseev who devised them; continuation (second year) of current studies in the Kara Sea under G. A. Baskakov on the ice-breaker *Litke*; oceanographic expedition (third year) in northern Greenland Sea on the ice-breaker *Lena,* under L. L. Balakshin, explored the area of the so-called Nansen Rise and studied currents and water exchange between the Atlantic and the Arctic Basin; expedition studying physical and mechanical properties of sea ice in area of Cape Shmidta.

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52156. KANAKI, VASILIĬ GAVRILOVICH, 1910– . Oni rabotai͡ut v "Druzhnom." (Vokrug sveta, Nov. 1958, no. 11, p. 29–32, illus.) Text in Russian. ***Title tr.:*** They are working at Druzhnoye.

Describes the geophysical observatory at Druzhnoye on Kheysa (Hayes) Island (80°35′ N. 57°50′ E.,), Franz Joseph Land, visited by the author in 1958; its organization for the IGY in July 1957; the laboratories for cosmic rays, seismic and auroral studies, the aerology and meteorological rocket investigations. Excerpt from the log of drifting station "North Pole-3," refers to eruption of a submarine volcano in area of Lomonosov Range on Nov. 24, 1954.

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52157. KANAKI, VASILIĬ GAVRILOVICH, 1910– . Polʹi͡arnym dnem i polʹi͡arnoĭ noch'iu. (*In:* Burkhanov, V. F. Cherez okean na dreĭfuiushchikh l'dakh, 1957. p. 198–230, illus.) Text in Russian. ***Title tr.:*** In the polar day and polar night.

Sketch of life and work on the drifting

station North Pole-3 in 1954–55 by its aerologist: the flight to the station, the camp, airlift, personnel, schedule of everyday life and work, etc. Soundings of the upper atmosphere were carried out. Ice pressures and movements in Nov.–Dec. disturbed the camp and a crack divided it in two. I. Mazuruk's flight to the station on Dec. 30, 1954, the sun's reappearance on Mar. 11, 1955, etc., are noted. Author's participation in the high latitude expedition on ice-breaker *Severnyĭ Poliûs* in 1946 is mentioned (p. 199). ***Copy seen:*** DLC.

52158. KANDROR, I. S., *and* **K. A. RAPOPORT.** Gazoobmen u cheloveka pri myshechnoĭ rabote v usloviiâkh rezkogo okhlazhdeniiâ. (Fiziologicheskiĭ zhurnal SSSR, Jan. 1957. t. 43, no. 1, p. 60–64, tables.) 6 refs. Text in Russian. Summary in English. ***Title tr.:*** Respiratory exchange in man during muscular work under conditions of severe cold.

Report on experiments which demonstrated that exercise does not interfere with chemical temperature regulation in very cold environment when the latter is not compensated by special clothing. Appearance of chemical temperature regulation during exercise depends on severity of cold, on intensity of exercise, heat production and individual traits.

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52159. KANDROR, I. S. O normirovanii pishchevogo raciona s uchetom sezonov i klimaticheskikh poâsov. (Voprosy pitaniâ, May–June 1958. t. 17, no. 3, p. 9–12, illus.) 13 refs. Text in Russian. Summary in English. ***Title tr.:*** Regulating food rations with consideration of the seasons and of climatic zones.

Report based on a year-round weekly record of basal metabolism and weight in 12 persons working under similar conditions in the far North. It is concluded that the amount of energy spent in the North is considerably higher than that in temperate zones; and in the same locality, higher in the winter than in the summer. In allotting food rations, this should be borne in mind. Introductory review of others', mainly American, work is included. ***Copy seen:*** DLC.

52160. KANDROR, I. S. O vliâniĭ polârnogo dnâ i polârnoĭ nochi na organizm cheloveka v usloviiâkh krupnykh naselennykh punktov. (Gigiena i sanitariâ, May 1958. god 23, p. 7–13, illus.) 14 refs. Text in Russian. Summary in English. ***Title tr.:*** The effect of polar day and polar night upon the human organism in big settlements.

A study based on several years of investigations in various areas of the Soviet Arctic. It includes basal metabolism, respiration, blood picture, sleep, endocrine activity, seasonal changes in the tonus of the central nervous system, diurnal changes of body temperature, etc. Generally, a depression of many functions during the polar night and hyperactivation during the polar day, noted in the past, has now decreased. But even under current conditions, some physiological disturbances take place during the prolonged day or night. These should be considered when hygienic instructions are worked out. ***Copy seen:*** DLC.

52161. KANGAS, MAUNO ESKO. Eine neue *Gnypeta*-Art, Col., Staphylinidae aus Sibirien. (Suomen hyönteistieteellinen aikakauskirja, 1957. v. 23, no. 2, p. 85–86, illus.) Text in German. ***Title tr.:*** A new *Gnypeta* species from Siberia; Col., Staphylinidae.

Describes: Gnypeta rugulosa n. sp. from "Sibirien, Lena med., Ytyk-haja (B. Poppius)" in the Entomological Museum of Helsinki University.

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52162. KANGAS, YRJÖ. Weitere Beiträge zur Kenntnis der nordischen *Xyletinus*-Arten; Col., Anobiidae. (Suomen hyönteistieteellinen aikakauskirja, 1958. v. 24, no. 1, p. 28–34, 17 illus.) 2 refs. Text in German. ***Title tr.:*** Further contributions to knowledge of the northern species of *Xyletinus*, Col., Anobiidae.

Describes a new death-watch beetle, *Xyletinus tremulicola*, n. sp. collected in Kalix, Norrbotten, and compares it with related species *X. longitarsis*.

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52163. KAN-KHUT, É. D. O snegovykh nagruzkakh. (Stroitel'naâ promyshlennost', Jan. 1957. god 35, no. 1, p. 50.) 4 refs. Text in Russian. ***Title tr.:*** Snow loads.

The accuracy of parameters given by Gol'denblat and others in 1956 (No. 45159) for calculating snow loads in the U.S.S.R. is discussed. The calculations gave a maximum value of 200 kg./cu. m. This value should be greatly increased for Siberia, the far North, and Kazakhstan, where prolonged snowstorms

with winds to 40 m./sec. frequently prevent snow removal. The wet snow that falls during these storms produces loads much greater than 200 kg./cu. m. because of its high density.—From SIPRE.

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52164. KANNISTO, ARTTURI (JUHA), 1874-1943. Materialien zur Mythologie der Wogulen; bearbeitet und herausgegeben von E. A. Virtanen und Matti Liimola. Helsinki, 1958. 443 p. illus. (Suomalais-ugrilainen seura. Toimituksia, v. 113.) Refs. in text. Text in German. ***Title tr:*** Materials on the mythology of the Voguls; reviewed and edited by E. A. Virtanen and Matti Liimola.

Contains an analysis of Vogul religious beliefs, rites and sacrifices, cosmogony and mythology based on Kannisto's field investigations of 1901–1906. Selected prayers and mythological texts in German translation are included (as previously published in the folklore series, No. 45880 and *infra*), to complete the picture of Vogul religious practices.

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52165. KANNISTO, ARTTURI (JUHA), 1874–1943. Wogulische Volksdichtung; bearbeitet und herausgegeben von Matti Liimola. Bd. 3, Märchen; Bd. 4, Bärenlieder. Helsinki, 1956–1958. 2 v.: 262, 552 p., illus. (Suomalais-ugrilainen seura. Toimituksia, v. 111, 114.) Refs. in text. Text in German. ***Title tr.:*** Vogul folklore; revised and edited by Matti Liimola. v. 3, fairy-tales; v. 4, bear songs. In sequence to No. 45880.

Contains texts (in transliteration and German translation) of 21 tales, associated mostly with witchcraft and magic, and 46 songs dealing with bear myths, bear hunt, bear magic, etc. The texts are supplied with commentaries on language and content.

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KANNISTO, ARTTURI (JUHA), 1874–1943, *see also* Vahter, T. Ornamentik der Ob-Ugrier. *1953.* No. 55705.

52166. KANNT, HANS S., *and others.* Eisbrecher "General San Martin." (Hansa, July 9, 1955. Jahrg. 92, Nr. 28/29, p. 1218–30, illus., diagrs.) Text in German. *Other authors:* W. Sieglitz, W. Heil, and W. Hollmann. ***Title tr.:*** Ice-breaker *General San Martin.*

Describes in detail, with photos, profiles and cross-sections in scale, this 6,500 hp. diesel-electric ice-breaker, delivered by the German Seebeck-Werft to the Argentine Antarctic Institute in Oct. 1954. Its two aft propellers give a maximum cruising speed of 16 knots in open water; it forced antarctic ice 4 m. thick in the 1955 season. Engines and electrical equipment are described in turn; auxiliaries include extensive oceanographic equipment, an airplane and a helicopter, etc. ***Copy seen:*** DLC.

KANTOR, SIDNEY, *see* Hanson, H. C., *and others.* Filariae . . . wintering . . . Canada geese. *1956.* No. 51575.

52167. KANWISHER, JOHN WILLIS, 1924– . Freezing and drying in intertidal algae. (Biological bulletin, Oct. 1957. v. 113, no. 2, p. 275–85, illus.) 18 refs.

Account of investigation of physiological aspects of freezing or drying of several species of intertidal seaweeds. As much as 80% of water in these plants was frozen when exposed to temperatures down to −15° C.; they may lose 90% of their water without injury. Metabolism is greatly reduced in both conditions. Some seaweeds (*Fucus*) spend months frozen in arctic sea-ice (temperature as low as −40° C.), yet resume photosynthesis upon being thawed out.

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52168. KANWISHER, JOHN WILLIS, 1924– , *and* **H. LEIVESTAD.** Thermal regulation in whales. (Norwegian whaling gazette, 1957. no. 1, p. 1–5, illus.) Ref. Contribution no. 878 from the Woods Hole Oceanographic Institution.

Account of temperature record from the abdominal cavity of a 34-foot whale killed instantly. There was a continuous temperature rise in the dead body, apparently due to bacterial activity, until the belly was cut open to let in sea water. ***Copy seen:*** DA.

52169. KAPITONOV, IL'ÎA TROFIMOVICH. Trelevka lesa traktorami S–100L. (Mekhanizat͡siîa trudoemkikh i tîa͡zhelykh rabot, Jan. 1958. god 12, no. 1, p. 31–33, illus., table, plan.) Text in Russian. ***Title tr.:*** Log trailing with the S–100L tractor.

A modernized and improved tractor (S–80) is used the year round in the forests of the Northern Ural. Maximum engine power is 100 hp., pull is 1,050 kg. in fifth gear and 9,000 kg. in first. Driving speed varies from 2 to 10 km./hr. Tractor components are suitable for

winter work at temperatures down to −42° C. and in snow 120 cm. high. The driver's compartment is heated. Construction and maintenance of the caterpillar links and gears are described in detail, including arrangements for removing snow and mud. Log-trailing operations are outlined for various weather and terrain conditions. Data of operations and productive output in winter, summer and spring are tabulated for the S–80 and S–100L tractors.

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52170. KAPITONOV, V. I. O vzaimootnosheniiâkh nekotorykh khishchnykh ptiſs i surkov v tundrakh Vostochnoĭ IÂkutii. (Zoologicheskiĭ zhurnal, Aug. 1957. t. 36, vyp. 8, p. 1228–32, table.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** Interrelations of some predatory birds with marmots on the tundras of eastern Yakutia.

Of 14 nests belonging to predatory birds, 12 were found to be near marmot settlements. The latter abound in insects which attract small birds which in turn are preyed upon by these predators. The predatory birds even warn the marmot by alarm cries against their enemies and defend their nests.

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52171. KAPLAN, M. A. Osnovnye zhanry nanaĭskogo (gol'dskogo) fol'klora. (Akademiâ nauk SSSR. Institut ėtnografii. Kratkie soobshcheniâ, 1950. vyp. 11, p. 107–111.) 2 refs. Text in Russian. ***Title tr.:*** Basic types of Nanai (Gold) folklore.

Discussion of the social organization, customs, beliefs, and way of life of the Golds based on an analysis of their fairy tales, legends and epics. The transition from matriarchate to patriarchate, traditional blood feud, shamanism, animal worship, cosmography, hunting and fishing economy, etc., are traced through the topics of their tales and myths. The different forms and subject matter of their folklore are discussed; the importance of oral literary traditions for study of the history and culture of aboriginals having no written language is stressed. ***Copy seen:*** DLC.

52172. KAPLAN, M. A. Tvorchestvo pervogo nanaĭskogo poėta Akima Samara. (Sovetskaiâ ėtnografiiâ, 1949, no. 4, p. 173–77.) 3 refs. Text in Russian. ***Title tr.:*** Works of the first Gold poet, Akim Samar.

Sketch of the life of A. Samar, born in 1916 in a Gold village near the Goriya (a tributary of the Amur) River, educated at the Institut narodov Severa (Institute of the Peoples of the North) in Leningrad, and killed in 1942–43 at Stalingrad. His translations of Russian classics and Soviet political works into Gold are noted, his poems and songs discussed and cited in excerpts.

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52173. KAPLIN, ALEKSEĬ ALEKSEEVICH. Oberegat' morskogo kotika. (Okhota i okhotnich'e khozâĭstvo, Apr. 1958. god 4, no. 4, p. 18–20, illus.) Text in Russian. ***Title tr.:*** Protect the fur seal.

Discusses its economic value; changes in the herds on the Pribilof, Commander and Tyuleniy Islands; beneficial effects of conventions for fur seal protection on recovery of the herds.

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52174. KAPLIN, ALEKSEĬ ALEKSEEVICH. Pushnoĭ aukſsion. (Okhota i okhotnich'e khozâĭstvo, Nov. 1958. god 4, no. 11, p. 9–10, illus.) Text in Russian. ***Title tr.:*** Fur auction.

Account of the 29th International Fur Auction at Leningrad, July 14–Aug. 1, 1958 (author in charge), with data on the volume and value of transactions in the main furs: over a million squirrel skins, 16,985 marten, 17,903 sable, 825,000 muskrat, 14,520 mink, 10,000 snowshoe hare, 1,490 wolverine and 11,780 white arctic fox. ***Copy seen:*** DLC.

52175. KAPLIN, ALEKSEĬ ALEKSEEVICH. Vneshniâiâ torgovliâ SSSR pushninoĭ za 40 let sovetskoĭ vlasti. (Okhota i okhotnich'e khozâĭstvo, Aug. 1957. god 3, no. 8, p. 5–10, illus.) Text in Russian. ***Title tr.:*** The foreign fur trade of the U.S.S.R. during 40 years of Soviet rule.

Outlines the sales organization of the Soviet fur trade: selling abroad, and to foreigners in the U.S.S.R., setting up the International Fur Auctions held in Leningrad each year since 1931, construction of the Fur Palace, etc. The Kamchatka sable, the Yakutia, Yenisey and Kamchatka arctic fox, and the Yakutia squirrel are listed among the most valuable pelts for the foreign market.

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52176. KAPLIN, P. A. O nekotorykh osobennostiâkh lagun severo-vostochnogo poberezh'iâ SSSR. (Akademiâ nauk

SSSR. Okeanograficheskaîa komissiîa. Trudy, 1957. t. 2, p. 104–110, illus., maps.) 4 refs. Text in Russian. ***Title tr.:*** On some features of lagoons on the northeastern coasts of the U.S.S.R.

Theories of lagoon formation are reviewed. Characteristic types on Chukotka are described and illustrated: their genesis, bottom formations, and profiles in their vicinity. The role of the shore region in lagoon formation is discussed, and comparisons made with conditions in other regions. ***Copy seen:*** DLC.

52177. KAPLIN, P. A. Otstuplenie lednikov Novoĭ Zemli. (Priroda, Mar. 1958. god. 47, no. 3, p. 88–90, illus.) 4 refs. Text in Russian. English translation by E. R. Hope, *pub. as* Canada. Directorate of Scientific Information, T–293–R. 3 p. (copy at DGS). ***Title tr.:*** Retreat of the Novaya Zemlya glaciers.

The present period is characterized by retreat of glaciers generally in the Arctic. Observations of 1955 compared with a 1933 map and other data disclose an intensive retreat on the northwest coast of Novaya Zemlya, mainly by calving at the ice-front, due to the rise in temperature of the coastal waters and decrease in their salinity. Exceptions to the general shrinking are some glaciers of evident individual regime, e.g., Shokalskiy in Russkaya Gavan, stationary during 1933–1952. Study of such phenomena was undertaken on Novaya Zemlya as part of the IGY program.

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KAPLIN, P. A., *see also* Budanov, V. I., *and others.* Present-day vertical movements . . . seacoasts. *1957.* No. 49977.

KAPLIN, P. A., *see also* Budanov, V. I., *and others.* Sovremennye vertikal'nye dvizheniîa beregov . . . *1957.* No. 49978.

KAPLUNOV, D. R., *see* Abramov, V. F., *and others.* Sravnitel'naîa otsenka otboĭki rudy . . . *1958.* No. 49105.

52178. KARACHAROVSKIĬ, V. V. O nakhodke zuba domashnego byka v ranneĭ stoîanke bliz' g. Îakutska. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniîa, 1941. vyp. 10, p. 139, table.) 3 refs. Text in Russian. ***Title tr.:*** The find of an ox tooth at an early site near Yakutsk.

A molar belonging to a domestic ox (*Bos taurus L.*) was found in 1940 among mammal bones collected near Olekminsk, on the Lena River, at a late neolithic site dated by A. P. Okladnikov into the 10th century B.C. This seems to prove the existence of cattle in this region well before the accepted date for the introduction of animal husbandry to Yakutia in the 13th–14th centuries A.D. by the forebears of present-day Yakuts migrating from the steppes of Central Asia. The fossil ox tooth is compared to present-day Yakut cattle: other mammals, all wild, found at the same site are listed.

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52179. KARAJOSIFIDIS, KOSTAS. Badania nad upływem insuliny i largactylu na zachowanie się cukru we krwi w hipotermii doświadczalnej. (Acta physiologica polonica, 1956. v. 7, fasc. 4, p. 469–76, illus. tables.) 10 refs. Text in Polish. ***Title tr.:*** Investigations on the effect of insulin and largactil upon blood sugar in experimental hypothermia.

Account of observations on rabbits in hypothermia of 25° C. Blood sugar level was elevated under these conditions, and remained so if glucose was administered. Insulin activity was weakened but prolonged; it caused further reduction of body temperature and abolished the hyperglycemic effects of cold or of largactil. ***Copy seen:*** DNLM.

52180. KARAKASH, A. I. Prognoz polozheniîa kromki l'da na Barentsovom more. (Meteorologiîa i gidrologiîa, Sept. 1958, no. 9, p. 16–21, diagrs.) 13 refs. Text in Russian. ***Title tr.:*** Forecasting the position of the ice edge in the Barents Sea.

Factors determining the ice regime of the Barents Sea are examined, and a method of forecasting ice conditions and the position of the ice edge one to five months in advance is described. The forecast is based on air temperatures and the index of cyclonic activity of the North Atlantic and the Barents Sea in the fall-winter weason. The method of analysis is described in detail, and forecasting formulas are given.

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52181. KARA-MURZA, Ė. N. Nekotorye dannye o sostave sporovopyl'tsevykh kompleksov morskogo nizhnego mela otdel'nykh uchastkov Nordvikskogo raîona. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1958. vyp. 10, p. 27–44, diagrs.) 14 refs. Text in Russian. ***Title tr.:*** Some data on composition of spore and pollen com-

plexes of the marine Lower Cretaceous in various parts of the Nordvik district.

Spore and pollen samples of the Valanginian series were identified from drilled cores at different depths in Kharabyl, Nordvik, Yurung-Tumus, Khara-Tumus locations. The pollen content is graphically presented according to depth intervals. Pollen spectra for a cross-section of each location are presented. Lower Cretaceous environments and climate for development of flora and sedimentation are considered.

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52182. KARASOV, N. F. Sokol-sapsan. (Priroda, Apr. 1957, no. 4, p. 117.) Text in Russian. ***Title tr.:*** Peregrine falcon.

Notes attacks of *Falco peregrinus* on sitting or swimming ducks in the Severnaya Dvina delta; several cases of attack on artificial ducks are also reported. The opinion that this falcon hunts only flying birds is wrong.

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52183. KARAVAEV, MIKHAIL NIKOLAEVICH, 1903– . Fragmenty reliktovykh stepeĭ s *Helictotrichon krylovii* (N. Pavl.) Henrard v ĪAkutii. (Botanicheskiĭ zhurnal, Apr. 1958. t. 43, no. 4, p. 481–89, 2 illus., table.) 11 refs. Text in Russian. Summary in English. ***Title tr.:*** Fragments of relict steppes with *Helictotrichon krylovii* (N. Pavl.) Henrard in the Yakut A.S.S.R.

Eight phytocoenoses with *H. krylovii* as the dominant, found in isolated relict habitats, are described. The distribution of this endemic species of the Yakut ASSR is discontinuous, and divides into four isolated areas. The *H. krylovii* association is composed of Eurasiatic steppe species, high mountain and mountain-steppe species, some of which are endemic. This vegetation of some 54 vascular plants and 12 mosses and lichens is described and tabulated.—From summary. ***Copy seen:*** DLC.

52184. KARAVAEV, MIKHAIL NIKOLAEVICH, 1903– . Pervaīa nakhodka *Tsuga* affin. *longibracteata* Cheng v iskopaemom sostoīanii na territorii SSSR. (Moskovskoe obshchestvo ispytateleĭ prirody. Bīūlleten', n. ser., otd. biol., July–Aug. 1958. v. 63, no. 4, p. 73–76, 3 illus.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** First find of *Tsuga longibracteata* Cheng in fossil condition on the territory of the U.S.S.R.

Contains data on fossil cones found near Yakutsk in the Tertiary deposits of the Kangallasky coal mines at 65 m. depth, and identified by the author as *Tsuga longibracteata*. A great resemblance was noted between these cones and those first discovered in Japan. ***Copy seen:*** DLC.

KARAZEEVA, Z. F., *see* Breev, K. A., *and* Z. F. Karazeeva. Materialy po biologii . . . *Oedemagena tarandi* L. 3 . . . *1957*. No. 49903.

KARDAKOV, ANDREĬ IVANOVICH, *see* Vasil'ev, V. N., Flora . . . Komandorskikh ostrovov. *1957*. No. 55741A.

KARDAKOVA-PREZHENTSEVA, EVGENIĪA ALEKSEEVNA, *see* Vasil'ev, V. N. Flora . . . Komandorskikh ostrovov. *1957*. No. 55741A.

KARELIN, DMITRIĬ BORISOVICH, 1913–1953, *see* Kuznetsov, I. M. O vychislenii skorosti vetra . . . *1958*. No. 52591.

52185. KARELINA, R. I. K voprosu o biologii belopolosoĭ kobylki v TSentral'noĭ ĪAkutii. (Yakutsk. Universitet. Uchenye zapiski, 1957. vyp. 1, p. 99–119, illus. tables.) 9 refs. Text in Russian. ***Title tr.:*** The biology of *Chorthippus marginatus* in central Yakutia.

Contains information on the damage to Yakut agriculture caused by locusts; species found in this area; biology of *C. marginatus:* oviposition, hatching and larvae, development in different areas and environments; food, including barley, rye, wheat, etc.; productivity; natural enemies; role of man in creating conditions favorable for spreading of this pest. ***Copy seen:*** DLC.

52186. KARGER, ADOLF. Wirtschaft und Wirtschaftsräume der Sowjetunion. (Geographische Rundschau, Jan. 1958. Jahrg. 10, Heft 1, p. 10–17, 4 tables, map.) Text in German. ***Title tr.:*** Economy and economic regions of the Soviet Union.

Survey of population and industrial production is followed by sketch of 16 regions, including the European North, Ural, West Siberia, etc. Main roads and natural resources of Kola Peninsula (Khibiny apatite, Moncha nickel and copper, iron ores), Vorkuta coal basin, coal in the Nizhnyaya Tunguska region and gold in Aldan and Orotukan regions are mentioned briefly.

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52187. KARI, LAURI E. Beiträge zur Kenntnis der Flechtenflora Lapplands mit besonderer Berücksichtigung der Erd- und Steinflechten auf Fjelden. Turku, 1936. 35 p. (Åbo, Finland. Suomalainen yliopisto. Julkaisuja. Annales universitatis turkuensis, ser. A, physico-mathematica-biologica. t. 4, no. 6.) Text in German. ***Title tr.:*** Contributions to knowledge of the lichen flora of Lapland with special consideration of the soil and stone lichens of the mountains.

Lichens collected in 1925 and 1931 from Muonio, Enontekiö, Kittilä, Sodankylä, Inari, and the Petsamo region of Finnish Lapland are listed with note of locations and substrate. Of the 212 varieties considered, three species, five varieties and three forms are described as new. ***Copy seen:*** DLC.

52188. KARK, ROBERT MANOAH, 1911– . Summary remarks. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 156–65, illus., tables.) 23 refs.

A review of special requirements in cold (and in warm) climate with respect to water, salt, protein, fat, and ascorbic acid. The use and necessity of the latter by experimental animals and man under cold stress is discussed in detail. The functional relationship between the adrenal and ascorbic acid in man, monkeys and guinea pigs is also analyzed.

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52189. KARLING, JOHN SIDNEY, 1899– . *Synchytrium fulgens* in relation to other species on onagraceous hosts. (American journal of botany, Jan. 1956. v. 43, no. 1, p. 61–69.) 16 refs.

Contains results of a study of 14 herbarium collections of fungus labeled "*S. fulgens*," showing that many are incorrectly named. There are at least three long-cycled and several short-cycled species of *Synchytrium* on *Oenothera* and other members of the Onagraceae. Among them is *S. aureum* on *Epilobium palustre* collected by W. H. Lewis at Great Slave Lake in Mackenzie District, July 31, 1951.

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52190. KARLSTROM, THOR NELS VINCENT, 1920– . Alaskan evidence in support of a post-Illinoian pre-Wisconsin glaciation. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1906–07.) Abstract of a paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957.

Significant and roughly equal age differences between the Naptowne, Knik and Eklutna glaciations are suggested by the glacial deposits in the Cook Inlet region recording the pre-Naptowne Knik glaciation; by buried soils exposed in some parts of the area, which record major retreatal intervals both preceding and following the Knik advance; also by boulder counts, geomorphic expression of moraines, and stratigraphic evidence. The Naptowne glaciation is correlated by radiocarbon dating with the Wisconsin and Weichsel stages of the continental type Pleistocene chronologies. This evidence is presented as indication that the Knik and correlative events are of comparable rank to the Wisconsin glacial stage. ***Copy seen:*** DGS.

52191. KARLSTROM, THOR NELS VINCENT, 1920– . Tentative correlation of Alaskan glacial sequences, 1956. (Science, Jan. 11, 1957. v. 125, no. 3237, p. 73–74, illus.) 14 refs.

A revised chart, and a discussion of Alaskan glacial sequences, based on additional field observations and improved radiocarbon determinations. The latter provide a chronology which is in general agreement with similar Wisconsin-type sequences and with historical, varve and radiocarbon data of the northern European Fourth Glacial and post-Glacial. The correlations support the concept of essentially contemporaneous past climatic changes throughout the Northern Hemisphere.

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KARLSTROM, THOR NELS VINCENT, 1920– , *see also* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958.* No. 50694.

52192. KARPENKO, A. S. Osnovnye zakonomernosti rastitel'nogo pokrova Indigirskoĭ nizmennosti. (Botanicheskiĭ zhurnal, Jan. 1958. t. 43, no. 1, p. 70–75, fold. map.) 12 refs. Text in Russian. ***Title tr.:*** The main features of the distribution of vegetation in the Indigirka lowland.

Reports a study of this moist, low-lying (0–200 m.) region (67°30′–68°30′ N. 145°–146° E.) cut by meanders of the Indigirka, in June-Aug. 1955. The prin-

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cipal plant associations are treated in turn: northern hardwood taiga forest and thin forest; birch (*Betula nana*, etc.) and willow (*Salix bebbiana, S. glauca, S. pentandra*, etc.) overgrowth; cotton-grass and sedge-covered mounds (*Eriophorum* and *Carex*); plant associations on polygonal-type peat-bogs; *Eriophorum* and *Carex-Eriophorum* associations of low bogs. Characteristics of these and lower divisions are discussed.

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52193. KARPUKHIN, I. P. O sluchaĭkh gibeli ondatry *Ondatra zibethica* L. na Kolyme. (Zoologicheskiĭ zhurnal, Oct. 1958. t. 37, vyp. 10, p. 1571–74, tables.) Text in Russian. Summary in English. ***Title tr.:*** Cases of the ondatra, *Ondatra zibetica*, dying on the Kolyma.

Information is presented on the introduction and acclimatization of the American muskrat in the Kolyma River system; limits of its distribution; cases of death and its main causes: freezing-through of shallow lakes and shore area of deep lakes which forces the animals to build their nests on the ice. Here many are killed by foxes moving from the tundra in winter. ***Copy seen:*** DLC.

52194. KARSTENS, CHAUNCEY W., *and others*. Pipeline study, Greenland. Fort Belvoir, Va., Oct. 21, 1957. 12 p. fold. map. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954. v. 2, *pub.* 1957). *Other authors:* W. L. Nelson, *and* G. W. Kearney.

Describes Engineer Research Development Laboratories field reconnaissance, June and Aug. 1954, and study of the Thule area to determine feasibility of constructing a petroleum products pipeline from the area to selected points on the icecap. Ground and air reconnaissance is reported; terrain, routes, ice movement, runoff streams, etc., are characterized. No insurmountable problems involved in the construction, operation, and maintenance of a high-pressure, all-welded steel, products pipeline across the area, were found. Suggestions for time, techniques and location of field tests are offered.

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52195. KARTASHOV, IZMAIL PAVLOVICH. O transkripʦii ſikutskikh i ėvenkiĭskikh geograficheskikh nazvaniĭ na topograficheskikh kartakh. (Nauchnye doklady vysshei shkoly. Geologo-geograficheskie nauki, 1958, no. 3, p. 209–212.) Text in Russian. ***Title tr.:*** Transcription of Yakut and Tungus geographic names on topographic maps.

Discusses errors and inconsistencies in the transcribing and transliterating into Russian of the vernacular names of features on Soviet maps of Yakut A.S.S.R., and adjacent areas.

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52196. KARYSHEV, O. Nakhodka v Arktike. (Ogonëk, Jan. 1957. god 35, no. 1, p. 32, illus.) Text in Russian. ***Title tr.:*** A find in the Arctic.

Note (with photo) on a sea-pen, gen. *Umbellula* 2 m. 60 cm. long, caught north of Vrangel Island by drifting station North Pole-6 and sent to the Zoological Institute. ***Copy seen:*** DLC.

52197. KASHMENSKAIA, O. V. Chetvertichnye zolotonosnye otlozheniia basseĭna reki Bërëlëkh. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informaʦionnyĭ biulleten', 1958, vyp. 10, p. 8–15.) 2 refs. Text in Russian. ***Title tr.:*** Quaternary gold-bearing deposits in Bërëlëkh River basin.

Outlines the eluvial, deluvial, alluvial and glacial deposits in the 9,000 km² Bërëlëkh basin (62°25′–63°55′ N. 146°35′–148°33′ E.), a part of the Kolyma basin. The region, of mainly Upper Permian and Mesozoic formations covered by numerous intrusions of different origin and age, is described. Occurrence and distribution of gold-bearing placers are treated. Special attention is given to alluvial deposits in which most of the placers are found. Their appearance in numerous terraces is described and their lithological and paleontological composition indicated. Gold-bearing placers are also found in deluvial solifluctional deposits; in glacial deposits they are absent. Their practical importance is mentioned.

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52198. KASK, G. IU. Razgruzka smerzaiushchikhsia gruzov iz zheleznodorozhnykh vagonov. (Mekhanizaʦiia trudoemkikh i tiazhelykh rabot, Aug. 1958. god 12, no. 8, p. 33, illus.) Text in Russian. ***Title tr.:*** Unloading frozen materials from railroad cars.

Unloading of sand, gravel, coal, ore and other frozen materials under winter conditions requires excessive time due to breaking the frozen lumps of materials by manual labor. Mechanized arrangements of crushers as used in concrete plants are recommended; they are

described in detail: four motor-driven vertical shafts with propellers and heated crushers rotate in different directions, moving within the frozen material.

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52199. KASSELL, BERNARD M. Post-war Soviet research in the Central Arctic. (American Society of Naval Engineers. Journal, Nov. 1957. v. 69, no. 4, p. 673–76, sketch map.)

Reviews Soviet activities in this area, particularly establishment and work of drifting stations North Pole 1–7. Locations are given for five scientific pavilions to be established during the IGY. 1957–58. Major achievements are outlined: discovery of the Lomonosov Range, interpretation of arctic meteorological data in forecasting weather for the Northern Hemisphere, preparation of accurate magnetic charts, etc.

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52200. KAT͡S, NIKOLAĬ ÎAKOVLEVICH, 1894– , *and* S. V. KAT͡S. K istorii flory i rastitel'nosti severa Zapadnoĭ Sibiri v posledniekovoe i pozdneledniekovoe vremîa. (Botanicheskiĭ zhurnal, July 1958. t. 43, no. 7, p. 998–1014, 6 illus.) 20 refs. Text in Russian. Summary in English. ***Title tr.:*** History of the flora and vegetation of northwestern Siberia in post-glacial and late-glacial times.

A reconstruction of the history of forests on the lower course of the Ob and its tributaries the Poluy and Shchutsiya, based on pollen analyses from 14 peat bogs. The macro fossils of these bogs and sediments are utilized for study of the entire flora. Layers back to the last interglacial were investigated and a list of plants indicated in them is presented (based in part on earlier studies). Data on absolute values of tree pollen frequencies are included.

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52201. KAT͡S, SOF'ÎA VASIL'EVNA, 1898– . Ėtapy razvitiîa rastitel'nosti Zapadnoĭ Sibiri v golot͡sene. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Trudy, 1957. t. 13, p. 118–23, tables, diagrs.) 6 refs. Text in Russian. ***Title tr.:*** Stages of development of Holocene vegetation in West Siberia.

According to pollen diagrams the vegetation of this region is of five types: tundra, forest tundra, northern Siberian taiga, middle Siberian taiga, and fine-leaf forest. Eight zones of pollen chronology are established and an attempt is made to reconstruct vegetation development during the Holocene period. For the northern tundra peats, a pollen diagram for Igarka is presented with comments (No. 8447).

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KAT͡S, SOF'ÎA VASIL'EVNA, 1898– , *see also* Kat͡s, N. ÎA., *and* S. V. Kat͡s. K istorii flory . . . severa Zapadnoĭ Sibiri . . . pozdneledniekovoe vremîa. *1958.* No. 52200.

52202. KAT͡SKOV, A. I. Opyt primeneniîa gravitat͡sionnogo gradientometra pri poiskakh kolchedannykh mestorozhdeniĭ. (Razvedka i okhrana nedr, Jan. 1957. god 23, no. 1, p. 41–48, diagr.) Text in Russian. ***Title tr.:*** Use of a gravity gradiometer in searching for pyrite deposits.

The search and qualitative evaluation of deposits in the Ural and Karelia with a new apparatus is described in detail. The parameters related to density are found more suitable for evaluation of unevenly distributed ore lenses, than parameters of magnetic susceptibility and electroconductivity. A new gravity gradiometer was developed with sensitivity of the order of the variometer's, but with higher (6–7 times) productivity. Ores are indicated only in a horizontal assemblage at least 20 m. long. Profiles from survey with the new apparatus and curves of gradients of gravitation forces and their distribution are shown (fig. 1–4). Results are verified by sample drillings. This apparatus can be used on soft and marshy as well as solid ground.

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52203. KAUFMAN, ALVIN. Southeastern Alaska's mineral industry. Washington, D.C., 1958. 37 p. maps, graphs, tables. (U.S. Bureau of Mines. Information circular 7844.) Approx. 45 refs.

Reports on potential mineral wealth and factors affecting its development. Lode mine production 1906–1956 is listed by years for gold, silver, platinum group metals, copper, lead and zinc. Occurrences of antimony, barite, copper, garnet, gold, gypsum, iron, lead-zinc, limestone, molybdenum, nickel, titanium, tungsten, uranium and other radioactive minerals are discussed and mapped. Labor supply, air transport (rates, lines), water supply, and hydropower are considered, also, by areas, potential waterpower. Market outlook is surveyed for

copper, lead, zinc, iron, titanium, uranium, antimony, nickel and tungsten, noting some processing companies within economic shipping distance.

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52204. KAUFMAN, NATHAN, *and others.* The effects of prolonged hypothermia on the rat. (Archives of pathology, July 1958. v. 66, no. 1, p. 96–99, illus., table.) 8 refs. *Other authors:* T. L. Gavan *and* R. W. Hill.

A histological and histochemical study of rat organs during hypothermia. No changes were found in succinic dehydrogenase, cytochrome oxydase and alkaline phosphatase of heart, liver and kidneys, and in the fat content of adrenals, kidney and liver. There was a loss in liver glycogen and a gain in myocardial glycogen. ***Copy seen:*** DNLM.

52205. KAURI, HANS. Über zwei für Europa and Nord-Amerika gemeinsame Tabaniden-Arten. (Opuscula entomologica, 1958. bd. 23, häfte 1–2, p. 95–104, 3 illus., 2 tables.) 12 refs. Text in German. ***Title tr.:*** On two species of Tabanidae common to Europe and North America.

Contains data on the identity of horse flies *Hybomitra lapponica*=*H. typhus* and *H. sexfasciata*=*H. borealis* (=*anderi*). The characteristics of these species, as they occur in Alaska, Lapland, etc., are tabulated and discussed.

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52206. KAUTSKY, GUNNAR. Ein Beitrag zur Stratigraphie und dem Bau des Skelleftefeldes, Nordschweden. Stockholm, Norstedt, 1957. 65 p. illus., diagrs., map. (Sweden. Geologiska undersökningen. ser. C, Avhandlingar och uppsatser, no. 543. Årsbok 49 (1955), no. 3) 26 refs. Text in German. Summary in English. ***Title tr.:*** A contribution to the stratigraphy and geology of the Skellefte region of northern Sweden.

Physical characteristics and stratigraphic sequence of rocks in this region (approx. 64°45′ N. 21° E.) of northeast Sweden are reviewed. Local age relationships of structures of both sedimentary and volcanic origin are described in detail. In contrast with Gavelin and Kulling (No. 51100) Kautsky believes the Revsund granite to be younger than the Vargfors series because it lacks the regional schistosity common to the older rocks. Granite boulders in the Vargfors conglomerate represent older granites which locally may resemble the Revsund. Two stratigraphic columns, representing viewpoints of specialists in the area, are presented and compared.

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52207. KAUTSKY, GUNNAR. Gibt es in den skandinavischen Kaledoniden Flysch? (Geologiska föreningen, *Stockholm.* Förhandlingar, 1948. bd. 70, häfte, 2 p. 279–94, 2 diagrs.) 25 refs. Text in German. Summary in English. ***Title tr.:*** Are there Flysch in the Scandinavian Caledonides?

Comparison is made between tectonic units and stratigraphy of the eastern Alps and the Caledonides of Scandinavia. Although the two mountain chains are believed to have essential differences, Flysch sediments might be expected in Caledonian areas west of the Cambro-Silurian overthrusts in Jämtland but east of the western Cambro-Silurian Köli belt. Two tectonic units in the northern Scandinavian Caledonides are referred to. Further study is required on a rock series attributed to the Seve-schists which may be analogous to the Flysch of the Alps.

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52208. KAUTSKY, GUNNAR. Neue Gesichtspunkte zu einigen nordskandinavischen Gebirgsproblemen; vorläufige Mitteilung. (Geologiska föreningen, *Stockholm.* Förhandlingar, 1946. bd. 68, häfte 4, p. 589–602.) Refs. in text. Text in German. ***Title tr.:*** New viewpoint on some north Scandinavian rock problems; preliminary report.

In 1945 and 1946 stratigraphic problems were investigated from Store Lulevatten (67° N.) in Sweden to the Norwegian coast. The earlier interpretations in Sweden and in Norway differ in designation and history of the rocks, and in amounts and sequence of thrust and overriding during the mountain building stages. Investigations extending across the north Scandinavian mountain areas between the locations of earlier studies are expected to clarify the problems.

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52209. KAWAKAMI, TAKEHIKO, *and* **T. ICHIHARA.** Japanese whale marking in the North Pacific in 1956 and 1957. (Norsk hvalfangst-tidende, June 1958. årg. 47, nr. 6, p. 285–91, tables, map) Text in Norwegian and English.

Marking (310 whales) was carried out in the north part of the North Pacific, mainly near the Aleutian Islands, also,

in 1957, off Cape Navarin approx. 62°20′ N. 179° E. (six fin whales). Data are given on the species, period, etc., and number marked, also on recoveries, 1949–1957 (2,829 marked, 116 recaptured). Map shows recoveries according to migration routes and time elapsed since marking ***Copy seen:*** DI.

52210. KAYSER, CHARLES, 1899– . Effet de la température sur la durée des différents accidents de l'électrocardiogramme chez quelques mammifères homéothermes et deux hibernants refroidis. (Archives des sciences physiologiques, 1957. v. 9, no. 1, p. 7–27, illus. tables) 22 refs. Text in French. ***Title tr.:*** Effect of temperature upon the duration of ECG features in some cooled homeotherm mammals and two hibernators.

An analysis and discussion of hypothermic electrocardiograms in the rabbit, cat, rat, guinea pig and in the hibernators: the hamster and gopher. The effects of low temperatures on the duration of P, QRS, Q-T, T-P, S-T were investigated down to 16° C. in the homeotherms, and to 4° C. in the gopher.

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52211. KAYSER, CHARLES, 1899– . Physiological aspects of hypothermia. (Annual review of physiology, 1957. v. 19, p. 83–120.) 620 refs.

A review of the field and its literature to June 1956. Successive sections deal with: definitions; physiologic and accidental hypothermias; general reviews; methods of producing hypothermia; O_2-consumption; lethal low temperatures for homeotherms; circulation, respiration and body fluids; the nervous system; endocrines; alimentary tract; kidney; pharmacological hypothermia.

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52212. KAYSER, CHARLES, 1899– , *and others*. Recherches sur la repolarisation du myocarde chez différents mammifères homéothermes et hibernants en hypothermie. (Société de Biologie, Paris. Comptes rendus, 1956. t. 150, no. 10, p. 1789–92, illus., table.) 5 refs. Text in French. *Other authors:* É. Coraboeuf *and* Y. M. Gargouil. ***Title tr.:*** Investigations on repolarization of the myocard of various homeotherm and hibernating mammals during hypothermia.

Critical thermal increment of repolarization of the heart, evaluated from the S-T distance, was found to be of the same order of magnitude in hypothermia of hibernators and non-hibernators studied. The thermal increment of the Osborn wave is different, of the order of 4,000. Repolarization of the heart was found to consist of two phases. The condition of these phases in hypothermia of various animals is also discussed.

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52213. KAYSER, CHARLES, 1899– . Résistance à l'hypothermie profonde chez les mammifères hibernants et chez les mammifères homéothermes. (Société de Biologie, Paris. Comptes rendus, 1958. t. 152, no. 7, p. 1198–1201, illus.) 12 refs. Text in French. ***Title tr.:*** Resistance to deep hypothermia in hibernating and homeothermous mammals.

In hypothermic rats, a core temperature of 15.5° C. stopped brain waves and respiration. Experiments suggest that heart stoppage is the consequence of respiratory arrest. The synchronism of nervous-wave and respiratory arrest leads to the assumption that the same brain substance is responsible for both.

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52214. KAYSER, CHARLES, 1899– . Le sommeil hivernal des mammifères; ses caractères particuliers qui le distinguent de la narcose par le froid. (Revue médicale de Nancy, Dec. 1957. t. 82, p. 1193–205, tables.) 63 refs. Text in French. ***Title tr.:*** Hibernation of mammals; its peculiarities which distinguish it from cold-narcosis.

Contains information on lethal low temperatures in a series of non-hibernating and hibernating mammals; heat production, temperature and pulse frequency in the two groups; hypothermia; tissue respiration; nervous regulation of hibernation; the role of the endocrines; seasonal cycles in thermogenesis and in incretory function.

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52215. KAYSER, CHARLES, 1899– . Le sommeil hivernal, problème de thermorégulation. (Revue canadienne de biologie, July 1957. v. 16, no. 3, p. 303–389, illus., tables.) About 400 refs. Text in French. ***Title tr.:*** The hibernating body, a problem of thermoregulation.

A comprehensive review, beginning with an historical outline as from antiquity and continuing with problems of thermal effects upon protoplasm including cold-effects; energy expense in hibernating mammals; physiology of hibernation,

especially temperature conditions of the organism; nutrition, metabolism and excretion; cardiovascular activity; blood and body fluids and their chemistry; respiration; nervous system and its function; role of endocrines in hibernation and hypothermia. ***Copy seen:*** DLC.

KAZAKOVA, M. E., *see* Semenov, E. I., *and others.* Novyĭ t͡sirkonievyĭ mineral seĭdozerit . . . *1958.* No. 54679.

KAZAKOVA, M. E., *see* Tikhonenkov, I. P., *and others.* Pervai͡a nakhodka ėl'pidita . . . *1957.* No. 55439.

52216. KAZANOVA, I. I. Razmnozhenie melkoĭ Onezhskoĭ sel'di v 1952 g. (Akademii͡a nauk SSSR. Karel'skiĭ filial. *Petrozavodsk.* Materialy po kompleksnomu izucheniiu Belogo mori͡a, 1957. vyp. 1, p. 105–116, illus. table, maps.) 8 refs. Text in Russian. ***Title tr.:*** Reproduction of the small Onega herring in 1952.

Report on investigation into the time, places and conditions of reproduction of this tribe, as well as the development, survival (or death) of the fry. Physical conditions of the area are outlined and compared with those of Sakhalin. Growth and development were largely studied under laboratory conditions.

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52217. KANZANSKIĬ, A. Na samykh dal'nikh nashikh ostrovakh. (Smena, Apr. 1958. god 35, no. 7, p. 21, illus.) Text in Russian. ***Title tr.:*** On our most remote islands.

Sketch of life and activities at an unidentified polar station (Nagurskaya?) on Franz Joseph Land, headed by I͡Urīĭ Starkov: its year-round air-connection with the continent; landing strip maintenance in winter; supply by ship in summer; etc. ***Copy seen:*** DLC.

52218. KAZANSKIĬ, N. N. Sel'skokhozi͡aĭstvennoe osvoenie srednego Priangar'i͡a v svi͡azi so stroitel'stvom Bratskoĭ GÉS. (Akademii͡a nauk SSSR. Izvestii͡a, ser. geogr., May–June 1957, no. 3, p. 32–47, maps.) 4 refs. Text in Russian. ***Title tr.:*** Agricultural development in the Middle Angara region and construction of the Bratsk hydroelectric station.

The region adjacent to the middle Angara River, called in Russian Priangar'ye, covers approx. 600,000 sq. km. and has only 780,000 inhabitants, concentrated in a narrow belt in the south. The Tayshet-Ust'kut railroad, in operation since 1956, and utilization of Angara water power will create conditions conducive to development of the immense natural resources of the region: coal, iron ore, salt, bauxite (at Bokson and Nizhne-Angarskoye), schist, etc., also the great timber reserves. The natural conditions and present state of local agriculture are sketched, with some discussion of how it will be affected as industry develops. Present distribution of kolkhozes and sovkhozes in the area is shown (map, p. 40). The paper is based in part on the author's investigation with the East Siberian Expedition of the Moscow State University in 1952–54.

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52219. KAZANT͡SEV, A. D. Kak i͡a lovliu zimoĭ ondatru. (Rat͡sionaliza t͡sii͡a okhotnich'ego promysla, 1958, vyp. 7, p. 74–75, *also pub.* in Okhota i okhotnich'e khozi͡aĭstvo, 1958, no. 2, p. 11.) Text in Russian. ***Title tr.:*** How I catch muskrat in winter.

A hunter of the Khanty-Mansi National District describes his experience trapping muskrats: the search for their "houses" or dens, sometimes with a dog, setting traps in ice holes, etc.

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KAZEN, D. H., *see* Stein, S. W., *and others.* The effects of adrenergic and adrenolytic agents . . . *1958.* No. 55145.

KEARNEY, ALLEN P., *see* Hall, J. F., *and others.* Body cooling in wet and dry clothing. *1958.* No. 51513.

KEARNEY, GEORGE W., *see* Karstens, C. W., *and others.* Pipeline study . . . *1957.* No. 52194.

52220. KEATINGE, W. R. The effect of low temperatures on the responses of arteries to constrictor drugs. (Journal of physiology, Aug. 1958. v. 142, no. 3, p. 395–405, illus., tables.) 19 refs.

Isolated ulnar arteries of bullocks lost their contraction power and response to adrenaline, histamine or Pitressin when cooled below 10° C. Arteries under the influence of these drugs at 37° when suddenly cooled to 6.5° C., remained contracted for four–six minutes and then relaxed slowly. Carotid arteries of other species and bovine ulnar veins also lost their responses to adrenaline or histamine when cooled to 6.5° C.

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52221. KEATINGE, W. R., *and* R. A. McCANCE. Increase in venous and arterial pressures during sudden exposure to cold. (Lancet, Aug. 1957. v. 273, no. 6988, p. 208–209, illus., table.) 10 refs.

Report on experiments with seven young, healthy men. Sudden exposure to cold caused in part of them a rise in antecubital and jugular venous pressure, accompanied by a moderate rise in arterial pressure, with little change in pulse rate. These changes are assumed to increase the work of the heart.

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52222. KECK, DAVID DANIELS, 1903– . Studies in *Penstemon*, VI; the section *Aurator*. (Torrey Botanical Club. Bulletin, Apr. 1938. v. 65, no. 4, p. 233–55.)

Contains keys and an annotated list of 18 species and 14 subspecies of this section, two subspecies and two varieties described as new. *P. gormanii* was collected in the Yukon and Alaska (Yukon valley, Chandalar River). Studies I–V, VII (1932–37, 1940) on this common North American perennial (beard-tongue) do not contain arctic material; pt. VIII *infra*. ***Copy seen:*** DLC.

52223. KECK, DAVID DANIELS, 1903– . Studies in *Penstemon*, VIII; a cyto-taxonomic account of the section *Spermunculus*. (American midland naturalist, Jan. 1945. v. 33, no. 1, p. 128–206, 5 illus., 13 text maps.) 10 refs.

This section is divided into nine subsections. In subsections *Proceri* and *Humiles*, chromosome counts have been made of 22 of the 34 species recognized. Three of the 22 have two chromosome numbers, namely *P. procerus* (n=8, 2n=32), *P. cinicola* (n=16, n=8) and *P. wilcoxii* (2n=16, 2n=32). Synoptical keys to the subsections and natural keys to the species and subspecies are provided. A systematic annotated list of 36 species and 21 subspecies is presented, with synonyms, descriptions, critical notes and distributional data. One new section (*Spermunculus*), two new species and one new subspecies are described (in Latin) and several new combinations are established. *P. procerus* ssp. *typicus* n. nom. is common in southern Alaska and Yukon Territory. ***Copy seen:*** DLC.

52224. KEDROV, L. V. Opredelenie teplovykh svoĭstv obuvi. (Legkaîa promyshlennost', July 1957. god 17, no. 7, p. 14–16, table, diagr.) Text in Russian. ***Title tr.:*** Determination of thermal properties of footwear.

Heat transmission through footwear of various types is studied in the laboratory of Central Scientific-Research Institute of the Leather Shoe Industry. A rubber balloon of shoe shape is placed inside the shoe and filled with hot water. Fall of temperature is studied for different materials and different types of footwear. Thermal resistance of various shoe parts is computed with given formulas. Well-insulated leather and felt footwear made for special assignments is also tested for the effects of snow, cold wind and moisture. ***Copy seen:*** DLC.

KEEFE, J. A. C., *see* Meen, V. B. Chubb . . . crater. *1957*. No. 53205.

KEEGAN, H. L., *see* Applewhite, K. H., *and others*. Residual effectiveness of DDT . . . *1953*. No. 49348.

52225. KEEGAN, THOMAS J. Arctic synoptic activity in winter. (Journal of meteorology, Dec. 1958. v. 15, no. 6, p. 513–21, text maps, tables.) 6 refs.

Analysis of wintertime distribution, structure and motion of cyclones and anticyclones in the Arctic, based upon 15 months' data, viz.: Dec. Jan. Feb., 1952–1957. Histories of the most important types of pressure systems are described, and interaction between arctic and middle latitudes is noted. Study discloses that the Arctic is a region of great synoptic activity, with cyclones outnumbering anticyclones about 2 to 1. Generally, cyclones are warm in the troposphere; cyclones originating in the Arctic are cold-core. Anticyclones are usually colder than cyclones. Synoptic activity in this region is very complex and is closely related to that of middle latitudes. ***Copy seen:*** DWB.

52226. KEEGAN, THOMAS J. The wintertime circulation in the arctic troposphere. (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 22–47, maps, tables.) 5 refs.

Survey of the distribution, growth, decline, and movement of tropospheric cyclones and anti-cyclones which appeared on synoptic weather charts Dec.–Feb. 1952–53—1954–55. Circulation proved to be as complicated over the polar area as over mid-latitudes; periods of persistence as well as of great variability occur; persistent anticyclones are associated with warm air aloft; numerous

cyclones traverse the north coast of Siberia. Maps and tables summarize data.
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52227. KEELER, C. M. Ablation studies: lower McCall Glacier, June 23 to September 1, 1957. (*In:* American Geographical Society. Preliminary reports of the Antarctic and Northern Hemisphere Programs, 1958. p. XII 11–15.)

Discusses methods of study, viz., measuring changes in surface level and in snow density; methods of calculating ablation; chart of surface level changes, including sources of error; map of ablation features, each located correctly within 10 meters; and the equi-ablation map, which required much interpolation, but is believed correct within 5 gm. water/sq. cm. and within 15 m. in area.
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KEELING, L., *see: Oil in Canada.* Northern . . . muskeg . . . *1958.* No. 53714.

KEENAN, C. E., *see* Chaudhry, A. P., *and others.* Daily rhythms in rectal temperature . . . *1958.* No. 50191.

KEENLEYSIDE, M. H. A., *see* Hoar, W. S., *and others.* Reactions of juvenile . . . salmon to light. *1957.* No. 51735.

52228. KEILPFLUG, ERICH. Das Schicksal der Indianer in Kanada. (Orion, June 1958. Jahrg. 13, Heft 6, p. 490–94, illus.) Text in German. ***Title tr.:*** The lot of the Indians in Canada.

Information is presented on the origin, route and times of Indian immigration into North America; vital statistics; role of the RCMP in maintaining order among the Indians; role of the aeroplane in opening and administering the Canadian North; Indian penetration into white man's areas and occupations.
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52229. KEIM, CHARLES J. Conservation comes north. (Alaska sportsman, Nov. 1957. v. 23, no. 11, p. 14–15, 42–45, illus.)

Describes program initiated in 1953 by the Cooperative Wildlife Research Unit at the University of Alaska to instruct military conservation officers in the laws and regulations of wildlife conservation in Alaska; an annual one-week course.
Copy seen: DI.

KEIM, CHARLES J., *see also* Skarland, I., *and* C. J. Keim. Archeological discoveries . . . *1958.* No. 54918.

52230. KEJLBO, IB. Misforståelserne omkring Frobisher Straedet. (Grønland, Dec. 1957, nr. 12, p. 459–66, maps.) Text in Danish. ***Title tr.:*** The misconceptions about Frobisher Strait.

Circumstances which led to the inclusion of "Frobisher Strait" (severing Greenland) on maps since the 16th century are recounted. Maps based on the discoveries of Frobisher, Davis and James Hall and various misconceptions that arose from them are discussed. Hans Egede's Greenland map from 1735–36 was the first to omit the strait.
Copy seen: DLC.

52231. KEJLSØ, ELVIN. Gravity measurements in western Greenland 1950–1952. København, Bianco Luno, 1958. 72 p. diagrs., fold. map. (Denmark. Geodaetisk institut. Skrifter, raekke 3, bd. 27.) 26 refs.

Contains tabulated data on observations at 194 stations along the coast from Kap Farvel north to Disko, and computed values of the gravity after adjustments were applied. A Frost gravimeter was used for the observations; the theory of the instrument is developed, and the calibration is described. A comparison is made between the Frost measurements and Nørgaard's and Martin's measurements (No. 41627, 46642), also between Askania and Frost measurements in Denmark.
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KELEĬNIKOV, A., *see* Nikol'skiĭ, G., *and* A. Keleĭnikov. Po Évenkii. *1958.* No. 53606.

KELEĬNIKOV, A., *see* Nikol'skiĭ, G., *and* A. Keleĭnikov. V Évenkii. *1958.* No. 53607.

KELLER, A. SAMUEL, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

KELLEY, ROBERT THOMAS, 1918– , *see* Rose, J. C., *and others.* Cardiovascular function . . . *1957.* No. 54385.

KELLI, A. CH., *see* Kondrat'ev, V. F., *and* A. Ch. Kelli. O dikikh ſagodnykh rasteniſakh. *1957.* No. 52381.

KELLOWAY, GEOFFREY A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

KELLY, MAURICE W., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

KELLY, ROBERT W., *see* Kessel, B., *and* R. W. Kelly. First . . . common crane . . . *1958.* No. 52248.

52232. KEMÉNY, ARMAND, *and others.* A vér anorganikus phosphor és diphosphoglycerinsav tartalmának változása hypothermiában, a postnatalis élet kezdetén. (Kísérletes orvostudomány, Apr. 1957. 9 évfolyam, 2 füzet, p. 158–65, illus., tables.) 24 refs. Text in Hungarian. Summary in German. *Other authors:* F. Kutas, *and* M. Stützel. ***Title tr.:*** Changes in anorganic phosphorus and in diphosphoglyceric acid of the blood during hypothermia of early postnatal life.

A study of one to several days-old dogs, rabbits and chicks cooled to 15°—10° C. In the mammals there was an increase of anorganic P and a decrease of diphosphoglyceric acid in the erythrocytes. The changes in anorganic P were insignificant in the chicks. Acidosis developing as result of lowered body temperature was mainly responsible for the changes in P content. ***Copy seen:*** DNLM.

52233. KEMMERIKH, A. O. Na Pripolĭarnom Urale. (Priroda, Aug. 1958. god 47, no. 8, p. 74–79, illus. map.) Ref. Text in Russian. ***Title tr.:*** On the sub-polar Urals.

Deals with the mineral resources of the area; rivers and water power; flora, forests, vertical zonation of the flora; morphology of the area, climate, precipitation and snow cover, water regimen of the rivers, lakes, etc. ***Copy seen:*** DLC.

52234. KENNEDY, STEPHEN JAY, 1904– . The Quartermaster Research and Development Center, 5; Textile, Clothing and Footwear Division. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, Oct. 1956. v. 8, no. 3, p. 233–40, illus.)

A discussion on the general aims of military clothing; climatic, including cold environment factors; terrain requirements; foot-wear, especially types designed for cold climates; tents for various climates, tundra included; fire, water, etc., resistance of tents; expendable paperboard tents for very cold weather; sleeping bags. ***Copy seen:*** DNLM.

52235. KENOYER, LESLIE A. Notes on plant ecology of Northern Ontario. (Michigan Academy of Science, Arts and Letters. Papers, (1939) 1940. v. 25, pt. 1, Botany and forestry, p. 67–74, 5 tables.)

Contains an ecological survey made during a trip in Aug. 1932 to James Bay, with data on plant formations at Gravenhurst, on Lake Muskoka, in the deciduous forest zone; in the Timagami Forest Reserve, a pine-dominated area of the coniferous forest region; at Cochrane, in a spruce- and fir-dominated area of the coniferous forest region, and at Moosonee in a relatively treeless muskeg. The frequency study of forest-floor species is tabulated. It is apparent that *Maianthemum canadense* and *Cornus canadensis* are the two most frequent plants.

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KENYON, J. R., *see* Cooper, K. E., *and* J. R. Kenyon. A comparison of temperatures . . . *1957.* No. 50334.

52236. KENYON, KARL WALTON, 1918– . Food of fur seals taken on St. Paul Island, Alaska, 1954. (Journal of wildlife management, Apr. 1956. v. 20, no. 2, p. 214–15, table.) 3 refs.

Notes based on 50,235 stomachs opened on the killing field. Of these some 32 contained food consisting chiefly of crustaceans and a few sandfish. The stomachs were collected between June 26 and July 26, 1954. ***Copy seen:*** DI.

52237. KENYON, KARL WALTON, 1918– . Harem master supreme. (Pacific discovery, Sept.-Oct. 1957. v. 10, no. 5, p. 24–28, illus.)

Describes fur seals on their breeding grounds in the Pribilof Islands. The present bull population is 16,000–17,000, the annual commercial crop 60,000–70,000 skins. ***Copy seen:*** DLC.

52238. KENYON, KARL WALTON, 1918– . The sea otter. (Oryx, Nov. 1957. v. 4, no. 3, p. 153–58, illus., plate.)

The extermination of *Enhydra lutris*, almost complete in North Pacific waters, is reviewed, with observations on the life of this marine mammal in the wild (on Amchitka Island) and in captivity at the Woodland Park Zoo in Seattle. The sea otter has been protected by law since 1911, and the population is increasing in Aleutian and California (near Monterey) waters. It does not flourish in captivity: often dies of enteritis, pneumonia, or infection of the extremities.

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KENYON, KARL WALTON, 1918– , *see also* Wilke, F., *and* K. W. Kenyon. The food of fur seals . . . *1957*. No. 56041.

52239. KÉPINOV, L. Influence de l'hypothermie experimentale sur les variations de la glycogénolyse hépatique des rats. (Journal de physiologie, June-July 1958. t. 50, no. 4, p. 853–60, tables.) 13 refs. Text in French. ***Title tr.:*** Influence of experimental hypothermia upon variations in hepatic glycogenolysis of rats.

Account of experiments with male animals made hypothermic by cold immersion. Glycogenolysis became inhibited when body temperature fell from 27° to 24° C. and stopped completely between 17° and 11° C. Insulin administered in the latter case had no effect but adrenalin reduced glycogenolysis. Adrenalin production is suspended in deep hypothermia. ***Copy seen:*** DNLM.

52240. KERÄNEN, JAAKKO, 1883– . Resultate magnetischer Beobachtungen im Jahre 1911 im nördlichen Finland und an der Küste des Finnischen Meerbusens. Helsinki, Helsingin Uusi Kirjapaino-Osakeyhtiö, 1918. 28 p. maps, tables. Text in German. ***Title tr.:*** Results of magnetic observations in the year 1911 in northern Finland and on the coast of Gulf of Finland.

Presents tabulated data on observations at 38 stations in northern Finland and 11 along the northern coast of the Gulf; tables include declination, inclination, horizontal intensity, and the values of the elements reduced to the period 1910.5. Stations, and observation and computation procedures are described, and observation accuracy is discussed. ***Copy seen:*** DLC.

52241. KERÄNEN, JAAKKO, 1883– . Resultate magnetischer Beobachtungen im Jahre 1912 in zwei Teilen des nördlichen Finlands und an der südlichen Ost-Küste des Bottnischen Meerbusens. Helsinki, Helsingin Uusi Kirjapaino-Osakeyhtiö, 1918. 18 p. maps, tables. Text in German. ***Title tr.:*** Results of magnetic observations in the year 1912 in two parts of northern Finland, and on the southern east coast of Gulf of Bothnia.

Observations were made at 15 stations in southern Lapland (Sodankylä) and the region north of Rovaniemi, 20 in northwestern Finland, and seven along the coast of Gulf of Bothnia between Turku and Pori; tables include declination, inclination, horizontal intensity, and the values of the elements reduced to the period 1910.5. Stations, and observation and computation procedures are described; results of coordination measurements in Pavlovsk are included. Charts of declination, inclination, and horizontal intensity are presented. ***Copy seen:*** DLC.

52242. KERÄNEN, JAAKKO, 1883– . Results of magnetic observations in 1913 in North Finland and at the northernmost repeat stations of the magnetic survey of Finland. Helsingfors, Helsingin Uusi Kirjapaino-Osakeyhtiö, 1917. 14 p. maps, tables.

Presents tabulated data from 34 stations on declination, inclination, horizontal intensity, and observations reduced to the period 1910.5. Magnetic charts of declination, inclination, and horizontal intensity are included. Stations, observation and computing procedures, and determination of corrections and horizontal constant at Pavlovsk are described. ***Copy seen:*** DLC.

52243. KERÄNEN, JAAKKO, 1883– . Results of magnetic observations in 1914 in North Finland. Helsingfors, Helsingin Uusi Kirjapaino-Osakeyhtiö, 1917. 13 p., maps, tables.

Presents results of observations at 33 stations in a region west of that investigated in 1913 (*supra*); tabulated data include declination, inclination, horizontal intensity, and results reduced to the period 1914.5. Magnetic charts of declination, inclination, and horizontal intensity are included. Stations, observation and computing procedures, and determination of corrections and horizontal constants at Sodankylä are described. ***Copy seen:*** DLC.

52244. KERÄNEN, JAAKKO, 1883– . Results of magnetic observations made in 1915 in north Finland. Helsingfors, Helsingin Uusi Kirjapaino-Osakeyhtiö, 1917. 15 p. tables, 4 l. maps.

Contains preliminary report of observations at 34 stations located north of the Arctic Circle in the parishes of Kittilä, Muonio, Enontekiö, Sodankylä (northwestern part), and Rovaniemi (northwestern part). Determinations of corrections and constants at Sodankylä (67°26′ N. 26°34′ E.) are described. Data on declination, inclination, and

horizontal intensity are tabulated and charted; the results are reduced to the period 1915.5. Brief station descriptions are included. ***Copy seen:*** DLC.

52245. KERN, FRANK DUNN. A biologic and taxonomic study of the genus *Gymnosporangium*. (New York Botanical Garden. Bulletin, Oct. 12, 1911. v. 7, no. 26, p. 391–483, 36 illus., plates 151–61.) 81 refs.

Presents (p. 391–434), the life history of this rust genus, its general characters, distribution and relationship, experimental investigation, and its pathologic and economic importance (a pest of junipers, cedars and stable orchard crops). Then follows a generic description, keys based on aecia and telia, host keys, and an annotated list of 40 species, of which three are new; synonyms, descriptions and data on host plants, type locality, distribution, illustrations and exsicatti are supplied. *G. sorbi*, occurring in southeastern Alaska, and *G. cornutum*, native to Greenland, are included.

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52246. KERRICH, G. J. Systematic note on *Rhorus substitutor* (Thunberg), Hym. Ichneumonidae. (Entomologisk tidskrift, 1957. årg. 78, häfte 4, p. 272–73.) 5 refs.

Contains data on synonyms of this ichneumon fly, including *Monoblastus erythropygus*, based partly on material from Lapland. ***Copy seen:*** DA.

KERSLAKE, D. McK., *see* Brebner, D. F., *and others*. The relation . . . heat exchange . . . *1958*. No. 49900.

52247. KESSEL, BRINA, *and* **T. J. CADE.** Birds of the Colville River, Northern Alaska. College, Alaska, 1958. 83 p. illus., tables, maps. (Alaska. University. Biological papers, no. 2.) 21 refs.

A study based largely on an expedition sponsored by the Office of Naval Research (June 4–Aug. 19, 1952) and field trips during the summers of 1956 and 1957. The Colville and its tributaries are the main drainage system of the Arctic Slope. The area, its geology, climate and phenology are described. Local avian habitats are characterized, 11 types are recognized along the Colville; biological and ecological data are given on the birds living in each type. An annotated list follows (p. 28–76) of 87 species, with information on distribution, abundance, habitat, breeding and other behavior; also data on specimens if taken.

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52248. KESSEL, BRINA, *and* **R. W. KELLY.** First North American sighting and photographic record of common crane, *Grus grus*. (Auk, Oct. 1958. v. 75, no. 4, p. 465, plate 22.)

This crane, a Eurasian species, was seen on Apr. 24, 1958, feeding in the fields about two miles out of Fairbanks, Alaska. It has been seen frequently with flocks of Canada geese and later with sandhill cranes. *Grus grus* normally breeds in Europe and western Asia, winters in Africa.

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52249. KESSEL, EDWARD L. The smoke fly, *Hormopeza copulifera* Melander. (Pan-Pacific entomologist, Apr. 1958. v. 34, no. 2, p. 86.)

Contains a note on this fly swept from smoke in various localities during a trip to Alaska (Spenard) and Yukon Territory. ***Copy seen:*** DA.

KESSLER, L. A., *see* Pool, J. L., *and others*. Mechanism . . . centrally induced cardiac irregularities . . . *1958*. No. 54076.

KESTER, FRANCIS E., *see* Hayman, C. R., *and* F. E. Kester. A study of infant mortality in Alaska. *1957*. No. 51640.

52250. KETHLEY, T. W., *and others*. The effect of low temperatures on the survival of airborne bacteria. Ladd Air Force Base, Alaska, Mar. 1957. 62 p. illus. tables (U.S. Air Force. Arctic Aeromedical Laboratory. Project no. 8–7958.) 17 refs. *Other authors:* E. L. Fincher and W. B. Cown.

A laboratory study of various airborne bacteria submitted to varying degrees of low temperature and humidity. A very low death rate was observed in the bacterial aerosols at low temperatures, consistent with reports on the presence of viable bacteria in the upper atmosphere. It is suggested that the composition of the non-living material associated with the airborne bacterium is the main factor determining its fate.

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52251. KEUL'KUT, VIKTOR GRIGOR'EVICH. Molodoĭ chukotskiĭ poėt. (Na severe dal'nem, 1955, vyp. 2, p. 108–110.)

Text in Russian. ***Title tr.:*** A young Chukchi poet.

Russian translation of three poems by this Chukchi writer, with a biographical note by the editor: his boyhood in poverty, studies at the Anadyr school for collective farm employees, work as a reindeer zootechnician, contribution to the local press. ***Copy seen:*** DLC.

52252. KEUL'KUT, VIKTOR GRIGOR'EVICH. Nerpa i medved'; okhota na morzheĭ. (Pioner, Sept. 1957. god 34, no. 9, p. 38–39.) Text in Russian. ***Title tr.:*** Seal and bear; walrus hunt.

Two Chukchi poems describing a seal's escape from a bear and a walrus hunt, translated into Russian by Nikolaĭ Starshinov. ***Copy seen:*** DLC.

52253. KEUL'KUT, VIKTOR GRIGOR'EVICH. Stikhi. (Druzhba narodov, June 1957, no. 6, p. 115–19.) Text in Russian. ***Title tr.:*** Poems.

Six poems on northern life and nature translated from Chukchi by N. Starshinov. ***Copy seen:*** DLC.

52254. KEW. ROYAL BOTANIC GARDENS. Plants from Labrador. (Bulletin of miscellaneous informations, 1907, no. 3, p. 76–88.)

Contains a systematic list of about a hundred flowering plants, nine ferns, 24 mosses and liverworts, 25 lichens and three fungi, collected by Sir William McGregor, Governor of Newfoundland, in Aug. 1905, on Cape Chidley (60°–60°30′ N.) the northern extremity of Labrador, also, a year later, at Anse Sablon on the south coast. The distribution is also shown in Lapland and northern Scandinavia. ***Copy seen:*** MH–A.

KEYSSLER, H., *see* Tauber, K., *and others.* Stoffwechseluntersuchungen . . . *1957.* No. 55338.

52255. KHABYRYYS, BAAL (VESHNIKOV G. G.) 1918– . Dva stikhotvoreniîa. (Druzhba naradov, Aug. 1955, no. 8, p. 132–34.) Text in Russian. ***Title tr.:*** Two poems.

Lyric poems translated from Yakut by M. Svetlov. ***Copy seen:*** DLC.

KHACHADURIAN, AVEDIS, *see* Badeer, H., *and* A. Khachadurian. Role of bradycardia . . . *1958.* No. 49470.

52256. KHAĬKIN, N. M. Atomnyĭ ledokol "Lenin". (Klub, June 1958. god 7, no. 6, p. 38, illus.) Text in Russian. ***Title tr.:*** The atomic icebreaker *Lenin.*

This new ice-breaker for arctic service is briefly described, with the main data on ship and power units. It has 16,000 tn. displacement, 134 m. length, 27.6 m. width, turbo-generators of 44,000 hp. at 18 knots. The atomic reactor is well insulated with heavy lead and concrete walls and can be automatically controlled from the bridge. Crew accomodations have facilities for long trips (day-lighting, heating and air conditioning, medical service, library, moving pictures, etc.). Special hangars are provided for two helicopters for reconnaissance. Radar and electronic instruments are used for navigation in all weather conditions. Atomic power is to be used in near future in tankers, whaling ships, locomotives and mobile electric-stations. ***Copy seen:*** DLC.

KHAIN, V. E., *see* Fortier, Y. O., *and others.* Geologiîa . . . *1958.* No. 50954.

52257. KHALEZOV, D. V avangarde sovetskoĭ aviatsionnoĭ nauki. (Grazhdanskaîa aviatsiîa, Dec. 1958. god 15, no. 12, p. 29–30, illus.) Text in Russian. ***Title tr.:*** At the head of Soviet aeronautics.

Notes activities and achievements of the Soviet Central Aero-Hydrodynamic Institute (TSentral'nyĭ aérogidrodinamicheskiĭ institut, TSAGI) occasioned by the 40th anniversary of its foundation; its chief scientists and engineers, their work on aircraft for arctic flights, etc. ***Copy seen:*** DLC.

52258. KHALIL, H. H. Hypothermia by internal cooling. (Lancet, Jan. 1957. v. 272, no. 6961, p. 185–88, illus.) 10 refs.

Contains description of a new method of inducing hypothermia by circulating cold water through an intragastric rubber balloon. The method, tried on dogs, showed injury potential in four out of 16 experiments at temperatures below 29° C. but did not produce ventricular fibrillation. ***Copy seen:*** DNLM.

52259. KHALILETSKIĬ, G. Dal'nie dorogi; stranichki dnevnika. (Dal'niĭ Vostok, Mar.–Apr. 1957. god 25, no. 2, p. 138–54.) Text in Russian. ***Title tr.:*** Distant paths; pages from a diary.

Journalist's sketch of his trip to Magadan and environs: the flight from Khabarovsk; rise of the town itself and gold mining in Magadan Province; work of the Marchekan shipyard and machine

plant; agriculture and vegetable growing and activities of the collective and state farms; fisheries and their shortcomings; young volunteer workers from Moscow; reindeer breeding; activities of the Main Administration for Construction in the far North (Dal'stroĭ) and of the All-Union Magadan Scientific Research Institute VNII–1. In 1956, the Province had 781 hectares of arable land; 70 percent of the collective farm income derived from reindeer breeding.

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52260. KHANTULEV, A. A. Voprosy genezisa lesostepnykh pochv Vostochnoĭ Sibiri. (Leningrad. Universitet. Uchenye zapiski, ser. biologicheskikh nauk, 1951. no. 140, vyp. 27, p. 199–217, tables.) 10 refs. Text in Russian. ***Title tr.:*** Origins of the forest-steppe soils of East Siberia.

"Variations in permafrost depth associated with relief, vegetation cover, and soil composition are described. The effects of permafrost, severe climate, and moisture on physical and chemical soil processes, including humus formation in the active layer, are examined in detail. Data on the chemical composition, structure, and hygroscopic properties of East Siberian soils are tabulated. Average thickness of the active layer is about 1 m. in deciduous mountain taiga, 1.5–2.5 m. in deciduous lowland taiga, 2–2.8 m. on the steppes, and 3 m. or more on grass-covered river valleys and slopes. Permafrost and peat cover prevent soil moisture from evaporating. The accumulation of moisture and salts in the active layer causes swamping of large areas, resulting in ground deformations and erosion."—SIPRE.

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KHARIN, V. I., *see* Kokosov, N. M., *and others.* Khanty-Mansiĭskiĭ natsional'nyĭ okrug . . . *1956.* No. 52358.

52261. KHARITONOV, LUKA NIKIFOROVICH. O kornëkh zvukopodrazhatel'nykh slov v ſakutskom ſazyke. (*In:* Akademiſa nauk SSSR. ſAkutskiĭ filial. Doklady 1954, p. 102–117, tables.) Text in Russian. ***Title tr.:*** Onomatopoeic word stems in the Yakut language.

Discusses the phonetic and grammatic structure of over 200 Yakut monosyllabic stem words of sound-imitative origin and their polysyllabic derivatives: verbs, adverbs, verbal nouns and adjectives, and interjections. ***Copy seen:*** DLC.

52262. KHARITONOV, LUKA NIKIFOROVICH. Tipy glagol'noĭ osnovy v ſakutskom ſazyke. Moskva, Izd-vo Akademii nauk SSSR, 1954. 312 p. tables. (Akademiſa nauk SSSR. ſAkutskiĭ filial.) Approx. 25 refs. Text in Russian. ***Title tr.:*** Types of the verbal basis in the Yakut language.

A lexical and morphological analysis of the basic verbs and verbal derivatives, their semantic and syntactic formation, etc. Glossaries of onomatopoeic (sound-imitating) and descriptive verbs and verbal affixes are appended (p. 260–306).

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52263. KHAR'KOV, V. E. Ukrytiſa dlſa samoletov v zimnikh usloviſakh. (*In:* U.S.S.R. Armiſa. Upravlenie Voenno-vozdushnykh Sil. Sbornik materialov po stroitel'stvu . . . aėrodromov. Moskva, 1942. vyp. 1, p. 56–61, illus., diagrs.) Text in Russian. ***Title tr.:*** Concealment of aircraft under winter conditions.

Aircraft embankments constructed from snow or lumber are discussed in terms of protection from bomb bursts and from detection. Snow embankments are made of hard-packed snow surrounding the plane and as high as its highest part, the outside walls sloping to minimize contrast. Two types of wooden embankments are discussed. Snow is banked against a vertical wall. A wooden wall sloping inward supports an embankment of snow and offers more protection to the plane and personnel than a simple snow wall.—From SIPRE. ***Copy seen:*** DLC.

52264. KHITAROV, N. I., *and others.* Khimicheskiĭ sostav zhidkikh vklſucheniĭ islandskogo shpata i voprosy genezisa. (Geokhimiſa, 1958. no. 3, p. 214–21, illus., table, plate.) 2 refs. Text in Russian. Summary in English. *Other authors:* E. V. Rengarten, *and* N. E. Lebedeva. ***Title tr.:*** The chemical composition of liquid inclusions in Iceland spar and questions of genesis.

Based on Iceland spar found in four places in Tungusska syncline of Siberian platform. Chemical characteristics of liquid inclusions in the crystals from lavic and tufogenous strata are presented. In most cases the liquid inclusions have calcium-sodium-chloride composition; in several, the salt concentration is high. In all the solutions, calcium predominates over sodium. "The absence of free CO_2, considerable chloride concentration, and the predominance of calcium chloride in inclusions indicate the specific conditions

of the formation of the Siberian shield deposits." ***Copy seen:*** DLC.

52265. KHLATIN, S. A. Za dal'neĭshee sovershenstvovanie lesoustroitel'nykh rabot v Sibiri i na Dal'nem Vostoke. (Lesnoe khozi͡aĭstvo, Mar. 1958. god 11, no. 3, p. 30–34.) Refs. Text in Russian. ***Title tr.:*** Further improvements in forest activities in Siberia and the Far East.

Forested areas in Siberia are estimated at about 845.3 million hectares. By 1961 air-mapping will have covered 139 million hectares. The economics of exploiting forests in different regions (Krasnoyarsk, Irkutsk, Ob-Irtysh basin) are reviewed, with emphasis on planned cutting and reforestation near suitable transportation lines and close to new industrial developments. Measures to combat fire hazard and forest pests are mentioned. Organized expeditions for further exploration of the regions are proposed. ***Copy seen:*** DLC.

52266. KHLEBOVICH, V. V. Nabli͡udeni͡ia nad morozostoĭkost'i͡u mnogoshchetinkovykh chervei Kuril'skoĭ gri͡ady. (Akademi͡ia nauk SSSR. Doklady, 1957. t. 112, no. 3, p. 542–44, illus.) 12 refs. Text in Russian. ***Title tr.:*** Observations on frost resistance in polychaetes of the Kuril Ridge.

Account of experiments using two species of these worms, with reference to earlier observations on the Murman coast. Temperatures of $-2°$ to $-4°$ C. were well tolerated in one species for three days in the other for 12 hours. Temperatures down to $-8°$ C. were increasingly injurious in shorter times. The ecological significance of this behavior is discussed. ***Copy seen:*** DLC.

52267. KHMYZNIKOV, PAVEL KONSTANTINOVICH, 1896– . K gidrologii vostochnoĭ chasti Karskogo mori͡a. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovani͡ia moreĭ SSSR, 1933. vyp. 18, p. 1–48, illus., tables, map.) Text in Russian. Summary in German. ***Title tr.:*** The hydrology of the eastern Kara Sea.

Account of investigations conducted in 1930 and 1931 from the M/S *Belukha* while on trips to the western Taymyr. Route, organization and methods of investigation; surface temperature and salinity; temperature and salinity of deep waters; O_2-content, and ice cover are described and analyzed. Based on these observations, the distribution of water masses, seasonal changes, effects of fresh waters, O_2-salinity-temperature relations, currents, etc., are reconstructed and discussed. ***Copy seen:*** DLC.

52268. KHMYZNIKOV, PAVEL KONSTANTINOVICH, 1896– . Nekotorye dannye o zimnem rezhime v 1927–28 g.g. prolivov arkhipelaga Novosibirskikh ostrovov i Ĭ Anskogo zaliva. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovani͡ia moreĭ SSSR, 1932. vyp. 15, p. 33–62, illus. tables, fold. map.) 18 refs. Text in Russian. Summary in German. ***Title tr.:*** Some data on the 1927–28 winter regime in the sounds of the new Siberian Islands and in Yana Bay.

Account of investigations made in 1927–28 by the Yana Hydrological party of the Academy of Sciences' Yakut expedition. Temperature, salinity, ice cover and its character were studied. Temperature and salinity indicate winter stagnation in some areas and layers, and an influence of the Yana River on the eastern part of the Laptev Sea. The differences in seasonal amount of water discharge of the Yana and its effects upon the sea were also studied as well as the process of rise of salinity in the sea ice. ***Copy seen:*** DLC.

52269. KHMYZNIKOVA, V. L. Materialy k izucheni͡iu zooplanktona Matochkina Shara i pribrezhnykh ra͡ionov Novoĭ Zemli. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovani͡ia moreĭ SSSR, 1931. vyp. 12, p. 131–50, tables.) 26 refs. Text in Russian. Summary in German. ***Title tr.:*** Materials to the study of the zooplankton of Matochkin Shar and the coastal areas of Novaya Zemlya.

Based on study of various collections, the material is first presented in taxonomic order with notes on temperature and salinity at the location of finds. Subsequently the matter is tabulated according to geographic distribution, and depth. It is concluded that the forms found in midsummer in the Strait are common to the coastal waters of Novaya Zemlya and originate from the Barents Sea. ***Copy seen:*** NN.

52270. KHMYZNIKOVA, V. L. Zooplankton ͡iuzhnoĭ i ͡iugo-vostochnoĭ chasti Karskogo mori͡a. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovani͡ia moreĭ SSSR, 1936. vyp. 24, p. 232–85, tables, maps.) 20 refs. Text in Russian. Summary in German. ***Title***

tr.: Zooplankton of the southern and southeastern Kara Sea.

Contains a study and list of all zooplankton hitherto recorded in the area including the author's investigations on material collected in 1930 and 1931, the latter derived largely from the surface. Some 224 forms are recorded briefly with location, depth, frequency, salinity, temperature, etc., noted. The collections of 1930–1931 are treated more fully, in a taxonomic order with information similar to the above. Zoogeographically, the material is essentially of three kinds: Atlantic, polar, and brackish or freshwater forms, the latter brought down by the big Siberian rivers.

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52271. KHODAK, ÍŪ. A. Vtorichnye mineraly nizhne-kembriĭskikh otlozheniĭ Aldanskogo raĭona ĪAkutskoĭ ASSR. (Akademiĭa nauk SSSR. Geologicheskiĭ institut. Trudy, 1956. vyp. 5, p. 169–200, 7 plates, 10 tables.) 59 refs. Text in Russian. ***Title tr.:*** Secondary minerals of Lower Cambrian deposits in the Aldan River region of Yakut A.S.S.R.

Describes petrographic and chemical characteristics of secondary, or newly formed, minerals of the Lower Cambrian sedimentary rocks. Lower Cambrian deposits consist of syngenetic, diagenetic and secondary minerals. Of the last, several are described: quartz and chalcedony, feldspars, newly-formed minerals of titanium (leucoxene, brookite, rutile), carbonates (calcite, dolomite), fluorite, pyrite, marcasite, magnetite, sericite, hydromica, kaolinite, garnet, barite, sulfur, and gypsum; and for some of these, the spectral, optical and chemical properties are outlined. Formation of new minerals depends primarily on the initial composition of sedimentary rocks, also on petrographic composition of cover, chemical properties of ground waters, geologic conditions, porosity, and separation of the rocks. It is concluded that newly formed minerals occur in four ways: (1) as products of recrystallization of syngenetic and diagenetic minerals without substantial changes of their chemical composition; (2) as products of chemical transformation; (3) as products of chemical modification of brecciated and clayey materials; and (4) as products of over-enlarged and brecciated minerals. This type of investigation, author notes, is new, initiated by the All-Union conference on sedimentary rocks in 1952.

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KHOMICH, L. V., *see* Tereshchenko, N. M., *and* L. V. Khomich. Otchet o rabote lingvisticheskoĭ ėkspeditsii . . . *1955.* No. 55384.

KHOREVA, I. M., *see* Chebotareva, N. S., *and others.* Geomorfologiĭa . . . *1957.* No. 50192.

52272. KHOROSHIKH, PAVEL PAVLOVICH. Arkheologicheskie raboty muzeev v SSSR za 1955–1956 gg. (Sovetskaĭa arkheologiĭa, 1957, no. 4, p. 298.) Text in Russian. ***Title tr.:*** Archeological work of U.S.S.R. museums in 1955–1956.

Reports on the excavations conducted by the Irkutsk regional museum in the future flood zone of the Irkutsk hydroelectric station on the Angara River. The finds, including finely carved bone and stone figurines, made at several neolithic (Serov, Kitoy) sites are described and the discovery of fossil mammal bones (woolly rhinoceros, bison, horse, giant elk, reindeer and stag) showing traces of stone tool work noted.

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52273. KHOROSHIKH, PAVEL PAVLOVICH. Ė. R. Rygdylon. (Sovetskaĭa arkheologiĭa, 1958. no. 4, p. 307, port.) Text in Russian.

Obituary of the Buryat philologist and archeologist, Ėrdemto Rinchinovich Rygdylon, 1906–1957. His research on neolithic sites on the Angara River and deciphering of old Turkic runic inscriptions in the Cis-Baykal area are noted.

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52274. KHOROSHIKH, PAVEL PAVLOVICH. Ėneoliticheskoe pogrebenie na beregu oz. Baĭkala. (Sovetskaĭa arkheologiĭa, 1957, no. 4, p. 153–55, illus., sketch map.) Ref. Text in Russian.

Title tr.: A late neolithic burial on the shore of Lake Baykal.

Reports on the discovery of the first late neolithic (Glaskov) burial on Lake Baykal proper made by the Baykal Historical-Archeological Expedition of the Irkutsk State University in 1956 at Sagan-nugė cove, midway between the Lena and Angara Rivers. The prone, north-northwest oriented, female skeleton with traces of red-brown ochre and the stone, bone and copper implements are described and compared to similar finds from the Lena, Angara and Selenga Rivers.

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52275. KHOROSHIKH, PAVEL PAVLOVICH. Pisanit͡sy na gore Mankhal. (Akademiĭa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniĭa, 1949. vyp. 25, p. 127–31, illus.) 5 refs. Text in Russian. ***Title tr.:*** Pictographs on Mankhay mountain.

Describes incised rock drawings, mainly of hunters on horseback, discovered by the author in 1925 and 1947 along the Kuda, a right tributary of the Angara River. Of interest is a horse with an ancient Yakut saddle cloth and branding mark. The drawings belong partly to the old-Turkic culture, similar to the Kurykan pictographs on the Upper Lena River described by Okladnikov (No. 36584), partly to the later old-Buryat period. ***Copy seen:*** DLC.

KHOROSHIKH, PAVEL PAVLOVICH, *see* Chard, C. S. Northern Asia. *1957.* No. 50173.

KHOROSHIKH, PAVEL PAVLOVICH, *see* Lisit͡syna, N. K. Arkheologicheskie . . . *1958.* No. 52859.

KHOROSHIKH, PAVEL PAVLOVICH, *see* Rygdylon, É. R., *and* P. P. Khoroshikh. Progrebeniĭa v mestnosti Idan . . . *1958.* No. 54476.

KHRGIAN, A. Kh, *see* Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet. Mezhdunarodnyĭ geofizicheskiĭ god. Informat͡sionnyĭ bi͡ulleten' . . . *1957.* No. 49182.

KHRISTIANOVICH, S. A., *see* Ivanov, B. V. Konferent͡siĭa . . . *1958.* No. 51999.

52276. KHROMCHENKO, VASILIĬ STEPANOVICH, *d.* 1849. Otryvki iz zhurnala plavaniĭa g. Khromchenki, v 1822 godu. (Se͡vernyĭ arkhiv, 1824. pt. 10, p. 254–76, 303–314; pt. 11, p. 38–64, 119–31, 177–86, 235–48, 297–312.) Ref. Text in Russian. ***Title tr.:*** Excerpts from the journal of the 1822 voyage of Khromchenko.

Contains the April–July 1822 section of Khromchenko's journal kept on the *Golovnin*, omitting some details on weather and changes in course. This second expedition of Khromchenko (in charge) and A. K. Étolin was to continue their 1821 survey, for the Russian-American Company, of the west Alaskan coast and islands between Cape Newenham (Bristol Bay) and Norton Sound and gain knowledge of the inhabitants of the area. Weather, navigation conditions and geographic features are noted; the customs, economy, clothing, beliefs, etc., of the natives are described. Glossaries, over 100 words each, with Russian translations, are given for five Eskimo languages: Koniag, Aglegmut, and those spoken on Nunivak, Stuart and St. Lawrence Islands. A review of the Russian-American Co.-sponsored expeditions during 1803–1821 introduces this journal. ***Copy seen:*** DLC.

52277. KHROMOV, SERGEĬ PETROVICH, 1904– . Geograficheskoe rasprostranenie mussonov. (Vsesoi͡uznoe geograficheskoe obshchestvo. Izvestiĭa, Jan.–Feb. 1957. t. 89, vyp. 1, p. 7–13, text map.) 14 refs. Text in Russian. ***Title tr.:*** The geographic distribution of monsoons.

Monsoons are considered (as by H. Flohn) not only tropical, but, in extension of Flohn's views, a planetary meteorological phenomenon which manifests itself in various forms of atmospheric circulation typical for each latitudinal belt. Four monsoon zones are distinguished: tropical, sub-tropical, temperate and polar (above 70° N.); existence of a high-arctic monsoon sub-zone north of 80° N. is claimed (p. 10). Zone distribution and types are schematically shown (text-map). ***Copy seen:*** DLC.

KIĂKK, V. A., *see* Zhebrovskiĭ, A. N., *and* V. A. Kiăkk. 0,01 natural'noĭ velichiny. *1957.* No. 56197.

52278. KIERNAN, WILLIAM J., Jr. Modern triumph in the northern ice. (United States Naval Institute. Proceedings, July 1957. v. 83, no. 7, p. 742–52, illus., map.)

Transportation of oil and construction materials for the DEW Line sites in Canada was carried out by MSTS (Military Sea Transport Service) Arctic Operations 1955, with 126 naval and merchant marine ships, in two task forces, working from both Atlantic and Pacific. The operation of the Atlantic force, preparations, organization, equipment, also difficulties encountered during navigation and unloading, are described. Most of the naval vessels were winterized prior to departure, with special lubricating and tuning-up of equipment, installation of a cast steel propeller with stainless steel blades or nickel-aluminum bronze propellers, fitting of propeller iceguards, etc. First discharge stop was Coral

Harbour, Southampton Island; the unloading operation is described, and comments offered on the native population (especially health conditions) and American-Canadian personnel. During the voyage to two sites further northward, the ships, so long as they were not allowed to go dead in the water, could be navigated independently, and icebreaker assistance was seldom required in Foxe Basin ice. Many vessels suffered bow damage, however, and brittle fractures in equipment were a source of trouble before the return home on Oct. 1. The experiences are summarized in a discussion of the suitability of various types of small craft for arctic service, and pointers are given on how to beach a vessel in Foxe Basin. On the Pacific side, all but 11 of the 53 ships went east of Point Barrow. Losses and damages are reviewed, and the Operation's overall efficiency is stressed. ***Copy seen:*** DLC.

KIERS, D., *see* Boeré, L. A., *and others.* Hypothermia . . . *1957.* No. 49803.

52279. KIERULF, THV. Verdens nordligste furuskog. (Tidsskrift for skogbruk, Jan. 1953. årg. 61, hefte 1, p. 24–26.) Text in Norwegian. ***Title tr.:*** The world's northernmost pine.

Describes scattered growth of pine among birch at Børselv (70°30′ N.) and Stabburselv (70°10′) east and west of the Porsangerfjord (25°30′ E.). The pine once thought to be dying out, thrives with the warmer climate during the past 40 years. Removal of the birch would further aid the pine. That at Børselv is the northernmost in Europe, and, according to some, in the world.

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52280. KILDAY, GORDON D. Rare waterspouts in Alaska. (U.S. Weather Bureau, Monthly weather review, Aug. 1957. v. 85, no. 8, p. 281.)

Brief account of sighting two waterspouts in Cross Sound, Aug. 19, 1957, by a fisherman. Clouds, visibility, temperature, dewpoint, and wind at Cape Spencer, 20 mi. to the northeast, are noted; the synoptic situation for the area is described; abnormally high sea temperatures prevailed in the eastern part of the Gulf of Alaska, but relation of waterspouts to the abnormal temperatures could not be determined.

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52281. KILDIŪSHEVSKIĬ, I. D. Pyl'ſsa v vozdukhe Arktiki. (Botanicheskiĭ zhurnal, Nov.–Dec. 1955. t. 40, no. 6, p. 857–60, table.) 8 refs. Text in Russian. ***Title tr.:*** Pollen in the arctic atmosphere.

Summarizes results of microorganism, spore and pollen grain studies, chiefly work of N. V. Polunin, S. M. Pady and C. D. Kelly (No. 13666 and 25191) from flights in 1947 and 1948. Data on quantity of pollen grains or spores are tabulated for various groups of plants.

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52282. KILLEEN, PEMBERTON LEWIS, 1908– . Iron deposits in the territories and overseas possessions of the United States and on certain islands under its jurisdiction: chapter I. Iron deposits of Alaska. (*In:* International Geological Congress. 19th, *Algiers,* 1952. Symposium sur les gisements de fer du monde, t. 1, p. 413–23, map in atlas vol.) Refs.

Geologic descriptions of the known iron-ore deposits are given; they comprise millions of tons of ore deposited under a variety of conditions in widely scattered locations throughout the country. Magnetite, a replacement in contact metamorphism and in fracture fillings, is of greatest importance. Hematite is known in several places, and associated minerals are reported. Richness of samples and size of some ore bodies are indicated. No production is noted. ***Copy seen:*** DLC.

KIMELDORF, DONALD J., *see* Newsom, B. D., *and* D. J. Kimeldorf. The role of food . . . rats . . . *1957.* No. 53553.

KIMELDORF, DONALD J., *see* Newsom, B. D., *and* D. J. Kimeldorf. Role of food . . . mortality . . . *1958.* No. 53554.

52283. KIMMINS, D. E. A new lentic species of the genus *Baëtis,* Ephemeroptera, from North Finland. (Notulae entomologicae, 1957. v. 37, no. 1, p. 27–29, 2 illus.)

Baëtis macani is described from Mt. Saana (about 800 m.) near Kilpisjärvi; it was bred from nymphs in a small stony lake, by T. T. Macan, q.v. The new species is closely related to *B. vernus.*

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52284. KINDBERG, NILS CONRAD, 1832–1910. New notes on the North-american bryology. (Revue bryologique, 1907. t. 34, no. 5, p. 87–92.)

Describes 32 mosses, 16 of them new species or subspecies; at least 12 are

registered in the far North: Alaska, Yukon Territory, Hudson Bay region, Baffin Island, Southampton Island.

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KINDBERG, NILS CONRAD, 1832–1910, *see also* Macoun, J. Catalogue of Canadian plants. *1883–1901.* No. 53032.

52285. KING, HAROLD, *and* **G. BOUNOUS.** Cardiac input in hypothermia. (Surgery, gynecology & obstetrics, Dec. 1958. v. 107, no. 6, p. 753–57, illus., tables.) 4 refs.

Direct measurements on dogs showed a total cardiac input of 40 milliliters at 25° C. body temperature against 135 ml. at 37°, per kilogram per minute. At 25° the flow was 29% of normal. The decrease was 9.3% per degree between 37° and 30° and 3.6% after. The amount of superior vena caval blood, arterial blood pressure, etc. are also discussed.

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52286. KINOSITA, SEIITI. Breakdown of snow by impulsive force, 2. (Teion kagaku, 1956. ser A, v. 15, p. 149–69, illus., tables.) 11 refs. Text in Japanese. Summary in English.

Report of observations on the resistance offered by snow to the penetration of a falling body and of studies on the relation between the variations in resistance and snow stratification. The resistive force showed large, slow changes on which rapid changes were superimposed. The slow changes are attributable to the break-down of individual snow layers as the body sinks into the snow, while rapid changes are due to intermittent breakdowns taking place within each layer. A large increase in the supporting capacity of the snow compressed by the falling was also noted. The ratio between the mass of compressed snow and the energy absorbed by the snow is considered as a measure of snow softness.

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KINOSITA, SEIITI, *see also* Ôura, H., *and* S. Kinosita. On . . . bending and compressive strengths . . . frozen soil . . . *1956.* No. 53813.

KIRBY, CHARLES K., *see* Kyle, R. H., *and* C. K. Kirby. The use . . . potassium chloride for defibrillation . . . hypothermic dog. *1957.* No. 52603.

52287. KIRDE, KARL. Change of climate in the Northern Hemisphere. Tartu, 1938. 35 p. diagrs., maps, tables. (Tartu, Estonia. Ulikool. Acta et commentationes. A, mathematica physica, medica. v. 33, no. 5.)

An attempt is made to analyze variations in temperature based on data from 45 stations, including nine north of 60° N. lat., with records of at least 45 years; beginning with the period of 1860–1870. Areas of significant increases and decreases in temperature are mapped for each month. Marked temperature increases in Greenland are noted.

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52288. KIREEV, V. A. Iz opyta ustroĭstva dorozhnykh osnovaniĭ v zimnee vremîa. (Avtomobil'nye dorogi, Jan. 1958. god 21, no. 1, p. 16–17, illus.) Text in Russian. ***Title tr.:*** Experience with winter construction of highway beds.

Road construction during winter extends the total construction period by at least five months. Various methods of partial or total bed covering, using gravel, sand and asphalt, are described with illus. and analysis of details. Dimensions of covering (width and thickness of different layers) are specified for different types of roads.

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52289. KIRICHENKO, A. ÎAkutsk-Gavana. (Neva, Nov. 1958, no. 11, p. 237, port.) Text in Russian. ***Title tr.:*** Yakutsk-Habana.

Describes a Yakut girl's ballet studies in Leningrad, her friendship with a Cuban girl dancer, and her return to Yakutsk as a full-fledged ballerina.

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52290. KIRICHENKO, A. O chem povedali skaly. (Neva, Oct. 1957, no. 10, p. 219, illus.) Text in Russian. ***Title tr.:*** The cliffs are talking.

Describes the painted frieze two-and-a-half-km. long discovered by A. P. Okladnikov on a sheer cliff high above the Lena River. These rock paintings, copied and interpreted by Okladnikov and V. D. Zaporozhskaîa, depict horses, elk, deer, birds, hunting scenes, religious and magic rites, etc.; the oldest is dated at approx. 15,000 years by its horse of a species now extinct.

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52291. KIRICHENKO, G. I. Verkhniĭ proterozoĭ okrainy Sibirskoĭ platformy. (Leningrad. Vsesoîûznyĭ geologicheskiĭ institut. Materialy, nov. seriîa, 1955. vyp. 7, Materialy po geologii Sibirskoĭ

platformy, p. 5–26, illus., tables, plates.) 7 refs. Text in Russian. ***Title tr.:*** The Upper Proterozoic on the borders of the Siberian platform.

Outlines the stratigraphy of Proterozoic deposits mainly distributed in the Yenisey Ridge, particularly its central and western parts, and the Turukhansk region, especially between the Sukhaya Tunguska and the Bol'shaya and Malaya Shorikha Rivers. These regions are treated in turn. In Turukhansk, the Lower Proterozoic also is represented. Stratigraphy of the formations and their series is outlined, their thickness and age identified; a new stratigraphic division is proposed; but many questions are still unsettled.

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52292. KIRILLOV, A. A. Classification of arctic ice and its distribution in the Soviet sector of the Arctic. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 11–14, plate, diagr.) 17 refs.

Reviews Russian scientists' attempts to classify sea ice. Eight bases for ice classification are noted, none of them as yet exhaustively investigated. Salient features of grouping systems in use in the U.S.S.R. are described with summary diagram. Geographic and seasonal distribution of sea ice are outlined, and regional characteristics are explained. Conventional signs used on ice charts are illustrated. ***Copy seen:*** DN–HO.

52293. KIRILLOV, A. A. Uchet torosistosti pri opredelenii ob"ema l'da. (Problemy Arktiki, sbornik statei, 1957. vyp. 2, p. 53–58, tables, graph.) 3 refs. Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Correction for hummocking in the calculation of ice volume.

"Hummocking as a factor increasing the total ice-cover volume in arctic seas is examined on the basis of data collected at the Arctic Institute since 1944. Methods developed for hummock observation, including aerial photography, are described, and formulas for calculating the ice volume in areas of hummocked ice are given. Measurements show maximum frequency for pyramidal and cone-shaped hummocks with a 1:3 ratio between above- and below-water volumes. The volume of a hummocked area in the Kara Sea averaged about 111 cu. km. for May 1944–1952 or about 28% of the total ice volume, with a rise to 39% in 1945 and a drop to 22% in 1950."—SIPRE.

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52294. KIRILLOV, D. S dreĭfuûshcheĭ l'diny. (Okhota i okhotnich'e khozîâĭstvo, Sept. 1958. god 4, no. 9, p. 27.) Text in Russian. ***Title tr.:*** From the drifting ice floe.

Reports birds, arctic fox and polar bears seen by the radio operator (2d team) of drifting station North Pole-6; e.g., in Apr. 1958 at 80°50′ N. 150°05′ E. (?), fox, in May snow bunting, on June 12, bear. During the first year of the station's drift, Apr. 1956–Apr. 1957, it had 50 visits of polar bears.

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52295. KIRILLOV, F. N. Ryby reki Indigirki. (Leningrad. VsesoîûznyĭI nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozîâĭstva. Izvestiîâ, 1955. t. 35, p. 141–67, illus. tables.) 24 refs. Text in Russian. ***Title tr.:*** Fishes of the Indigirka River.

Based on author's field work during May–Dec. 1944, with the Indigirka expedition of the Yakut Section of this (VNIORKh) institute. The following data are presented for the more common forms: frequency and distribution, morphology and morphometry, size distribution, growth, maturity in males and females, reproduction and fry, food, economic value, etc. ***Copy seen:*** DLC.

52296. KIRIS, I. D. 40 let sovetskoĭ okhotovedcheskoĭ nauki. (Okhota i okhotnich'e khozîâĭstvo, Sept. 1957. god 3, no. 9, p. 22–24.) Text in Russian. ***Title tr.:*** Forty years of Soviet hunting science.

Outlines the wildlife research, conservation and management, and organization of the hunting industry. Activities are reported of the All-Union Scientific Research Institute of animal raw materials and furs (VsesoîûznyĭI nauchno-issledovatel'skiĭ institut zhivotnogo syr'îâ i pushniny, VNIIZhP), founded (under another name) in 1922: it has eight main central laboratories, and 12 local branches, among them Yakutsk, Petropavlovsk-in-Kamchatka, Krasnoyarsk and Arkhangel'sk; some 8,000 local observers cooperate in its work. In 1957, it sent out 17 scientific expeditions. During a 25-year period, 180,000 fur animals have been released for acclimatization of new species and for recovery of depleted hunting fauna. Commercial hunting is on the rise in the U.S.S.R. ***Copy seen:*** DLC.

KIRIS, I., *see also* Krîuchkov, S., *and* I. Kiris. Okhota v Finlîandii. *1958.* No. 52510.

KIRKNESS, WALTER, *see* Parker, R. R., *and* W. Kirkness. King salmon . . . *1956.* No. 53863.

KIRO, M. B., *see* Suzdal'skaîa, I. P., *and* M. B. Kiro. Vliîanie temperatury . . . *1957.* No. 55246.

52297. KIRSCHNER, CHARLES E., 1920– . Developments in Alaska in 1957. (American Association of Petroleum Geologists. Bulletin, June 1958. v. 42, no. 6, p. 1434–44, 4 text maps, table.) 12 refs.

Lands in northern Alaska withheld under Public Land Order No. 82, are to be opened for exploration in 1958; central province is in early stage of exploration; in southern Alaska, drilling increased four-fold in 1957. Exploration is expected to increase sharply in 1958. ***Copy seen:*** DGS.

52298. KISELEV, I. I. Termitnyĭ sposob razmorazhivaniîa merzlykh gruntov. (Stroitel'naîa promyshlennost', Jan. 1957. god 35, no. 1, p. 30–33, table, diagrs.) Ref. Text in Russian. ***Title tr.:*** Thermit method for thawing of frozen ground.

A method of digging frozen ground using Thermit for preliminary partial thawing is described in detail; complete thawing of the frozen layer is not necessary, since the mechanical strength of the lower strata at temperatures above −2° C. is low. Data on variations in strength with temperature and moisture are tabulated for sand, clay, and dry pulverized soils (for the temperature range from −0.5° to −10.3° C.). Frozen areas up to 25–35 cm. wide between thawed zones will not impede excavation. Combustion of Thermit (aluminum powder and ferric oxide) generates heat about 1,000 cal./kg. and develops a maximum temperature about 3,000° C. Thawing of 1m.³ of ground at temperature −10° C. requires about 4 kg. of Thermit: charges of 4 kg. each are usually placed in 1 m. lengths of steel pipe with special igniter, and the pipes lowered into wells drilled in frozen ground 1 m. apart by a special machine. The temperature of the thawed ground varies from +10° C. at center to +1° C. on the periphery. ***Copy seen:*** DLC.

52299. KISELEV, ÎA. E. Sokrovishcha khvoĭnoĭ lapki. (Nauka i zhizn', Feb. 1957. god 24, no. 2, p. 59.) Text in Russian. ***Title tr.:*** Treasures of conifer needles.

After pine and other conifers are cut, the branches are usually gathered in piles and burnt. The needles, however, contain valuable fiber and chemical components; experiments in extracting ascorbic acid, carotene, ethyl alcohol, etc., for industrial purposes are being made by the Academy of Forestry (Lesotekhnicheskaîa akademiîa). ***Copy seen:*** DLC.

52300. KISELEV, IVAN ALEKSANDROVICH, 1888– . Osobennosti raspredeleniîa fitoplanktona v Belom more. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîu Belogo moriîa, 1957. vyp. 1, p. 282–304, tables, maps.) 21 refs. Text in Russian. ***Title tr.:*** Features of phytoplankton distribution in the White Sea.

Study of conditions in the far northern sector: the narrows (Gorlo), the mouth of the sea (Voronka), Gulf of Mezen, and in the southern area (Onega Bay). Earlier investigations are reviewed and occurrence of typical and common White Sea forms discussed. The phytogeographical character of each of these species and their distribution in other seas, also their vertical distribution are noted. A summary of conditions in each of the subareas is presented.

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52301. KISELEV, O. N. Povedenie ryb v zone deĭstviîa ėkholota. (Priroda, Apr. 1957, no. 4, p. 114–15, 2 illus.) Text in Russian. ***Title tr.:*** Behavior of fishes in the action area of an echo-sounder.

Observations of the research ship *Perseĭ-2* on various fishes in the Barents Sea are summarized: fishes were not disturbed when the echo-sounder was used. Its use in the night-time, when pelagic fishes are especially active is of great importance in research work.

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52302. KISELEV, O. N. Primenenie ėkholota v promyslovoĭ razvedke. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîu Belogo moriîa, 1957. vyp. 1, p. 489–94, illus.) Text in Russian. ***Title tr.:*** Use of echo-sounding in fishing reconnaissance.

Contains information on the working of echo-sounding, self-registering instruments; possibilities of using them in locating fish-shoals; character of their recordings of accumulations of herring, cod, capelin, etc.; utilizing these records. ***Copy seen:*** DLC.

52303. KISELEV, S. V. Issledovaniâ bronzovogo veka na territorii SSSR za 40 let. (Sovetskaâ arkheologiâ, 1957, no. 4, p. 28–43.) Refs. Text in Russian. ***Title tr.:*** Investigations of the bronze age on U.S.S.R. territory for the past 40 years.

Discusses the necessity of corelating the chronological dating of northern and southern cultures, and stresses (p. 29) that studies of the economic and social development, tribal movements, etc. of the neolithic population of the north are further advanced than those on the south. The bronze age cultures of the Yenisey (Andronov) and Baykal area (Kitoy and Glazkov) are mentioned (p. 42–43); the cultural-historical ties of the Chukchi and Eskimo cultures are touched upon. ***Copy seen:*** DLC.

52304. KISH, GEORGE. Soviet air transport. (Geographical review, July 1958. v. 48, no. 3, p. 309–320, 8 text maps, 2 tables.) 2 refs.

General account of air travel in the U.S.S.R. Types of aircraft, flight schedules, domestic and international routes and service are described. Maps show the Aeroflot system (extending northward to Murmansk, Arkhangel'sk, Vorkuta, Noril'sk, Yakutsk, Magadan); flight frequencies; non-stop domestic flights (none to arctic points); jet flights, routes and frequencies; international routes and frequencies. Travel time from Moscow to selected cities is tabulated, also number of flights/week handled by Soviet airports (Murmansk, Arkhangel'sk, Noril'sk 14, Vorkuta 28, Yakutsk and Magadan 70). ***Copy seen:*** DGS.

52305. KISHCHINSKIĬ, A. A. K biologii krecheta, Falco gyrfalco gyrfalco L., na Kol'skom poluostrove. (Moskva. Universitet. Uchenye zapiski, 1958, vyp. 197, Ornitologiâ, p. 61–75, illus., tables.) 29 refs. Text in Russian. ***Title tr.:*** Biology of the gyrfalcon, *Falco gyrfalco gyrfalco* L., in Kola Peninsula.

Ecological study based on observations in the tundra south of Teriberka (69°10′ N. 35°10′ E.) and Gavrilovo (69°10′ N. 35°45′ E.). Life conditions, distribution, nesting, hunting area, food (p. 63–70), biology of reproduction, population fluctuations are discussed. Two ecological groups of the gyrfalcon are distinguished: in coastal areas and in continental tundras; the former living on sea birds, the latter on ptarmigan. ***Copy seen:*** DLC.

52306. KISLÎAKOV, V. M. Sily smerzaniâ ţsementobetonnoĭ plity s gruntovym osnovaniem. (Avtomobil'nye dorogi, Apr. 1957. god 20, no. 4 (174), p. 10–11, diagr. table.) Text in Russian. ***Title tr.:*** Forces in the adfreezing of concrete slabs to ground bed.

Laboratory and field studies of the forces of friction-adhesion and freezing carried out by the Automobile Road Institute are discussed as they bear upon the appearance of cracks in slabs. Mathematical expression of shearing stresses in relation to linear expansion of the slabs, their dimensions, and temperature differences in slab and ground are given for ground freezing and thawing of various durations. ***Copy seen:*** DLC.

KITTLE, C. FREDERICK, *see* Santos, E. M., *and* C. F. Kittle. Electrocardiographic changes . . . *1958.* No. 54546.

52307. KIVINEN, ERKKI. Om återuppbyggnadsverksamheten i Finland. (Norsk myrselskap. Meddelelser, Dec. 1954. årg. 52, nr. 6, p. 184–92, table.) Text in Swedish. ***Title tr.:*** On reconstruction activities in Finland.

A national program for resettlement of 420,000 displaced persons and for rebuilding generally was initiated in 1945, following devastation of north Finland by the Germans, and loss of 12% of the land area, ceded to the U.S.S.R. An inventory of available land, soil, forest, and economic possibilities, was made; land has been cleared and drained; housing, highway, industrial and commercial building has been carried on. More than two million hectares of land have been affected. In north Finland the agricultural program is about half completed; hay is the main crop because of frost risk; some 450 new industrial, commercial, and public buildings have been finished. ***Copy seen:*** DA.

52308. KJAERBØL, JOHANNES, 1885– . Et tilbageblik. (Grønland, Sept. 1957, nr. 9, p. 321–29, illus.) Text in Danish. ***Title tr.:*** A retrospect.

Former minister for Greenland offers general comments and his impressions of the country from five trips there, July 1955–Jan. 1957. ***Copy seen:*** DLC.

52309. KLAEBO, KÅRE. Skogplanting med maskin; maskinplanting utført på Forsetmoen i Troms 1949–1950. (Tidsskrift for skogbruk, Apr.–May, 1951. årg. 59, hefte 4–5, p. 145–156.) Text in Norwegian. ***Title tr.:*** Forest planting with machine; mechanical planting at the Forset military training camp in Troms 1949–1950.

The American Badger tree planter was found too light for the terrain in Troms province experiments, but it could be used in combination with the Badger mechanical plow. This planter is described; improvements are suggested to adapt it to rugged terrain. ***Copy seen:*** DA.

52310. KLATZMANN, JOSEPH. Expériences d'agriculture en Laponie. (Annales de géographie, May–June 1957. année 66. no. 355, p. 267–72, 2 tables.) Text in French. ***Title tr.:*** Agriculture in Lapland.

Notes efforts of Norwegian and Finnish governments to encourage development of small farms in the North, thus lessen dependence on costly transported foods. Three pilot farms in northern Norway (at Nordreisa, Alta and Kistrand near Lakselv) are described as representative for the region; one of them supports its family, the other two must be supplemented with outside work for income. Milk, beef, pork, potatoes are their principal products. Costs, etc., are tabulated. ***Copy seen:*** DGS.

KLEBESADEL, L. J., *see* Taylor, R. L., *and others.* Field crops for Alaska. *1958.* No. 55353.

KLEBESADEL, L. J., *see* Taylor, R. L., *and others.* Weeds . . . *1958.* No. 55354.

KLEĬMENOV, P., *see Radio.* V Arktike . . . *1957.* No. 54194.

KLEIN, R. L., *see* Holland, W. C., *and* R. L. Klein. Effects of temperature, Na and K . . . *1958.* No. 51772.

52311. KLEIN, WILLIAM H. The circulation and weather of 1957. (Weatherwise, Feb. 1958. v. 11, no. 1, p. 7–11, 32–34, graph, 7 text maps.)

Summary of conditions in North America, especially the United States, by seasons. Maps showing mean sea-level pressure for Jan., mean 700-mb. heights for Aug. and Oct., and mean 700-mb. height departures from normal for Feb. minus those for Jan., include the North American Arctic. ***Copy seen:*** DWB.

52312. KLEIN, WILLIAM H. Principal tracks and mean frequencies of cyclones and anticyclones in the Northern Hemisphere. Washington, D.C., U.S. Govt. Print. Off., 1957. 60 p. text maps, diagrs. (U.S. Weather Bureau. Research paper no. 40.) 130 refs.

Portrays on maps, and discusses in text, principal tracks of cyclones and anticyclones at sea level; also shows geographical frequency of Lows, Highs, cyclogenesis and anti-cyclogenesis, by months for the entire year. Method of preparation of tracks is explained: their synoptic climatology discussed; mean meridional distribution and annual march of cyclone and anticyclone occurrence and genesis are related to the mean zonal circulation of the Northern Hemisphere at the 700-mb. level. Statistics are presented on relative frequency, average speed, and life span of pressure centers. Principal conclusions are offered in the charts and summarized (eleven items) in text. ***Copy seen:*** DN–HO.

52313. KLEĬNENBERG, SERGEĬ EVGEN'EVICH. K voprosu o proiskhozhdenii kitoobraznykh. (Akademiĭa nauk SSSR. Doklady, 1958. t. 122, no. 5, p. 950–52, illus.) 22 refs. Text in Russian. ***Title tr:*** The problem of cetacean origin.

Contains a discussion on the area, period and mode of origin (mono-, di-, or polyphyletic) of whales, followed by authors' views favoring a diphyletic development of the *Odontoceti* and *Mysticeti.* This is based on anatomical differences of the respiratory system, the skull, and extremities, and on differences of ecology. ***Copy seen:*** DLC.

52314. KLEĬNENBERG, SERGEĬ EVGEN'EVICH *and* **T. I. MAKAROVA,** *Editors.* Kitoboĭnyĭ promysel Sovetskogo Soĭuza. Moskva, Izd-vo zhurnala "Rybnoe khozĭaĭstvo," 1955. 118 p. illus., tables, map. 305 refs. Text in Russian. ***Title tr:*** The whaling industry of the Soviet Union.

Account of Russian whaling, its past, present condition and biological and technological research. Successive sections deal with its history in European and Far-Eastern waters; present Russian

activities in the Far East and Antarctic. Research, reviewed extensively, covers food of whales, size and morphometry of common species, yields in oil, growth, parasites; migrations in general and in the Far East; factors affecting migration; whale population of various Pacific areas; weight composition and chemical composition of different parts of the body of the common species; vitamin content of certain organs; oil production methods; production of gelatin, dry protein and liver products; research on endocrine glands and brain. ***Copy seen:*** DI.

52315. KLEĬNENBERG, SERGEĬ EVGEN'EVICH, *and* **A. V. ĪABLOKOV.** O morfologii verkhnikh dykhatel'nykh puteĭ kitoobraznykh. (Zoologicheskiĭ zhurnal, July 1958. t. 37, vyp. 7, p. 1091–99, illus.) 17 refs. Text in Russian. Summary in English. ***Title tr.:*** On the morphology of the upper respiratory passages of whales.

Morphological and anatomical account of upper nasal canals of the larynx and pharynx of the Odontoceti and Mystacoceti. The function is reconstructed from the morphology. The peculiarities of these organs in the two groups of whales are emphasized.

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52316. KLEĬNENBERG, SERGEĬ EVGEN'EVICH. Ob okhrane morzha. (Priroda, July 1957, no. 7, p. 101–103, illus.) 10 refs. Text in Russian. ***Title tr.:*** Walrus protection.

Contains data on the morphology, biology, ecology and geographic distribution of walrus. Commercially the walrus is valuable for its tusks (ivory), hide, and oil. Owing to reckless slaughter by sealers and whalers, the stock is greatly decreased even in the arctic seas. The walrus rookeries on the coast of Chukotsk Peninsula, for instance, are reduced from 33 to three (in 1954). Strong protective measures were taken in 1956 by the Soviet government. Hunting of walrus is allowed only for kolkhozes of the Chukotsk Peninsula and northern regions of Yakut A.S.S.R.; but even for them the killing of females and young on the water is forbidden. ***Copy seen:*** DLC.

52317. KLEIVAN, HELGE. Eskimoenes skjebne på Labradors østkyst. (Grønland, Sept., Oct. 1957. nr. 9, 10, p. 347–55, 377–85, illus., map.) Text in Norwegian. ***Title tr.:*** The fate of the Eskimos on the east coast of Labrador.

Traces history of this group (now about 700) from 1771, when the Moravian Mission station at Nain was established. The climate and general geography of the area is described. Relations between these Eskimos and incoming whites are discussed. Health conditions, fishing, hunting and sealing activities, housing, education and missionary work are outlined. Conditions after 1942, when the Newfoundland government took over trade on the coast on a non-profit basis, are dealt with in the second section. Since 1949, when Newfoundland with Labrador became part of Canada, these Eskimos have received the federal social assistance as Indians and Eskimos elsewhere in Canada. Details are given on the welfare measures and comparisons made with conditions in Greenland.

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52318. [KLEIVAN, HELGE. Eskimoer på besøk i England i 1772; fra George Cartwrights dagbok fra Labrador. (Polarboken 1957, p. 139–51.) Text in Norwegian. ***Title tr.:*** Eskimos on a visit to England in 1772; from George Cartwright's diary from Labrador.

Recounts the activities and reactions of five Eskimos, brought from Labrador to England by Cartwright, during the winter 1772–73, the visit ending in tragedy as four of them died of smallpox.

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52319. KLEIVAN, INGE. De gamle i Grønland. (Grønland, Nov. 1957. nr. 11, p. 401–409, illus.) Text in Danish. ***Title tr.:*** Old people in Greenland.

Old age pension arrangements in Greenland are outlined and figures given for different categories: since 1951 they are payable by the district treasuries. Some form of support from the state was first introduced in 1926 and the first old age home, at Julianehåb, established in 1932. The position of old people is reviewed and their problems in modern Greenland are touched upon. ***Copy seen:*** DLC.

52320. KLEIVAN, INGE. Træk af John Møllers liv og virke. (Grønland, Aug. 1958. nr. 8, p. 303–313, illus., ports.) 22 refs. Text in Danish. ***Title tr.:*** Features of John Møller's life and work.

Sketch of John Peter Christian Møller (1867–1935), son of the printer and editor Lars Møller. He was trained in printing and photography in Denmark and worked in the printing plant at Godthåb for 47

years. He founded Godthaabs fotografiske Anstalt (The Godthaab Photographic Establishment); about 3,000 photographs from his collection are in the public records office at Godthåb, and 2,031 were copied in 1954–55 by the Royal Library in Copenhagen. Møller was also active as an interpreter, as a writer, and in local government; and he was a skilful hunter. ***Copy seen:*** DLC.

KLEM, S., *see* Adolph, E. F., *and others.* Reversible cessation . . . circulation . . . *1958.* No. 49119.

52321. KLEN, RUDOL'F. Izmeneniia poverkhnosti kostnogo i khriashchevogo transplantatov pod vliianiem kholoda. (Ortopediia, travmatologiia i protezirovanie, Mar.–Apr. 1958. god 19, no. 2, p. 38–40.) Text in Russian. ***Title tr.:*** Surface changes of bone and cartilage transplants under the influence of cold.

Author discusses the ill effects of rough surfaces of such transplants; the effects of ice-crystal formation during freezing (to −30° C.); histological aspects of frozen bone surfaces; histology of frozen cartilage, practical aspects of frost injury to transplants. ***Copy seen:*** DNLM.

52322. KLEPPING, J., *and others.* La sécrétion médullosurrénale dans la lutte contre le froid. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 8–9, p. 1539–41, table.) 6 refs. Text in French. *Other authors:* M. Tanche *and* J. F. Cier. ***Title tr.:*** Adrenal medullary secretion in the struggle against cold.

Account of investigations on dogs exposed to temperatures of −5° to −20° C. Chemical thermoregulation (in the restricted sense) was manifest in secretion, by the adrenal medulla, of adrenalin and some noradrenalin. The former plays the main calorigenic role. ***Copy seen:*** DLC.

52323. KLIEGER, PAUL. Curing requirements for scale resistance of concrete. (*In:* National Research Council. Highway Research Board. Bulletin 150, 1957, *Effect of de-icing on vehicles and pavements,* p. 18–31, tables, graphs.) 2 refs.

Laboratory surface scaling and strength tests of concrete prepared from types I, II and III portland cement showed that non-air-entrained concrete has little resistance to surface scaling resulting from the use of de-icers. Prolonged curing raised the level of resistance, but failed to produce a level of satisfactory height. Air-entrained concrete has a high resistance to surface scaling resulting from use of calcium chloride as a de-icer, provided the concrete is adequately cured. Length of curing period is given for both types of concrete at 40° F. and 73° F. to obtain a level of strength sufficient for traffic loads. At 25° F. curing time was excessively long. In some cases adequate scale resistance was obtained, but concrete was unacceptable because of low strength. ***Copy seen:*** DLC.

KLIEGER, PAUL, *see also* Verbeck, G. J., *and* P. Klieger. Studies of "salt" scaling of concrete. *1957.* No. 55786.

52324. KLIMANOV, V. Kapkany. (Okhota i okhotnich'e khoziaistvo, Feb. 1957, no. 2, p. 42–43, illus.) Text in Russian. ***Title tr.:*** Traps.

Notes shortcomings in the production of traps in the U.S.S.R.: poorly adjusted parts, springs which are not cold resistant, inefficient testing, delay in production of new types of traps, etc. The All-Union Scientific Research Institute of livestock products and fur (Vsesoiuznyi nauchno-issledovatel'skii institut zhivotnovodcheskogo syr'ia i pushniny, VNIIZhP) is urged to exert itself in this matter. ***Copy seen:*** DLC.

52325. KLIMOV, K. I., *and* **A. V. VILENKIN.** Poteri énergii v nachal'nyi period raboty agregatov transmissii pri nizkikh temperaturakh. (Avtomobil'naia i traktornaia promyshlennost', July 1957, no. 7, p. 24–26, diagrs., tables.) 6 refs. Text in Russian. ***Title tr.:*** Energy loss in a transmission during the initial operation period at low temperatures.

Friction losses in a transmission using summer oil are compared at 0° C. and −15° C. The torque is about three times higher at the lower temperature; 82.2% (0° C.) and 93.3% (−15° C.) of the energy are lost in the friction of bearings, gaskets, and gears. Improvement in the construction (shape) of gaskets and bearings is suggested. ***Copy seen:*** DLC.

52326. KLINOV, F. IA. Polîarnyi sneg. (Akademiia nauk SSSR. Izvestiia, ser. geofizicheskaia, June 1958, no. 6, p. 796–99, illus., plates.) 4 refs. Text in Russian. ***Title tr.:*** Polar snow.

Reports the structure and forms of falling snow crystals, as observed at Verkhoyansk in 1952–54. Different forms of crystals, developed at temperature of −40° C. and lower, are described and

illustrated by photos or (if they could not be photographed) by drawings. The influence of low temperature and of the manner of fall on form and structure of the crystals is discussed; some differences are noted between crystals below −40° C. (fig. 1) and those below −50° C. (fig. 2). Rare crystals, especially twin-forms are indicated (fig. 3); crystals falling in masses are outlined (fig. 5). Laws of crystal formation in respect to low temperature are discussed.

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KLISCH, J. A., *see* Mardoian, M. G., *and others.* Winterization of construction equipment . . . *1957.* No. 53128.

KLIUCHNIKOVA, L. A., *see* Laĭkhtman, D. L., *and* L. A. Kliuchnikova. Rol' razvodiĭ v teplovom balanse Arktiki. *1957.* No. 52626.

52327. KLIUKIN, N. K. Vysokogornaia meteostantsiia v verkhov'iakh Kolymy. (Priroda, Apr. 1957, no. 4, p. 55–58, illus.) Text in Russian. ***Title tr.:*** An alpine meteorological station in the upper reaches of the Kolyma River.

Contains a description of Mus-Khaya Mountain (2,959 m.) in the Suntar-Khayata Ridge on the watershed between the Indigirka and Aldan Rivers, selected as site of a meteorological station to be finished in 1957 for International Geophysical Year. It is not far from the Cold Pole, near Oymyakon; the Oymyakon station is closed at present. Some notes on preliminary work (photographing, mapping, air reconnaissance) are added. When finished the station will consist of Mus-Khaya (2,050 m.), lower base (1,300 m.); Agayakan (777 m.) and Oymyakon (740 m.).

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KLIUKIN, N. K., *see also* Riabov, IU. Meteostantsiia . . . *1957.* No. 54297.

52328. KLOTS, ALEXANDER BARRETT, 1903– . Studies of New World arctic and alpine Lepidoptera. (*In:* International Congress of Zoology, 14th, Copenhagen, 1953. Proceedings, 1956. p. 469–70.)

Species (14) of the butterfly *Boloria* are tabulated to show their distribution in arctic (ten) and alpine (six) zones; ten occur also in the Palaearctic.

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52329. KLUMOV, S. K. O sviazi biomassy planktona i dobychi usatykh kitov v severo-zapadnoĭ chasti Tikhogo okeana. (Rybnoe khoziaĭstvo, Nov. 1958. god 34, no. 11, p. 16–20, tables.) Text in Russian. ***Title tr.:*** The connection between the plankton biomass and the catch of bearded whales in the northwestern Pacific.

Includes information on the food of these whales in general; quantitative distribution of zooplankton in the area discussed; average plankton biomass required to feed a bearded whale; the Kuril Islands area as best feeding ground; effect of plankton shortage on the behavior of the whales; effect of plankton quantity upon the size of catch; amount of plankton and fish concentration.

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52330. KLUMOV, S. K. Uchast' kitov. (Priroda, Mar. 1958. god 47, no. 3, p. 36–43, illus. tables, map.) 5 refs. Text in Russian. ***Title tr.:*** The fate of the whales.

Reviews warnings concerning whale depredation, present open whaling grounds, whalers, factories, catches. Species hunted, main areas and types of whaling are discussed with information on reserves and conditions of the fin whale, humpback, cachalot, and others. Needed conservation measures and ecological studies are indicated.

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52331. KLYKOV, N. V. Razvitie gipotermii pri neposredstvennom pereokhlazhdenii mozga cherez naruzhnye pokrovy golovy. (Biulleten' éksperimental'noĭ biologii i meditsiny, Nov. 1957. god 22, t. 44, p. 41–45, illus., tables.) 15 refs. Text in Russian. Summary in English. ***Title tr.:*** Development of hypothermia by direct cooling of the brain through the external integuments of the head.

Report on experiments with cats having "cold blankets" applied to the head. During cooling, brain temperature fell quicker and to lower levels than rectal temperature. At the end of cooling, temperatures were also different at the various levels of the brain. Reduction of brain temperature was associated with respiratory and circulatory changes.

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52332. KNABEN, GUNVOR. *Papaver*-studier, med et forsvar for *P. radicatum* Rottb. som en islandsk-skandinavisk art. (Blyttia, 1958. v. 16, no. 2, p. 61–80, 6 illus.) 13 refs. Text in Norwegian.

Summary in English. ***Title tr.:*** *Papaver* studies, and defense of *P. radicatum* Rottb. as an Icelandic-Scandinavian species.

Contains data on *Papaver radicatum*, which comprises an assemblage of races with 2n=70, in Iceland, the Faroes and Scandinavia. It is replaced in eastern Finnmark by *P. dahlianum* (2n=70), which grows also in Franz Joseph Land and Novaya Zemlya, Greenland and Ellesmere. A third species, *P. lapponicum* with 2n=56, is found in Kola Peninsula, Siberia, Greenland, Canada and Alaska. The many characteristics are grouped in three subspecies *occidentale*, *labradoricum* n. comb. and *porsildi* n. subsp. (Latin diagnosis). Preliminary descriptions of *P. radicatum*, *P. dahlianum* and *P. lapponicum* are given.

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52333. KNECHT, R. W. Statistical results and their shortcomings concerning the ionosphere within the auroral zone. (*In:* Polar Atmosphere Symposium, *Oslo*, 1956. v. 2, *pub.* 1957, p. 109–119, map, graphs.) 3 refs.

Problems involved in the summarization of high latitude ionospheric data are discussed, and typical problems illustrated by ionograms and data plots for a number of arctic stations. To make statistical summaries of the data more meaningful: soundings should be made every 15 min. with extra soundings at 5 min. before and after the hour; a gain run should be made each hour; the f-plot should be prepared regularly, and the number of values used in the computation and an estimate of the dispersion, such as the quartile range, should be published in addition to the median. These procedures, recommended by the URSI High Latitude Committee, Brussels, 1956, writer has found warranted by additional information available.

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KNECHT, R. W., *see also* Smith, E. K., *and* R. W. Knecht. Some implications of slant $-E_s$. *1957.* No. 54992.

KNECHT, R. W., *see also* Wright, J. W., *and* R. W. Knecht. Atlas of ionograms . . . *1957.* No. 56122.

52334. KNÎAZEV, K. Stupeni kaskada. (Ogonëk, July 1956. god 34, no. 29, Sibirskiĭ nomer, p. 6, illus., port.) Text in Russian. ***Title tr.:*** The steps of a cascade.

Brief remarks on planned construction of a system of hydroelectric plants on the Ob River, beginning with power stations at Novosibirsk and Kamen'; they are to harness the power of the river's 394 billion cu. m. annual discharge into the Kara Sea. ***Copy seen:*** DLC.

52335. KNIGGE, KARL MAX, 1926– , *and* **R. S. GOODMAN.** Initial effects of cold exposure upon uptake and release of thyroidal I^{131} in hamsters. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 73–74.)

Hamsters exposed to 0° or 5° C. showed an accelerated release of thyroidal I^{131} followed by a period of complete inhibition. After 24–36 hrs. release is resumed and may be above normal. Significant increase in uptake is noted only after three days of cold. Effects of hypophysectomy, adrenalectomy, ligation of ureter, etc., were also studied.

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52336. KNIGGE, KARL MAX, 1926– , *and* **D. M. SOLOMON.** Response of hamster thyroid to cold exposure and hemithyroidectomy, compared with effects of TSH administration. (Federation proceedings, Feb. 1958. v. 17, no. 1, pt. 1, p. 88.)

Thyroid changes after TSH were found to differ from those produced by chronic cold or hemithyroidectomy and suggest participation of thyroid factors in addition to TSH. In operated animals the effects of hemithyroidectomy are superimposed and added to those produced by cold. ***Copy seen:*** DLC.

52337. KNIGGE, KARL MAX, 1926– , *and others.* Role of pituitary, adrenal and kidney in several thyroid responses of cold-exposed hamsters. (American journal of physiology, June 1957. v. 189, no. 3, p. 415–19, illus., table.) 18 refs. *Other authors:* R. S. Goodman *and* D. H. Solomon.

This investigation showed that the pituitary is necessary for survival of cold-exposed animals and the increased uptake of I^{131} by their thyroid. Cold exposure first caused an accelerated release of thyroidal I^{131} followed by complete inhibition. Uptake of I^{131} was also depressed during initial cold exposure.

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52338. KNIGHT, J. A. Current practices on highways for alleviation of frost damage. (Roads and engineering con-

struction, Oct. 1957. v. 95, no. 10, p. 148–56, illus.)

Analyzes the mechanics of frost action and summarizes questionnaire replies for provincial highway departments in Canada, on methods used to alleviate frost damage. Water drainage and removal of susceptible soil are stressed as most important factors in reducing costs due to frost heaving. ***Copy seen:*** DLC.

KNIGHT, S. J., *see* Rula, A. A., *and others.* Trafficability of snow. *1957.* No. 54447.

52339. KNIPOVICH, NIKOLAĬ MIKHAĬLOVICH, 1862–1939. Gidrologiia i promyslovoe delo. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia moreĭ SSSR, 1930. vyp. 11, p. 21–35.) Text in Russian. Summary in German. ***Title tr.:*** Hydrology and its utilization.

Value of systematic hydrographic observations for the industrial exploitation of the dead and living resources of the sea is stressed. In illustration, the work of Russian scientists in the Barents Sea during the 19th and 20th centuries and the changes noted by them are reviewed. Author's temperature observations made along the Kola meridian (33°30′ E.) in 1921 are compared with those of 1900, and a warming of the sea is noted. He also established a north- and northeastward penetration of the Atlantic fauna, including commercial fishes; economic exploitation and benefits from the study of the hydrography of the area are to be expected. ***Copy seen:*** NN.

52340. KNOEDLER, DAVID, *and* **W. STANMEYER.** Dental observations made while wintering in Antarctica, 1956–1957. (Journal of dental research, Aug. 1958. v. 37, no. 4, p. 614–22, table.) 10 refs.

Report of dentist attending expeditionary personnel, of whom 89 (out of 92) sought aid. Toothache due to thermal conductivity of metallic restorations and hypersensitive cervical dentin were the most common complaints. Alveolar osteitis was a problem occurring once after every four or five extractions. Oral hygiene was good. Other conditions, including deposition of calculus, were not unusual. ***Copy seen:*** DNLM.

KNOWLES, DAVID M., *see* Gastil, G., *and* D. M. Knowles. Regional geology . . . *1957.* No. 51091.

52341. KNUDSEN, HELGE. Et kommunalbestyrelsesmøde. (Grønland, Mar. 1958, nr. 3, p. 81–92, illus.) Text in Danish. ***Title tr.:*** A meeting of the municipal council.

Presents abridged minutes of a meeting of the Upernavik (72°47′ N. 56°12′ W.), West Greenland council at Prøven (approx. 72°30′ N. 55°40′ W.) in July 1957, to show the variety of business it dealt with. The author, municipal treasurer, acted as secretary.

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52342. KNUDSEN, HELGE. Et traek fra narhvalernes liv; virkelighed eller ammestuehistorie? (Grønland, Sept. 1958, nr. 9, p. 353–56, illus.) Text in Danish. ***Title tr.:*** A feature in the life of narwhals; reality or a tall story?

Discusses the phenomenon allegedly observed in Greenland that narwhals who have had their tusks broken, mend them by ramming the end of another narwhal's tusk into the hole. No conclusions are drawn but the evidence warrants investigation.

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52343. KNUTH, EIGIL, *Greve,* **1903– .** Archaeology of the farthest North. (International Congress of Americanists, 32nd. *Copenhagen,* 1956. Proceedings, 1958, p. 561–73, illus., diagr., sketch map.) 22 refs.

Discusses the geographic features and past climatic trends (based on driftwood accumulations) of Pearyland. Author's archeological field-work of 1947–1955 on Jørgen Brønlunds Fjord, Cape Holbaek (Danmarks Fjord) and Prinsesse Ingeborg Halvø is reviewed. A temporary division of the term Independence culture (cf. No. 35630) into Independence I and II (neither of them Dorset) is suggested, in view of possible future subdivisions. The older, Independence I, radio-carbon dated to 3840±170 years is likened to the Sarqaq culture of Disko Bay; the younger, Independence II, radio-carbon date 2830±130 years, is characterized as pre-Dorset. The archeological material (flint and bone implements, tent rings, fire places) is described and the absence of harpoon heads and such "important features of Dorset culture as slate, grinding, and lamps" or even soapstone is stressed. ***Copy seen:*** DSI.

52344. KOBAYASHI, TEISAKU. Experimental researches on the snow crystal habit and growth by means of a diffusion

cloud chamber; preliminary report. (Teion kagaku, 1956. ser. A, v. 15, p. 1–12, illus.) 16 refs. Text in Japanese. Summary in English.

Account of experiments on snow crystal formation, growth and characteristics, when produced in "water-droplet-free" air or by AgI seeding. In the first instance ice crystals had a tendency to grow in the direction of the c-axis, whilst development of dendritic forms requires a liquid water film on the crystal surfaces. The successive stages of snow crystal formation following silver iodate seeding are presented and analyzed in detail. ***Copy seen:*** DWB.

52345. KOBLENTS, IA. P. O sokhranenii otmetok nuleĭ vodomernykh postov na polʲarnykh stant͡siiakh. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 111–13, illus.) 2 refs. Text in Russian. ***Title tr.:*** Preservation of the zero marks of water gage posts at polar stations.

Types of gages in use at stations along the Northern Sea Route are reviewed and causes of destruction (frost, fossil ice) are described. For permafrost regions, a metal pipe of 6 cm. diam. with a disk of 15 cm. diam. welded to one end, is suggested. This gage is not liable to destruction or change in elevation provided the disk is placed three times deeper than the thickness of the active layer. ***Copy seen:*** DLC.

52346. KOBLENTS-MISHKE, O. I. O produkt͡sii fitoplanktona v severo-zapadnoĭ chasti Tikhogo okeana vesnoĭ 1955 g. (Akademiia nauk SSSR. Doklady, Oct. 21, 1957. t. 116, no. 6, p. 1029–32, illus. map) 6 refs. Text in Russian. ***Title tr.:*** Phytoplankton production in the northwestern Pacific during the spring of 1955.

Report on phytoplankton determinations made in May and June from and aboard the *Vitiaz'*. The most productive zone is along the southeastern coast of Kamchatka Peninsula; the lowest, the boreal oceanic zone, where low quantity of phytoplankton and lack of biogenous elements, such as nitrogen, iron, etc., are probably factors in the low productivity. The method used for this quantitative determination is an indirect one. ***Copy seen:*** DLC.

KOBOZEV, I. I., *see* Fomin, V. M., *and others.* O razvitii . . . termal'nye vody . . . *1958.* No. 50943.

52347. KOBRICK, JOHN L. Quartermaster human engineering handbook series, I. Spatial dimensions of the 95th percentile arctic soldier. Natick, Mass., Sept. 1956. vi, 86 p. diagr., 39 illus. (U.S. Quartermaster Research and Development Command. Environmental Protection Research Division. Technical report EP–39.) 10 refs.

Handbook for engineers and designers in establishing space allowances in the design and sizing of man-operated equipment. Data are given on the body size of the soldier clothed in full arctic uniform. As the criterion used is the 95th percentile of U.S. Army nude body size, the data are concerned with the upper size limit. The information is presented in pictorial form with index scales, so that dimensions can be measured on the pictures and referred to the index scale to establish actual size. ***Copy seen:*** DLC.

KOCH, BENT A., *see* Graenseforeningen. Det nye Norden . . . *1956.* No. 51322.

52348. KOCH, BENT ESKE, 1926– . Lidt om de grønlandske tertiaerfloraer. (Naturens verden, 1955. årg. 39, hefte 7–8, p. 193–204, illus., diagr., map.) Text in Danish. ***Title tr.:*** Note on the Tertiary flora of Greenland.

Geologic and paleontologic study of the northwest Greenland sedimentary area is reviewed. Much of the Tertiary fossil plant remains is found in freshwater deposits below and between basalt layers. Many of the trees identified, including *Metasequoia* sp., *Cercidiphyllum arcticum, Ginkgo,* and others now native to eastern Asia, are to be seen growing in the Copenhagen botanical garden. ***Copy seen:*** DLC.

KOCH, LAUGE, 1892– , *see* Arktisk Institut, *København.* Danish scientific activities . . . *1959.* No. 49379.

KOCH, LAUGE, 1892– , *see* Rasmussen, K. J. V. Report II. Thule Exped. *1928.* No. 14231.

KOCHANSKI, ADAM, *see* Fletcher, R. D. Arctic weather-forecasting problems. . . . *1958.* No. 50929.

52349. KOCHEGIN, P. Druz'iam iz Svanvika. (Ogonëk, May 1957. god 35, no. 19, p. 29, ports.) Text in Russian. ***Title tr.:*** To the friends from Svanvik.

Open letter by a Soviet flyer who was wounded over North Norway in Oct. 1944 (then occupied by German forces) and

parachuted. He recounts his rescue by the inhabitants of the village of Svanvik (approx. 69°25′ N. 30° E.) and expresses his thanks. ***Copy seen:*** DLC.

52350. KOCHEROV, P. N., *and* I. V. TISHKOVETS. Iz opyta postroĭki ledokolov-buksirov. (Sudostroenie, Aug. 1958, no. 8, p. 54–60, illus., diagrs., graph, tables.) Text in Russian. ***Title tr.:*** Experiences in the construction of ice-breaker tugs.

Describes the 1,300 s. hp. diesel-electric *Don* and *Volga*, built in 1950 as the first in a series of river ice-breakers used as tugs in the summer season. Modifications and improvements in later models, prompted by investigations of engine performance, rudder and propeller damages, noise level, etc., are reviewed. Ice-breaking characteristics are summarized. ***Copy seen:*** DLC.

52351. KOCHETKOV, T. P. Novye dannye po stratigrafii uglenosnykh otlozheniĭ melovoĭ sistemy Lenskogo basseĭna. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Apr. 1958. god 23, no. 4, p. 47–56, tables.) Text in Russian. ***Title tr.:*** New data on the stratigraphy of coal-bearing deposits of the Cretaceous system of the Lena basin.

Reviews recent studies and collected paleobotanical material on Lena and Olenek strata in the Chay-Tumuss and Bulun regions in the Lena delta. Various cross-sections of these strata were examined and their spore and pollen complexes are evaluated, and a new stratigraphic division is presented. The new data permit a division of these strata into Lower Cretaceous series of Lena basin, and Upper Cretaceous of the Vilyuy basin; and enable correction of errors of A. I. Gusev. ***Copy seen:*** DLC.

52352. KOCHETKOVA, G. V. Rasprostranenie antagonisticheskikh form gribov roda *Penicillium* v pochvakh Evropeĭskoĭ chasti Sovetskogo Soîuza. (Moskovskoe obshchestvo ispytateleĭ prirody. Biîlleten', nov. ser., otdel biol. 1957. v. 62, no. 3, p. 77–81, 2 illus., table.) 3 refs. Text in Russian. Summary in English. ***Title tr.:*** Distribution of antagonistic forms of fungi of the genus *Penicillium* in the soils of the European part of the Soviet Union.

Distribution from the Murmansk region to the moist, subtropical Batumi district is outlined. A regular rise in the proportion of antagonistic forms was observed from north to south, but the proportion fell noticeably with elevation of the terrain. Antagonistic penicilliums found in soils of northern and alpine districts include a large proportion of forms that produce penicillin. The proportion of these forms falls sharply in subtropical soil, and the fungi show a capacity of producing other antibiotic substances. The majority of the stamms producing penicillin belong to the series *P. chrysogenum* and *P. citrinum*.

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52353. KOCHEVYKH, V. P. Osobennosti senouborki v zapolîar'e. (Vestnik sel'skokhozîaĭstvennoĭ nauki, May 1958. god 3, no. 5, p. 148–50.) Ref. Text in Russian. Summary in English and German. ***Title tr.:*** Features of haymaking beyond the Arctic Circle.

In the Pechora basin, with its frequent rain and low temperature in August, special measures are needed to get the hay cured and dried after cutting. Three were tested at the kolkhoz "Severnaîa Zvezda" in the Nentsy District. They differed mainly in the relative length of time the hay lay spread on the meadow, in cocks, and on racks. All methods proved about equally satisfactory.

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KOCHNEV, P. P., *see* Akademiîa nauk SSSR. Îakutskiĭ filial. Za sovetskuîu vlast' . . . *1957*. No. 49170.

52354. KÖNIG, WOLFGANG, *and* C. KUPFER. Ethnographische Bibliographie der Sowjetunion 1945–1953. (Deutsches Jahrbuch für Volkskunde, 1955. Bd. 1, Heft 1–2, p. 323–75.) Text in German. ***Title tr.:*** Ethnographic bibliography of the Soviet Union, 1945–1953.

Lists Soviet publications on European ethnography (including northern Russia) as available in East Germany. The paucity of material from non-Russian Soviet republics is noted.

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KÖVER, GYÖRGY, *see* Hársing, L., *and others*. The effect of hypothermia . . . *1956*. No. 51606.

52355. KOFOED, ARNE, *and* N. HOLM. Kapisigdlit. (Atuagagdliutit: Grønlandsposten, Sept. 26, 1957. Ukiut 97–iat, nr. 20, p. 12–13.) Text in Danish and Eskimo. ***Title tr.:*** Kapisigdlit.

Photographs of this fishing settlement (64°26′ N. 50°15′ W.) in the Godthåb Fjord, West Greenland.

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KOGAN, D. M., *see* Gantskaia, O. A. Sessii . . . issledovanii 1957 g. *1958.* No. 51080.

KOIZUMI, KIYOMI, *see* Suda, I., *and others.* Analysis . . . hypothermia on central nervous system responses. *1957.* No. 55211.

52356. KOJIMA, KENJI. Viscous compression of natural snow-layer, 2. (Teion kagaku, 1956. ser. A, v. 15, p. 117–35, illus.) 5 refs. Text in Japanese. Summary in English.

Viscous compression of a snow cover is analyzed mathematically on the basis of measurements in 1955–56 of the thickness and density of individual snow layers made at five-day intervals. Viscosity values for the fragile snow when plotted against time, were similar to those of the hard, compacted snow of the previous winter, while a more rapid increase in viscosity with snow density was found in 1955–56 than in 1954–55. Microscopic observations revealed the presence of depth hoar crystals in the snow, connected with one another in the vertical direction, a phenomenon which may explain the fact that the fragile snow of 1955–56 showed the same viscous resistance as settled snow.—From SIPRE.

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52357. KOKOSOV, N. M. Geograficheskie issledovaniia v Ural'skom filiale Akademii nauk SSSR. (Akademiia nauk SSSR. Izvestiia, ser. geog., Mar.–Apr. 1957, no. 2, p. 164–65.) Text in Russian. ***Title tr.:*** Geographical explorations of the Ural Branch of the Academy of Sciences of U.S.S.R.

Includes notes on the economic and geographic investigation carried on by the Branch since 1951–52 of the Northern, sub-Polar and Polar Ural and adjacent areas of Khanty-Mansiyskiy and Yamalo-Nenetskiy National Districts.

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52358. KOKOSOV, N. M., *and others.* Khanty-Mansiiskii natsional'nyi okrug; ocherk prirody i narodnogo khoziaistva. Sverdlovsk, 1956. 104 p. illus., tables, maps incl. 1 fold. (Akademiia nauk SSSR. Ural'skii filial.) 63 refs. Text in Russian. *Other authors:* V. I. Nikulin, *and* V. I. Kharin. ***Title tr.:*** Khanty-Mansi National District; outline of its nature and economy.

The Khanty-Mansi (until 1940 the Ostyak-Vogul) National District was organized in Dec. 1930 as a part of Ural Province (which became in 1934 Ob'-Irtysh Province, during Dec. 1934–1944 Omsk and since Aug. 1944 has been Tyumen' Province). The District, covering 558 thousand sq. km., has 98,000 population (in 1939), of which only one-fifth are native Ostyaks (Khanty), Voguls (Mansi), Samoyeds (Nentsy) and Zyryans (Komi), four-fifths of the population being Russian. The main features of the District are outlined, chiefly on the basis of material gathered in 1950–52 by the Section of Economic Investigations (Otdel ėkonomicheskikh issledovanii) of the Ural Branch of the Academy of Sciences. Russian expansion and exploitation of the area and the progress of acculturation of the native population in the Soviet time are reviewed (p. 16–21). The geomorphology and geological structure and mineral resources, climate, river, lake and marsh hydrology, soil, vegetation, and fauna are outlined (p. 21–52). Fisheries and the fishing industry, forestry and the wood industry, also other, smaller branches of industry are described (p. 52–79). Agriculture, stock raising, reindeer husbandry and fur farming, hunting and trapping, and transport and communication are dealt with (p. 97–101). Data are given on the size, distribution and growth during 1930–50 of each branch of the economy; difficulties of economic development with the large area in virgin taiga and impassable marshes, are noted. Over 60% of the District's economy is based on fisheries, over 23% on forestry and only 15% on livestock, reindeer breeding and fur farming. The 2,288 fishers are organized in 196 teams (artel'); most of the collective farms and many state organizations are engaged in the fishing industry. Some 55 collective farms own 90,000 reindeer and over 7,000 silver foxes. Considerable deposits of natural gas (discovered in the Berezovo region), rock crystal, clay, quartz sand and immense deposits of peat are the main mineral resources. Rivers (the Ob' and its tributaries: Irtysh, Konda, Severnaya Sos'va, Vakh, Lyapin, etc.) and settlements (Khanty-Mansiysk, Berezovo, etc.) are described. District boundaries and its administrative divisions, also the dis-

tribution of industry are shown on maps; a list of literature is added.

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52359. KOKOSOV, N. M. V Otdele ėkonomicheskikh issledovaniĭ Ural'skogo filiala Akademii nauk SSSR. (Voprosy ėkonomiki, Feb. 1957, no. 2, p. 158–59.) Ref. Text in Russian. ***Title tr.:*** In the Section of Economic Investigations of the Ural Branch of the Academy of Sciences of U.S.S.R.

Notes compilation of a monograph on the geography and economy of the Yamal-Nentsy National District as part of an investigation of the eastern slopes of the sub-polar and polar Urals carried out by the Section. ***Copy seen:*** DLC.

KOLC, JIŘI, *see* Málek, P., *and* J. Kolc. Reaktivita . . . toxinům . . . *1957.* No. 53077.

KOLDOVSKÝ, O., *see* Hahn, P., *and* O. Koldovský. Significance . . . adrenal glands . . . *1958.* No. 51507.

52360. KOLESNIKOV, ARKADIĬ GEORGIEVICH. On the growth rate of sea ice. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 157–61, graph.) 16 refs.

Existing theories on ice growth fail to explain entirely discoveries made by Soviet drifting research stations. The most promising group of theories includes studies proposing to obtain analytical solutions simple enough for practical calculations. An approximate theory of ice growth as it occurs on the sea surface, considering the quantitative influence of solar and effective radiation is formulated. ***Copy seen:*** DN–HO.

52361. KOLESNIKOV, V. G. O vliianii gidrologicheskikh uslovīĭ na raspredelenie i povedenie sel'di v Norvezhskom more. (Rybnoe khoziaĭstvo, Nov. 1957. god 33, no. 11, p. 69–76, illus. maps.) Text in Russian. ***Title tr.:*** The effect of hydrological conditions on the distribution and behavior of herring in the Norwegian Sea.

Account of investigation made in the fall of 1955 and in spring-summer 1956 by special search boats in the fishing areas of the North Atlantic. Temperatures were taken twice daily and wind conditions studied in order to determine movements of water masses. All these data were correlated on the fishing vessels with the distribution of herring. General conclusions as to the dependence of the latter on hydrological and weather conditions are drawn. ***Copy seen:*** DLC.

52362. KOLESNIKOVA, VERA DIONIS'EVNA. Sposoby sviazi slov v slovosochetaniiakh ėvenkiĭskogo iazyka. (Akademiia nauk SSSR. Institut iazykoznaniia. Doklady i soobshcheniia, 1958. no. 11, p. 107–120.) 7 refs. Text in Russian. ***Title tr.:*** Means of word linking in compound words of the Evenki language.

Discusses the syntactic and morphological laws governing the formation of compound words. The analysis is based on the Poligus dialect, one of the Podkamennaya Tunguska dialects used in working out a written Evenki (Tungus) language. ***Copy seen:*** DLC.

KOLETSKY, SIMON, *see* Stueber, P., *and others.* Regional renal hypothermia. *1958.* No. 55207.

52363. KOLI, LAURI. Beiträge zur Kenntnis der Euphyllopodenfauna Finnlands. (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Tiedonannot (Archivum), 1956. v. 11, no. 2, p. 108–111, 2 text maps.) 7 refs. Text in German. ***Title tr.:*** Contribution to the knowledge of the phyllopod fauna proper of Finland.

Contains taxonomic notes and data on distribution of *Lepidurus arcticus, Branchinecta paludosa* and *Polyartemia forcipata,* collected by the author in the Enontekiö region (68°–69° N.). ***Copy seen:*** DLC.

52364. KOLI, LAURI. Über *Cottus gobio* L. und *C. gobio koshewnikowi* Gratzianow in Finnland und in Schweden. (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Tiedonannot (Archivum), 1958. v. 12, no. 2, p. 108–112, 2 illus., table.) 6 refs. Text in German. ***Title tr.:*** On *Cottus gobio* L. and *C. gobio koshewnikowi* Gratzianow in Finland and in Sweden.

Contains a study (based partly on material from Swedish Lapland and northern Finland) of two forms of freshwater sculpin, one, *C. gobio,* has a smooth skin and the other is covered with prickles. The *C. koshewnikowi* is considered a subspecies of *C. gobio,* and not a species. ***Copy seen:*** DLC.

52365. KOLOBKOV, N. V. Neobychnye polĭarnye siianiia. (Meteorologiia i gidrologiia, Mar. 1958, no. 3, p. 56–58, maps.) 3 refs. Text in Russian. ***Title tr.:*** Unusual auroras.

Auroras are usually visible in the 2,200- to 2,800-km. radius zone from the magnetic pole; during September (5, 22, 23 and 30) of 1957, however, auroras were visible four times in the zone 60°–43° N. and between 25° and 75° E. The characteristics of this phenomenon are described. ***Copy seen:*** DLC.

52366. KOLODÍAZHNAÍA, A. A. K voprosu ob oledenenii Sos'vinsko-Vagranskogo vodorazdela na vostochnom sklone severnogo Urala. (Akademiía nauk SSSR. Laboratoriía gidrogeologicheskikh problem. Trudy, 1955. t. 12, p. 114–19, table, map.) 10 refs. Text in Russian. ***Title tr.:*** The glaciation of the Sos'va-Vagran watershed, on the eastern slope of the northern Urals.

Earlier work in the area (approx. 60°20′ N. 59°30′ E.) is outlined. Its glacial deposits, their thickness and character are described, with discussion of the extent of the local glacier and its movement, effect of rivers, origin of local lakes. ***Copy seen:*** DLC.

52367. KOLOMIETS, N. G. Sostoíanie i zadachi zashchity lesov Sibiri. (Lesnoe khoziaĭstvo, May 1958. god 11, no. 5, p. 35–38.) Refs. Text in Russian. ***Title tr.:*** Condition and problems of forest protection in Siberia.

Contains general data on the extent of Siberian forests and their timber resources. Included are descriptions of insect damage to trees; and discussion of insect eradication, insect pests of coniferous forests and the fight against them; damage, biology and combat of *Dendrolimus sibiricus;* entomological research and education; air reconnaissance.
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52368. KOLPAKOVA, N. Na Pechore; fol'klornaía ėkspeditsiia Instituta russkoĭ literatury AN SSSR. (Sovetskaía ėtnografiia, 1958, no. 6, p. 146–51.) 6 refs. Text in Russian. ***Title tr.:*** On the Pechora; the folklore expedition of the Institute of Russian Literature of the Academy of Sciences, U.S.S.R.

Describes the lyric, epic and popular Russian songs and ballads collected in 1955 and 1956, in the Ust'-Tsil'ma and Nar'yan Mar districts on the middle and lower Pechora region. ***Copy seen:*** DLC.

52369. KOMAR, IGOR' VALER'IANOVICH. Industrial'nyĭ Ural. (Priroda, Nov. 1957. no. 11, p. 125–34, 7 illus., map.) Text in Russian. ***Title tr.:*** The industries of the Urals.

Reviews the industrial development of this important mountain region in the forty-year Soviet era. The more productive regions of the central and southern Urals are dealt with chiefly. But the forests of Northern Ural, the new industrial centers of Vorkuta (coal and machine industry), Salekhard (formerly Obdorsk) and coal-mining in the Pechora basin are considered; the importance of Pechora-Vorkuta railway for the industrial development of Northern Ural is stressed.
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52370. KOMAR, IGOR' VALER'IANOVICH. K voprosu o granitsakh Urala, kak ėkonomicheskogo raĭona. (Akademiía nauk SSSR. Izvestiía, ser. geogr., May–June 1957, no. 3, p. 23–31, map.) Text in Russian. ***Title tr.:*** Boundaries of the Ural economic region.

Includes (p. 27) discussion of economic relations between the Northern Ural and the Ural economic region, which as yet covers only the Middle and Southern Ural. There is remarkable development in the Northern and its connection with the Middle Ural is planned by railroad from Podgornaya near Salekhard to Polunochnaya, and by the Pechora-Volga waterway, but its present industry (wood and power) differs from the rest of Ural and justifies its separation into an independent economic region.
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52371. KOMAR, VL. A., *and* **N. M. CHUMAKOV.** Sredne- i verkhne paleozoĭskie otlozheniia Vilŭĭskoĭ vpadiny. (Akademiía nauk SSSR. Izvestiía, ser. geologicheskaía, Apr. 1957. god 22, no. 4, p. 23–32, map, cross-section.) 17 refs. Text in Russian. ***Title tr.:*** Middle and Upper Paleozoic deposits in the Vilyuy depression.

Reports 1953–55 study of deposits located in several places in the Kempendyay River region and the middle Vilyuy basin, an area 63°–64° N. 115°–120°30′ E. Combined cross-sections of Devonian, Carboniferous and Permian-Triassic deposits are presented and their distribution, thickness, series, and floral and faunal characteristics are outlined. With discovery of these deposits, the origin of the Vilyuy depression is referred to Middle rather than Upper Paleozoic.
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52372. KOMARENKO, L. E. K izucheniiu flory vodorosleĭ reki Indigirki. (Akademiía nauk SSSR. Izvestiía vo-

stochnykh filialov, 1957, no. 4–5, p. 203–212, illus., tables, map.) 4 refs. Text in Russian. ***Title tr.:*** Study of the algal flora of the Indigirka River.

Reports on study of 37 plankton samples collected June-Sept. 1944 in the Indigirka River from the Moma down to the mouth (map). Microflora of these samples was studied by the author. The 65 phytoplankton species identified are listed with notes on size, quantity and place of occurrence; their characteristic features are discussed; microflora of the Indigirka and the Lena River are compared. ***Copy seen:*** DLC.

52373. KOMAROV, N. S. Sneg (*In:* U.S.S.R. Armiia. Upravlenie Voenno-vozdushnykh Sil. Sbornik materialov po stroitel'stvu . . . aėrodromov. Moskva, 1942. vyp. 1, p. 9–13.) Text in Russian. ***Title tr.:*** Snow.

The crystallographic structure and the calculation of the physical constants of snow are discussed. The analysis includes density, destruction of the snow cover, evaporation, and condensation. A classification into powder snow and old snow with subdivisions ranging from freshly formed snow to old firn snow is given. The duration of the snow cover increases from southwest to northeast; remains on the ground for about 200 days a year in the northeast areas of U.S.S.R.—From SIPRE.

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52374. KOMAROV, VALENTIN DMITRIEVICH. Issledovanie vodopronitsaemosti merzlot pochvy. (Meteorologiia i gidrologiia, Feb. 1957, no. 2, p. 10–18, tables, graphs.) 25 refs. Text in Russian. ***Title tr.:*** Investigation on water permeability of frozen ground.

The effects of the ice content, composition, moisture, and temperature of frozen ground on its water permeability are examined in detail on the basis of observation under natural conditions, published studies, and experiments in the laboratory of the Institute of Permafrostology in 1954 and 1955. The coefficient of water infiltration is mathematically formulated in relation to its moisture content and experimentally determined at various temperatures. The coefficient is dependent upon the initial moisture content and general hygroscopicity of the ground. Hypothesis on the thermo-physical role of phase transformation for free water during the infiltration process is discussed in relation to ground porosity and ice-forming ability (cryogelation). Absorption of thawed water by frozen ground is analyzed in respect to ground characteristics and depth of freezing and illustrated by graphs and tables.

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52375. KOMAROV, VALENTIN DMITRIEVICH. O vodopronitsaemosti merzlogo peska. (*In:* Materialy po laboratornym issledovaniiam merzlykh gruntov, sbornik 3, 1957. p. 142–48, table, graphs, diagrs.) 5 refs. Text in Russian. ***Title tr.:*** Water permeability of frozen sand.

"Experiments carried out by the Institutes of Permafrostology and Weather Forecasts are described. Sand samples consisted of particles 0.05–1 mm. in diam. (98%) with some less than 0.05 mm. in diam. (2%) and moisture contents of 2–17%. Water at 0° C. filtering from the surface into sandy soil previously cooled to −3° or −5° C. caused a temperature jump to −0.2° or −0.3° C. because of the latent heat associated with crystal formation. Permeability diminished with increased ice content: a permeability of 6 mm./min. for a 3% ice content dropped to 0.07 mm./min. when the ice content reached 27%."—SIPRE.

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KOMAROV, VLADIMIR LEONT'EVICH, 1869–1945, *see* Eckardt, T. Bericht . . . "Flora der UdSSR." *1957.* No. 50680.

KOMAROVA, A. E., *see* Ivanov, A. P., *and* A. E. Komarova. Peplovye tufy . . . *1958.* No. 51997.

52376. KOMI ASSR. STATISTICHESKOE UPRAVLENIE. Narodnoe khoziaistvo Komi ASSR; statisticheskii sbornik. Syktyvkar, Komi knizhnoe izdvo, 1957. 175 p. tables, diagrs. Text in Russian. ***Title tr.:*** The economy of Komi A.S.S.R.; a statistical handbook.

Contains statistical data on the population, administrative division, cities, towns, etc., industry, agriculture, transportation and communication, labor, commerce, education, public health and welfare and urban conditions of Komi A.S.S.R. including its areas considered as far North (towns of Vorkuta and Ukhta, and the Izhemskiy, Intinskiy, Kozhvinskiy, Troitsko-Pechorskiy, Ust'-Usinskiy, Ust'-Tsilemskiy and Ukhtinskiy Districts). Coal mining and forestry are

dealt with in the chapter on industry, and reindeer breeding (p. 82–83) in that on agriculture. Data on the petroleum and natural gas industry are omitted. A tabular summary is given (p. 7) of the data on far North areas included in tables, etc. throughout the volume.

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52377. KOMMUNISTICHESKAIA PARTIIA SOVETSKOGO SOIUZA. MURMANSKIĬ OBLASTNOĬ KOMITET. OTDEL PROPAGANDY I AGITATSII. Murmanskaia oblast'; goroda i raĭony. Murmansk, 1957. 171 p. ("Bloknot agitatora," spetsial'nyĭ vypusk). Text in Russian. ***Title tr.:*** Murmansk Province; cities and districts.

Outline of the economic, cultural and industrial development and present conditions in Murmansk, Monchegorsk and Kirovsk and in the Kandalakshskiy, Lovozerskiy, Pechengskiy, Kol'skiy, Saamskiy, Terskiy, Polyarnyy and Teriberskiy districts: scientific exploration, mineral discoveries (apatite, iron ores, etc.), expansion of the older towns and establishment of settlements, development of industrial organizations, creation of the Northern Fleet, progress of fisheries, activities of collective and state farms and fishery collectives, etc. Urban development plans are discussed in the last chapter by A. Antonov, chief of Provincial Section for Construction and Architecture (p. 158–71).

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52378. KOMOVA, O. N. Ob advektsii tepla zimoĭ v tsentre Arkticheskogo basseĭna. (Problemy Severa, 1958, vyp. 1, p. 330–36, diagrs., table, maps.) Text in Russian. ***Title tr.:*** Advection of warmth in winter to the center of the Arctic Basin.

Air temperature, Jan. 29–Feb. 1, 1956, in Moscow was −30° C., and at the drifting station North Pole-5 (86°30′ N. 90° E.) it ranged from −1° to −4° C. Synoptic conditions over the North Atlantic and Arctic Basin are analyzed and the exceptionally warm weather in the Arctic is attributed to the unusual distribution and movement of cyclones and anticyclones, which caused a flow of warm air masses from the Atlantic into the Arctic. ***Copy seen:*** DLC.

52379. KONDAKOV, KONSTANTIN GAVRILOVICH, *and* **G. V. NAUMOV.** Narodnokhoziaĭstvennoe znachenie almazodobyvaiushcheĭ promyshlennosti v IAkutskoĭ ASSR. (Voprosy ėkonomiki, June 1957, no. 6, p. 135–40, table.) Text in Russian. ***Title tr.:*** The national economic importance of the diamond industry in Yakut A.S.S.R.

Six diamantiferous regions have been discovered in Yakutia: Malo-Botuobinskiy, Daldyno-Alakitskiy, Sredne-Markhinskiy, Tyungskiy, Munskiy and Severo-Olenekskiy. Development problems are discussed for each of these regions, including transportation, electrification, construction of buildings and water supply; a gradual development is suggested, beginning with the most promising and accessible, Malo-Botuobinskiy region. The Soviet Union's industrial diamond requirements are estimated at 7–9 million carats a year. There are prospects of meeting this demand by development of the Yakutia diamond fields.

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KONDAKOV, KONSTANTIN GAVRILOVICH, *see also* Akademiia nauk SSSR. Institut ėkonomiki. Problemy . . . IAkutskoĭ ASSR. *1958.* No. 49171.

KONDIURIN, N., *see* Bel'kov, N., *and* N. Kondiurin. Slavnoe sorokaletie. *1958.* No. 49629.

52380. KONDORSKAIA, N. V., *and* **G. A. POSTELENKO.** Seismicheskaia aktivnost' Kurilo-Kamchatskoĭ oblasti za 1954–1956 gg. (Akademiia nauk SSSR. Izvestiia, ser. geofizicheskaia, Sept. 1958, no. 9, p. 1114–20, 3 tables, 4 maps.) 14 refs. Text in Russian. ***Title tr.:*** Seismic activity of the Kuril-Kamchatka region for 1954–1956.

Reports observations in the region 43°–58° N. 144°–165° E., based on the Uglegorsk, Yuzhno-Sakhalinsk, Klyuchi, Magadan stations. Seismic activity was evident in southeast Kamchatka, northern Kuril Islands, east of Simushir and of Upur and Iturup Islands. The purpose of these investigations was to determine earthquake centers, intensity, depth and energy expended. A classification according to depths and regional distribution is made, and the data presented in tables and maps. ***Copy seen:*** DLC.

52381. KONDRAT'EV, V. F., *and* **A. CH. KELLI.** O dikikh iagodnykh rasteniiakh. (Priroda, June 1957, no. 6, p. 127.) Text in Russian. ***Title tr.:*** On wild small-fruit plants.

Notes the abundance and economic importance (as food supply) of some berry-

producing plants, like cloudberry, (*Rubus chamaemorus*), bilberry (*Vaccinium vitis idae, V. uliginosum*), blueberry (*V. myrtillus*), etc. growing wild in Kola Peninsula. The introduction of these plants into cultivation is strongly recommended. ***Copy seen:*** DLC.

52382. KONDRAT͡SOVA, O. F. Nekotorye osobennosti gidrologicheskogo rezhima pribrezhnogo Murmana. (Akademiiâ nauk SSSR. Murmanskaiâ biologicheskaiâ stant͡siiâ. Trudy, 1957. t. 3, p. 20–32, illus. maps.) 13 refs. Text in Russian. ***Title tr.:*** Some peculiarities of the hydrological regime of coastal Murman.

Account based on field work during 1953 and 1954, with data on bottom configuration, constant currents, thermal conditions in horizontal and vertical transects, annual fluctuation of temperatures. A zone of 20 mile width was studied. The effect of conditions on the plankton, especially on forms eaten by fish is considered. ***Copy seen:*** DLC.

52383. KONDRAT͡SOVA, O. F. Termika i solenost' pribrezhnykh vod vostochnogo Murmana. (*In:* Akademiiâ nauk SSSR. Murmanskaiâ biologicheskaiâ stant͡siiâ. Zakonomernosti skopleniĭ . . . 1958. p. 7–34, illus., tables, maps.) 11 refs. Text in Russian. ***Title tr.:*** Thermal conditions and salinity of coastal waters of the eastern Murman.

Contains information and data on the physiographic aspects of the area studied; temperature changes during the year, with depth and distance from shore, maxima and minima, averages; general thermal conditions during period of study (1953–1955), air temperatures and their fluctuations; salinity of coastal waters, with changes in time and location, extremes, averages; effect of atmospheric precipitation upon salinity; temperature and salinity of various profiles.

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52384. KONECHNYKH, G. K. Iz opyta organizat͡sii okhotnich'ego promysla kak otrasli obshchestvennogo khozîâĭstva kolkhozov Vilûĭskogo raĭona. (Akademiiâ nauk SSSR. ĪAkutskiĭ filial, *Yakutsk*. Trudy, seriiâ ėkonomicheskaiâ, 1957. vyp. 1, Materialy po ėkonomike sel'skogo khozîâĭstva ĪAkutii, p. 155–61, tables.) 2 refs. Text in Russian. ***Title tr.:*** An attempt to organize hunting as a branch of the general economy of collective farming in the Vilyuy District.

Outlines the present situation and potential expansion of hunting to provide additional occupation and income in the sparsely populated Vilyuy basin. The favorable terrain with numerous rivers and lakes, and the plentiful wildlife (squirrel, white hare, fox, ermine, kolinsky and others) present good opportunities for hunting. Pelts bring 1.5–1.7 million rubles yearly, and game (e.g. white hare) also has value. If the hunting were organized and methods brought up-to-date (some seasonal hunting plans are presented), the income from it could be doubled. ***Copy seen:*** DLC.

52385. KONEV, G. Berezovyĭ grib, chaga. (Sel'skoe khozîâĭstvo Sibiri, 1958, no. 6, p. 93–94, illus.) Text in Russian. ***Title tr.:*** Birch rot.

Describes fungus called "chaga" occurring on birch and mountain-ash in coniferous forests of the North. It is used by hunters as substitute for tea, and is said to have medicinal properties, curing and preventing tumors, etc.

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52386. KONGSVIK, RAGNAR. Økonomiske samarbeidsproblem innen Nordkalotten. (Nordisk jordbrugsforskning, 1956. årg. 38, hefte 1, p. 33–41.) Text in Norwegian. ***Title tr.:*** Economic cooperation problems in northern Fennoscandia.

The principal economic reasons for increased agricultural production in the arctic region of Fennoscandia are the high cost of imports and the advantages of local production. Norway's program of cost, labor, and procedural accounting and scientific counsel for volunteer farms is outlined. Included in it are grains, fodder, vegetables, fruits and berries, and farm animals. Adaptation of crops to soil and farm size, effectiveness of mechanization and fertilizers, and increased cultivated area are important factors in the program. ***Copy seen:*** DA.

KONIGSMARK, B., *see* Gunter, R., *and others.* Physiologic changes . . . *1958.* No. 51421.

52387. KONITZKY, GUSTAV A. Indianermasken in Nordamerika. (Kosmos, Sept. 1956. Jahrg. 52, Heft 9, p. 406–415, illus.) Text in German. ***Title tr.:*** Indian masks in North America.

Describes symbolic and naturalistic masks with animal or human features including those used in ritual dances by Tlingit and Haida Indians, South Alaskan

Eskimos, and Aleuts. The simple, almost abstract design of Eskimo masks and the elaborate workmanship of the Indian are mentioned. ***Copy seen:*** DLC.

52388. KONNIKOV, E. D. Kolkhoznoe proizvodstvo basseĭna reki ĺÂny. (Akademiîa nauk SSSR. ĺÂkutskiĭ filial, *Yakutsk*. Trudy, seriîa ėkonomicheskaîa, 1957. vyp. 1, Materialy po ėkonomike sel'skogo khozîâĭstva ĺÂkutii, p. 125–34, tables.) 3 refs. Text in Russian. ***Title tr.:*** Collective farm production in the Yana River basin.

This 433,000 sq. km. region (approx. 65°–70° N. 130°–140° E.) comprises the Verkhoyansk, Sakkyryrsk and Ust'-Yansk administrative districts. Its population distribution, livestock, and collective farms are reviewed. Cattle, horse, and reindeer raising, fur farming, and hunting are dealt with in turn, and statistical data given according to administrative districts. Specialization is suggested for the collective farms and plans outlined. ***Copy seen:*** DLC.

52389. KONNOVA, O. S. Nekotorye kristallopticheskie issledovaniîa sezonnomerzloĭ porody. (*In:* Akademiîa nauk SSSR. Institut merzlotovedeniîa. Sezonnoe promerzanie gruntov i primenenie l'da dlîa stroitel'nykh tseleĭ. 1957. p. 67–81, tables, graph, diagrs.) 9 refs. Text in Russian. ***Title tr.:*** Investigations on seasonally frozen ground using the methods of crystal optics.

"Structural changes in clay soil associated with freezing were studied at the Zagorsk Experimental Station in the winter of 1954–55. Data on the cryogenic texture of frozen clay and on the structure and forms of ice crystals and their crystallographic orientation in frozen ground are tabulated and discussed. Intense migration of moisture from the lower thawed strata resulted in a 5-fold moisture increase in the frozen clay. Microscopic analysis of frozen samples showed textural modification during freezing, the ice content in the frozen samples reaching 38–47%."—SIPRE. ***Copy seen:*** DLC.

52390. KONNOVA, O. S. Nekotorye rezul'taty issledovaniîa stroeniîa merzlykh porod. (*In:* Materialy po laboratornym issledovaniîam merzlykh gruntov, sbornik 3, 1957. p. 195–226, illus., tables, diagrs.) 3 refs. Text in Russian. ***Title tr.:*** Results of structural studies on frozen ground.

Results of microscopic studies on various frozen soils are outlined; data obtained from photographs are tabulated; and the effects of ice formation, moisture, and freezing temperature on structure are discussed. A compact structure appeared in moist samples frozen rapidly at −25° to −52.7° C. Cryogenic structure with lamellar heterogeneity was observed in samples frozen at −10° to −12° C. Regular crystallographic orientation decreased in coarse-grained sand (grains 1.5 mm. or more in diam.). Decreased moisture and freezing speed produced disorganized orientation.—From SIPRE. ***Copy seen:*** DLC.

52391. KONOVALOV, I. N., *and others.* Nekotorye novye svedeniîa o fiziologicheskoĭ prirode stoĭkosti rasteniĭ k morozu. (Akademiîa nauk SSSR. Botanicheskiĭ institut. Trudy, ser. 4. Ėksperimental'naîa botanika; problemy mikroėlementov, 1958. vyp. 12, p. 299–312, illus. tables.) 34 refs. Text in Russian. *Other authors:* E. N. Mikhaleva *and* L. M. Zakman. ***Title tr.:*** Some new information on the physiological nature of resistance to frost in plants.

A study on the effects of some oxydants and reductants on cold resistance of plants especially during the period of spring frosts. Plants were exposed to frosts of −1° to −3° C. In those which showed increased hardiness, indicators of oxydation-reduction were on a higher level. The oxydants and reductants used also produced an increased cold resistance but to a limited extent. ***Copy seen:*** DLC.

52392. KONSTANTINOV, K. Atomnyĭ ledokol skhodit so stapeleĭ. (Ogonëk, Dec. 1957. god 35, no. 49, p. 4–5, illus.) Text in Russian. ***Title tr.:*** The atomic ice-breaker is launched.

Journalist's notes from a visit to the atom-powered ice-breaker *Lenin:* its size, accommodations, etc.; the maiden voyage will be under command of Capt. P. A. Ponomarev. ***Copy seen:*** DLC.

52393. KONSTANTINOV, K. Pushnina idet s aukt͡siona. (Ogonëk, Aug. 1956. god 34, no. 33, p. 26–27, illus.) Text in Russian. ***Title tr.:*** Furs are sold at auction.

Sketch of Soviet fur sale at the 27th(?) International Fur Auction in Leningrad, headed by Alekseĭ Alekseevich Kaplin, chairman of the All-Union Association "Soîuzpushnina." High quality of the

furs and high cash prices for Kamchatka sable are noted. ***Copy seen:*** DLC.

52394. KONSTANTINOV, K. G. *and* **M. N. SHCHERBINO.** Sutochnye vertikal'nye migrat͡sii morskogo okuni͡a. (Rybnoe khozi͡aĭstvo, Oct. 1958. god 34, no. 10, p. 11–13, illus.) Text in Russian. ***Title tr.:*** Diurnal vertical migrations of the sea-perch.

Describes vertical migration in general, factors causing it, significance for fisheries. Migration of the sea (red) perch in arctic waters is discussed and attributed to the vertical movement of its food animals; extent of the vertical migration is considered. ***Copy seen:*** DLC.

52395. KONSTANTINOV, O. A. Sovetskoe raĭonirovanie k sorokaletiiu velikoĭ oktiabr'skoĭ sot͡sialisticheskoĭ revoli͡ut͡sii. (Vsesoi͡uznoe geograficheskoe obshchestvo. Izvestii͡a, Sept.–Oct. 1957. tom 89, no. 5, p. 426–44) 35 refs. Text in Russian. ***Title tr.:*** Soviet zoning during the forty years since the great October socialist revolution.

Outlines principles and development of the division of the U.S.S.R. into administrative and economic zones. Six periods are distinguished: 1918–1920, when the most evident defects of the old administrative division were corrected; 1921–1930, creation of the new administrative zone system (Soviet Republics, Autonomous Republics, Provinces, Districts); 1931–1939, when these zones were adjusted to new conditions created by economic development; 1939–1945, creation of 11 economic zones embracing 127 administrative units; 1946–1953, when small adjustments and corrections of zones were made; 1954–1957, a period of decentralization, climaxed by the creation of 105 National Economic Councils (Sovety narodnogo khozi͡aĭstva) in May–July 1957. Principles of further development are discussed in conclusion (p. 441–44). Remarks on zoning in the arctic and sub-arctic areas and on creation of Northern economic zone in 1939 (p. 437) are included. ***Copy seen:*** DLC.

52396. KONSTANTINOVA, OL'GA ALEKSANDROVNA. Suffiksal'noe slovoobrazovanie imen sushchestvitel'nykh v ėvenkiĭskom i͡azyke. (Akademii͡a nauk SSSR. Institut i͡azykoznanii͡a. Doklady i soobshcheni͡a, 1958. no. 11, p. 3–19.) 6 refs. Text in Russian. ***Title tr.:*** Suffixal noun formation in the Evenki language.

A morphological and semantic analysis of the Poligus dialect spoken by the Evenki (Tungus) living along the lower reaches of the Nizhnyaya Tunguska River. ***Copy seen:*** DLC.

KONSTANTINOVA, OL'GA ALEKSANDROVNA, *see also* Avrorin, V. A. Literaturnye i͡azyki . . . *1953.* No. 49443.

52397. KONTOROVICH, G. I. Povyshenie kachestva kont͡sentrata i izvlecheni͡a zheleza na Olenegorskoĭ fabrike. (Gornyĭ zhurnal, May 1958, no. 5, p. 59–61, diagrs.) Ref. Text in Russian. ***Title tr.:*** Rise in quality of the concentrate and of extraction of iron at the Olenegorsk plant.

Analyzes the early concentration process for iron ores and offers suggestions of supplemental processes for additional enrichment and a higher percentage of iron extraction. The Olenegorsk (now Olen'ya, approx. 68°09′ N. 33°18′ E.) ore deposits contain about 90% ore-forming minerals (magnetites, hematites, quartz and hornblende) in small grains. Concentration can be increased by simple means in various stages of the processing cycle. Iron content in the new concentrate can be increased to 62% and iron extraction from it, to 80%.

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52398. KONZHIN, A. I. Primenenie organo-mineral'nykh smeseĭ v uslovii͡akh Kraĭnego Severa. (Zemledelie, Oct. 1958. god 6, no. 10, p. 82–84, tables.) Text in Russian. ***Title tr.:*** Using organic-mineral mixtures under conditions of the far North.

Experiments with various combinations of humus and mineral fertilizers, for potato, forage oat, wheat and barley crops were carried out in 1953–55 by the Institute of Agriculture of the Far North at the Salekhard, Igarka, Khanty-Mansiysk and Nar'yan-Mar Agricultural Experiment Stations. Satisfactory results were obtained by all stations. At Igarka, the potato crop, 97–108 cwt. per hectare fertilized with five tons of humus mixed with 30 kg. of $N_{30}P_{45}K_{30}$ substantially exceeded the yield (82.4 cwt.) from ground fertilized with 70 tons of manure per hectare.

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52399. KONZHUKOVA, E. D. Intinskai͡a fauna nizhneĭ permi Severnogo Priural'i͡a. (Akademii͡a nauk SSSR. Paleontologicheskiĭ institut. Trudy, 1956. t. 62,

p. 5–50, illus., table, plate.) 14 refs. Text in Russian. ***Title tr.:*** The Inta fauna of Lower Permian on the west side of the Northern Ural.

Description of vertebrate fauna found in 1948 by G. A. Dmitriev in carboniferous deposits of Lower Permian north of the Bol'shaya Inta estuary, (66°15′ N. 59°50′ E.) in Komi A.S.S.R., the first such discovery in European U.S.S.R.; its paleontological and stratigraphic importance is stressed. Among the vertebrates best represented is the new family *Intasuchidae*, of which *Intasuchus silvicola* sp. nov. and *Syndgodosuchus tetricus* sp. nov. are described in detail; other fossil fauna are outlined. Morphologic and stratigraphic characteristics are given for the Inta fauna, and discovered species are listed (p. 49–50). The similarity of this fauna with the vertebrates of Texas Redbeds is noted. ***Copy seen:*** DLC.

52400. KOPEĬKO, P. I. Puti povysheniĭa produktivnosti skota v ĬAkutii. (Sel'skoe khozĭaĭstvo Sibiri, 1958, no. 1, p. 43–45, tables.) Text in Russian. ***Title tr.:*** Methods of raising the productivity of cattle in Yakutia.

Discusses data on weight, annual yield and fat content of milk from ordinary local cows in comparison with the productivity of cross-bred stock with strains of Kholmogor or Simmental. Cross-breeding and improvement of fodder and maintenance result in a considerable rise of productivity. Based on studies by the Yakut Experimental Station of Animal Husbandry. ***Copy seen:*** DLC.

52401. KOPISTO, AARNE. Rovaniemen Kolpeneenharjun kaivauksista. (Suomen muinaismuistoyhdistys. Suomen museo, 1955. v. 62, p. 100–106, illus. map.) Refs. Text in Finnish. Summary in German. ***Title tr.:*** About the excavations on the Kolpene ridge at Rovaniemi.

Describes the discovery, in 1954, of a group of nine stone-faced fireplaces on a ridge near the Kemi River. The absence of any house remains in the area is noted. A large amount of beautifully ornamented potsherds belonging to the older phase of the typical comb-ceramic pattern, the so-called Äyräpää II,1 style, were found. Kolpene is thus the northernmost stone-age habitation site in Finland with typical comb-ceramic (cf. No. 50767). ***Copy seen:*** DLC.

52402. KOPPERS, WILHELM, 1886– . Eine Würdigung des wissenschaftlichen Lebenswerkes von Professor Pater Wilhelm Schmidt und seine Bedeutung für die Amerikanistik. (International Congress of Americanists, 31st. *Sao Paolo*, 1954. Proceedings, 1955. v. 2, p. 1129–51.) 25 refs. Text in German. ***Title tr.:*** An appreciation of the scientific life work of Prof. Father Wilhelm Schmidt and his importance for Americanist studies.

A discussion and evaluation of Schmidt's ethnologic work and studies of the history of religion including v. 6 of his *Ursprung der Gottesidee* (No. 37266) dealing with the Algonkians, Eskimos and Déné groups of northern North America. ***Copy seen:*** D8I.

KOPTEVA A. V., *see* Baskakov, G. A., *and* A. V. Kopteva. Ėkspeditsiĭa . . . Karskogo moriĭa v 1956 g. *1958*. No. 49572.

52403. KOPYLOVA, T. N. Nekotorye svedeniĭa o rezul'tatakh bureniĭa nefti v Olenekskom raĭone. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ biŭlleten', 1958. vyp. 7, p. 50–52.) Text in Russian. ***Title tr.:*** Some information on the results of drilling for oil in the Olenek River region.

Reports on the oil prospecting of the Main Administration of the Northern Sea Route during 1948–1953 in the Tyumyanskiy and Ulakhan-Yurgakh River section of the lower Olenek basin in northwestern Yakutia. Of the identified Cambrian, Permian, and Triassic bituminous rocks and gas, the Permian is given most attention. In the Ulakhan-Yurgakh section, 21 wells were drilled, the deepest 1781 m. Lithology and stratigraphy of oil-bearing sediments are briefly reviewed. Bitumen content (up to 9.84%) is reported. Petroleum in commercial amounts was not found. ***Copy seen:*** DGS.

KOPYTOFF, IGOR, *see* Indiana. University. The Samoyed. *1955*. No. 51922.

52404. KOPYTOV, A. Sessiĭa raĭsoveta ob okhotnich'em promysle. (Okhota i okhotnich'e khozĭaĭstvo, Sept. 1957. god 3, no. 9, p. 21.) Text in Russian. ***Title tr.:*** Regional council's session devoted to hunting industry.

Reports proceedings of the Amderma Regional Council (Soviet) in the Nentsy

National District: the most successful hunters of the region are listed; shortcomings are noted in supply of equipment and shelter (huts) in remote hunting areas. ***Copy seen:*** DLC.

KORANDA, J. J., *see* Drew, J. V., *and others.* Rate . . . thaw in arctic soils. *1958.* No. 50627.

52405. KORCHAGIN, ALEKSANDR. ALEKSANDROVICH, 1900– . Novaîa (dlinnoplodnaîa) raznovidnost' cheremukhi *Padus racemosa* (Lam.) Gilib. (Botanicheskiĭ zhurnal, Mar.–Apr. 1951. t. 36, no. 2, p. 197–98, illus.) Text in Russian. ***Title tr.:*** A new dolichocarpous variety of *Padus racemosa* (Lam.) Gilib.

Includes a Latin diagnosis and Russian description of the wild cherry, *Padus racemosa* var. *dolichocarpa* n. var., collected in the Mezen' valley in Arkhangel'sk province in the summer of 1947. ***Copy seen:*** DLC.

52406. KORDIKOV, A. A. Izuchennost' mineralogicheskikh korreliîativov oblomochnykh porod Leno-Eniseĭskoĭ oblasti. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958, t. 80. Sbornik statteĭ po geologii Arktiki, vyp. 5, p. 149–81, table.) Text in Russian. ***Title tr.:*** Investigation of mineralogic correlatives of disintegrated rock formations in the Lena-Yenisey province.

Presents a stratigraphic study of disintegrated rock formations from Permian to Quaternary, distributed in the province between the Yenisey and the Lena, its southern border along the middle of Siberian platform and Anabar crystalline massif; the northern along the Taymyr coast. Since the faunal and floral characteristics of strata are lacking, the stratigraphic division is based on the heavy mineral residues, which differ in each stratigraphic unit. For five regions (Ust' Yeniseyskiy Port, Lake Taymyr region, eastern Taymyr, Nordvik-Khatanga, the lower Olenek) the accessory minerals identified by the author and other scientists are reviewed and summarized in a table according to mineralogic correlatives and periods. The importance of this petrographic correlation method is stressed and its usefulness for study of oil-bearing deposits is discussed. ***Copy seen:*** DGS.

52407. KORENEVA, E. V. Sporovo-pyl'tsevoĭ analiz donnykh otlozheniĭ Okhotskogo moriî. (Akademiîa nauk SSSR. Institut okeanologii. **Trudy,** 1957. t. 22, p. 221–51, illus., table, maps.) 30 refs. Text in Russian. ***Title tr.:*** Spore-pollen analysis of bottom deposits in the Okhotsk Sea.

Use of this method in marine and local research is discussed briefly; material and techniques are outlined. Quantitative analysis of pollen and spores in the area and the qualitative (species) distribution are presented. The Sea is zoned according to spore-pollen spectra. Distribution with depth of the sediment is treated in detail. ***Copy seen:*** DLC.

52408. KORENÎAKO, A. I., *and others.* Rasprostranenie aktinomitsetov-antagonistov v pochvakh Kol'skogo poluostrova. (Mikrobiologiîa, Jan.–Feb. 1955. t. 24, vyp. 1, p. 62–66, tables.) 7 refs. Text in Russian. *Other authors:* A. G. Kuchaeva *and* I. E. Mishustina. ***Title tr.:*** Distribution of actinomycete antagonists in the soils of the Kola Peninsula.

A study of uncultivated and cultivated soils of the area. The former were found to be poor in microflora, especially in actinomycetes. Cultivated and particularly manured soils contained a great amount of actinomycete antagonists making up 10–89% of the actinomycetes. *Actinomyces globisporus* group was predominant in cultivated soils, *A. griseus* in the others. ***Copy seen:*** DLC.

52409. KOREPANOV, K. Kormovaîa kapusta na Severe. (Sel'skoe khozîaĭstvo Sibiri, 1957, no. 9, p. 40–41, table.) Text in Russian. ***Title tr.:*** Forage cabbage in the North.

Reports results of growing *Brassica subspontanea planifolia* for the Khanty-Mansi Agricultural Station in 1955–56: selection of soil, methods of growing, yield up to 500 cwt./hectare, nutrient qualities. ***Copy seen:*** DLC.

KOREV, ÎU., *see* Krîukov, V., *and* ÎU. Korev. Na Dal'nem Vostoke. *1958.* No. 52513.

52410. KORNEEV, I. A. Kompleksnoe lechenie otmorozheniĭ s primeneniem vnutriarterial'nykh vlivaniĭ 1% rastvora novokaina. (Khirurgiîa, Sept. 1957. god. 33, no. 9, p. 30–38, illus.) Text in Russian. Summary in English. ***Title tr.:*** Complex treatment of frostbite with intra-arterial injections of 1% novocaine solution.

Account based on treatment of 96 patients, 23 of them with third degree and 44 with fourth degree injury. In these

two groups, anticoagulants were used in addition to novocaine. Topical treatment consisted in removal of blisters and application of biomycin and vaseline oil. In advanced frostbite this treatment reduced inflammatory changes and neurosis. Surgical and late treatment are also discussed. ***Copy seen:*** DNLM.

KORNIENKO, A. D., *see* Musich, N. I., *and* A. D. Kornienko. Osobennosti sistemy zemledeliia v IAkutii. *1957.* No. 53471.

KORNILOV N. A. *see* Tavrovskiĭ, V. A., *and others.* Pervye itogi reakklimatizatsii sobolia . . . *1958.* No. 55340.

52411. KOROCHKINA L. S. Poluchenie meditsinskogo zhira iz pecheni treski kholodnym sposobom. (Rybnoe khoziaĭstvo, Mar. 1958. god 34, no. 3, p. 56–60, illus., tables.) Text in Russian. ***Title tr.:*** Preparation of medicinal cod-liver oil by a cold method.

Disadvantages of hot methods of extraction are explained. A cold method was developed in the fisheries laboratories, utilizing deep-frozen livers. The effects of freezing and thawing on the oil, optimal yields, etc. are discussed. The method is claimed to produce more and better oil than the warm process.

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KOROLEFF, F., *see* Hela, I., *and* F. Koroleff. Hydrographical and chemical data . . . *1958.* No. 51668.

KOROSTOVTSEVA, N. V., *see* Petrov, I. R., *and others.* Gipotermiia . . . *1956.* No. 53968.

52412. KOROTKEVICH, E. S. Rastitel'nost' Severnoĭ Zemli. (Botanicheskiĭ zhurnal, May 1958. t. 43, no. 5, p. 644–63, 7 illus., 2 tables.) 16 refs. Text in Russian. ***Title tr.:*** The vegetation of Severnaya Zemlya.

Reviews the exploration of these islands (77°55′–81°16′ N. 91°–106° E.) from their discovery in 1913 till 1957, including author's sojurn May–Sept. 1950. Physical, especially climatic, conditions are described. The various plant associations analyzed and tabulated include those of lowlands, inland plateaux, river terraces, preglacial plateaux. The vascular plants (38 species) making up these complexes are tabulated with indications of their occurrence. Altogether 54 vascular plants were encountered, and they are systematically tabulated (p. 660–61) with note of their occurrence on islands of the archipelago, and some discussion of their geographic distribution in the area.

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KOROTKEVICH, E. S., *see also* Gorodkov, B. N., *and* E. S. Korotkevich. Pitanie beloĭ kuropatki . . . *1957.* No. 51297.

52413. KOROTONOSHKO, NIKOLAĬ IVANOVICH. Avtomobili vysokoĭ prokhodimosti. Moskva, Mashgiz, 1957. 228 p. illus., diagrs., tables. 7 refs. Text in Russian. ***Title tr.:*** High-traction motor vehicles.

Reviews development and analyzes construction of high-powered trucks and tractors, suitable for cross-country travel and poor roads. Various types of engine starters (hydraulic and pneumatic) with air preheater for winter operation are described in detail with illus. (p. 35–43). Effects of type and size of tires on traction on various grounds (hard, soft, snow, icy, sandy, etc.) are discussed with tabulated data and illus. ***Copy seen:*** DLC.

52414. KOROVIN, M. K. Osnovnye ėlementy geologii i geotektonicheskikh struktur Zapadnoĭ Sibiri. (Akademiia nauk SSSR. Zapadno-Sibirskiĭ filial. Gorno-geologicheskiĭ institut. Trudy 1956. vyp. 15, p. 3–20, maps incl. 2 fold.) 14 refs. Text in Russian. ***Title tr.:*** Basic elements of geologic and geotectonic structure of West Siberia.

Thirteen geologic and geotectonic structures in West Siberia are distinguished and briefly characterized in turn. The arctic regions are included from the Ural in the West to Khatanga Bay in the east. The formation underlying the West Siberian Lowland is characterized. Geotectonic materials of last forty years are reviewed and displayed in maps. Recent studies especially are said to change the previous understanding on the Paleo- or Great Ural, Ob'-Yenisey folded zone, and Chulymo-Yenisey depression.

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52415. KORPÁŠ, J., *and* **Z. TOMORI.** Vplyv hypotermie na kašeľ a dýchanie. (Československá fysiologie, Nov. 1957. ročnik 6, sešit 4, p. 479–82, illus. table.) 17 refs. Text in Czech. ***Title tr.:*** Effect of hypothermia on cough and respiration.

Account of experiments with cats. Hypothermia caused progressive weakening and disappearance of coughing caused

by irritation of respiratory receptors. At the beginning of cooling, breathing showed an increase in frequency and amplitude. With advancing hypothermia, frequency decreased and suspension took place at 16.2 ± 1.9° C. rectal temperature. ***Copy seen:*** DNLM.

52416. KORSAKOV, GEORGIĬ KONSTANTINOVICH, *and* **A. A. SMIRENSKIĬ.** Zarastaûshchie vodoemy i ikh ispol'zovanie dlîâ ondatrovodstva. Moskva, Izd-vo tekhn. i ėkon. lit-ry po voprosam zagotovok, 1956. 136 p. illus. 49 refs. Text in Russian. ***Title tr.:*** Overgrown water bodies and their utilization for muskrat raising.

Consecutive sections of this book deal with the problem of plant overgrowth in fresh-waters and its significance for muskrat management; type of plant growth and of water bodies; type of water bodies as seen by the fur-animal breeder and hunter; distribution pattern and population densities of the muskrat; biotechnical measures and melioration of waters; organization of muskrat breeding; estimating the population; organizing the catch; enemies; tagging. This fur-animal is one of the economically most important in the Soviet Union, especially in colder areas.

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52417. KORT, V. G. Issledovaniîa dal'nevostochnykh morei i Tikhogo okeana, provedennye Institutom okeanologii AN SSSR v 1949–1954 gg. (Akademiîa nauk SSSR. Okeanograficheskaîâ komissiîâ. Trudy, 1958. t. 3, p. 3–12.) Text in Russian. ***Title tr.:*** Explorations of the Far Eastern seas and the Pacific conducted by the Institute of Oceanology of Academy of Sciences U.S.S.R., during 1949–1954.

Brief but comprehensive report covering the activities of the R/V *Vitîaz';* hydrology and meteorology; chemistry of the water and sediments; geology of the bottom and coasts; biological conditions (plankton, benthos, microbiology); ichthyology, fisheries and whaling; methods and equipment. ***Copy seen:*** DLC.

KORT, V. G., *see also* Akademiîa nauk SSSR. Okeanograficheskaîâ komissiîâ. Institut okeanologii . . . *1958.* No. 49185.

52418. KORZH, D. Nekotorye nereshennye voprosy. (Narodnoe obrazovanie, June 1957, no. 6, p. 47–51.) Text in Russian. ***Title tr.:*** Some unsolved problems.

Discusses the problems arising from the inadequate teaching of Russian in elementary schools of non-Russian minorities, including those of the Yakuts and Zyryans. The ensuing difficulties encountered by students in high schools when teaching is exclusively in Russian is stressed. ***Copy seen:*** DLC.

52419. KORZHINSKIĬ, A. F., *and* **E. K. VASIL'EV.** Nakhodka paralûminita v ûrskikh osadkakh ûgo-zapadnoĭ okrainy Vilûiskoĭ vpadiny. (Akademiîa nauk SSSR. Doklady, Nov. 11, 1958. t. 123, no. 2, p. 357–60, diagrs., tables.) 4 refs. Text in Russian. ***Title tr.:*** A find of paraluminite in the Jurassic deposits in the southwest borderland of the Vilyuy depression.

Describes this scarce mineral as found in lower Lias series, 3 km. northeast of the kimberlite pipe "Mir," on the edge of Gorelyye spring, which flows into the Irelyakh River. Microscopic, chemical, thermal, X-ray and optical analyses are presented, and other properties outlined. Comparison is made with paraluminite in other places. ***Copy seen:*** DLC.

52420. KOSHELEVA, I. T., *and* **A. S. TOLSTUKHINA.** K voprosu ob okul'turivanii pochv severnogo Priob'îâ. (Pochvovedenie, Feb. 1957, no. 2, p. 72–82, tables.) Text in Russian. Summary in English. ***Title tr.:*** The problem of soil cultivation in the northern Ob' basin.

Reports results of authors' investigations sponsored by the Soil Institute and Institute of Agriculture of the far North and carried out during 1953–55 in the forest-tundra and taiga of the Salekhard, Berezovo and Khanty-Mansiysk regions on the banks of the Poluy, Sos'va and Irtysh Rivers. Changes in the properties of virgin soils were studied in five experimental plots cultivated and manured (100 tons/hectare/year) for vegetable growing. The amount of humus, also the composition of humic substances changed during the process of cultured soil formation, and this composition is a reliable indicator of the degree of cultivation. Application of micro-elements (copper and boron) to forest-tundra soils in the Salekhard region proved highly effective for forming cultural soils.

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52421. KOSHELEVA, I. T. Mikromorfologiîâ tundrovykh pochvo-gruntov kak

vozmozhnyĭ indikator ikh genezisa. (Akademiîa nauk SSSR. Izvestiîa, ser. geograficheskaîa, May–June 1958, no. 3, p. 88–92, table, plate.) 5 refs. Text in Russian. ***Title tr.:*** Micromorphology of tundra ground-soils as a possible indicator of their genesis.

Presents results of micromorphological investigation of soil-particles in the active layers, using samples from four sections in the northern Ob tundra region including Tambey Bay (71°30′ N. 72° E.) on northeast Yamal. Microtexture and assortment of material in diameters from 1.0 to 0.001 mm. were studied and the data are presented in table. The features appearing on the surface, stone, rings, nets, etc., continue in miniature aspect throughout the active layer. It seems probable that the macro- and micro-forms of tundra ground follow the same rules of cryogenesis. ***Copy seen:*** DLC.

52422. KOSHELEVA, I. T., *and* **L. N. NOVICHKOVA.** O pîatnistykh tundrakh Zapadnoĭ Sibiri i ikh al'goflore. (Botanicheskiĭ zhurnal, Oct. 1958. t. 43, no. 10, p. 1478–85, 3 tables.) 30 refs. Text in Russian. ***Titie tr.:*** The spotted tundras of Western Siberia and their algal flora.

Lists 22 soil algae of the Yamal and Gydan Peninsulas, with data on the chemistry of their substrates: spotted and polygonal tundras. The algae are analyzed for their calcium content and grouped according to stability and ecological characteristics. If the soil has a slightly acid reaction on the spotted tundras, the yellow-green (Xantophyta) and green (Chlorococcales) algae predominate, but on slightly alkaline soil, the blue-green algae, Cyanophyta, take the lead. ***Copy seen:*** DLC.

52423. KOSHLÎAKOV, M. N. Nekotorye voprosy obshcheĭ tsirkulîatsii vod okeanov. (Akademiîa nauk SSSR. Izvestiîa, seriîa geograficheskaîa, July–Aug. 1958, no. 4, p. 11–23, diagrs., maps.) 18 refs. Text in Russian. ***Title tr.:*** Some problems of the general circulation of ocean waters.

Theoretical discussion, and review of literature, on convective and wind-driven circulations, their dynamics and causes in specific regions including the North Atlantic where polar fronts appear, and northeast Pacific. A proposal for study of regional circulation in the Atlantic is presented. The nature of vertical and horizontal circulation in the Arctic Basin is also discussed. ***Copy seen:*** DLC.

52424. KOSITSKIĬ, G. I. O roli nervnoĭ sistemy v patogeneze nekroza pri otmorozhenii tkaneĭ. (Khirurgiîa, Nov. 1956. god 32, no. 11, p. 66–69.) Text in Russian. ***Title tr.:*** On the role of the nervous system in pathogenesis of necrosis due to tissue frostbite.

A general discussion of the (presumed) role of the nervous receptors in necrosis of frostbite. Their injury may cause nonspecific reactions from the central nervous system causing tissue necrosis in the frostbitten area. ***Copy seen:*** DNLM.

KOSKI, KALEVI, *see* Moorrees, C. F. A. The Aleut dentition . . . *1957*. No. 53386.

52425. KOSKIMIES, JUKKA. Flocking behaviour in capercaillie, *Tetrao urogallus* L., and blackgame, *Lyrurus tetrix* L. Helsinki, 1957. 32 p. map, tables, diagrs. (Suomen Riistanhoito-Säätiö: Finnish Game Foundation. Riistatieteellisiä jualkaisuja: Papers on game research, 18.) 50 refs.

Based on records (age, sex, date, locality) of 840 and 1,500 respectively of these two grouse during the autumns and winters, 1954–55 and 1955–56. The flocks represented by these samples exceed 20,000 in number; the records cover the entire country. Data on flock composition and size are given. Flocking proper begins in October: the capercaillie sampled in Sept. 1954 were 50% in flocks, the blackgame 70%, the others solitary; corresponding values for Jan. 1955 were 70% and 95%. Of all capercaillie observed in September, 81% were in flocks, in January, 95%; of blackgame 93% and 100% respectively. Both species tend to sex segregation in winter, and their flocking intensity increases from south to north. Coincident with flock formation, gonadal inactivity, open escape behavior, wider range of mobility and increased sociability occur in both species. The survival value of the flocking behavior and concomitant changes, is discussed. ***Copy seen:*** DA.

52426. KOSKIMIES, JUKKA, *and* **P. RAJALA.** The winter bird census of 1956–57. (Suomalainen eläin- ja kasvietieteellinen seura Vanamo. Tiedonannot (Archivum). 1957. v. 12, no. 1, p. 41-51, text map.) 5 refs.

About a hundred localities were covered in the winter 1956–57 census initiated by the Zoological Museum of the University of Helsinki. They are listed with

date, name of leader and number in his group, followed by record of the species and number of individual birds observed in each. Of the nine zonal subdivisions of the country, three are in the far North: Rovaniemi, Forest Lapland, and Fjeld Lapland. ***Copy seen:*** DLC.

52427. KOSKIMIES, JUKKA, *and* **P. RAJALA.** The winter bird census of 1957–58. (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Tiedonannot (Archivum), 1958. v. 13, no. 1, p. 39-53, text map.)

Gives for the winter 1957–58, the locality of each census point: date, observers and the species (in code) also total number of individuals of each species observed. The data from the northern provinces of Finland are given on p. 53 (13 species.).

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KOSKIMIES, JUKKA, *see also* Seiskari, P., *and* J. Koskimies. Ecological evidence of racial divergence . . . *1955*. No. 54669.

52428. KOSMACHEV, K. P. Almazy [A]kutii. (Geografiia v shkole, July-Aug. 1957. god 20, no. 4, p. 61–63, illus., map.) Text in Russian. ***Title tr.:*** Diamonds of Yakutia.

Discusses the economic and industrial importance of the diamantiferous fields discovered in Yakutia; 1956 production was sixfold that in the Ural. Schematic map indicates diamantiferous areas covering almost all of the Vilyuy River basin.

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52429. KOSMACHEV, K. P. O dispetcherskikh kartakh MTS [A]kutii. (Akademiia nauk SSSR. [A]kutskiĭ filial, *Yakutsk*. Trudy, seriia ėkonomicheskaia, 1957. vyp. 1, Materialy po ėkonomike sel'skogo khoziaĭstva [A]kutii, p. 100–103, map.) 5 refs. Text in Russian. ***Title tr.:*** On dispatch maps for machine and tractor stations of Yakutia.

For the large collective farms (some up to 70,000 hectares) there should be detailed maps, showing location of arable land, its features and conditions, accessibility, and other data to facilitate planning, speed service, reduce costs of equipment sent from these stations.

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52430. KOSMACHEV, K. P. Sel'skoe khoziaĭstvo Leno-Amginskogo mezhdurech'ia. (Akademiia nauk SSSR. [A]kutskiĭ filial, *Yakutsk*. Trudy, seriia ėkonomicheskaia, 1957. vyp. 1, Materialy po ėkonomike sel'skogo khoziaĭstva [A]kutii, p. 50–99, illus., tables, maps.) 51 refs. Text in Russian. ***Title tr.:*** Agriculture of the Lena-Amga interfluve.

Deals with a roughly triangular region east of Yakutsk, approx. 60°–63° N. 130°–135° E., between the Lena, Aldan and Amga Rivers. Here in only 3% of the area of Yakutia is 40% of the land under the plow, 30% of the livestock, 45% mechanical power and 20% of the population. Detailed account is presented of the stock raising, dairying, fodder, hay, and pasture production, and fur farming. History of farming, geography of arable land, distribution of crop culture, system of field cultivation, agrotechnics, mechanization of agriculture, and related matters are discussed and statistical data given. The last chapter deals with further development of agriculture. ***Copy seen:*** DLC.

52431. KOSOBRODOV, I. Beregite ptiſs. (Okhota i okhtnich'e khoziaĭstvo, Aug. 1957. god 3, no. 8, p. 13.) Text in Russian. ***Title tr.:*** Protect the birds.

Suggests prohibition of spring hunting in the Severnaya Dvina River delta. Referring to Spangenberg's statement, the author confirms the killing of 246 swans by a single hunter on one trip and states that he knows many other, similar cases. ***Copy seen:*** DLC.

52432. KOSSOVSKAIA, A. G. Istoriia mezozoĭskogo osadkonakopleniia v zapadnom Verkhoſan'e i Vilŭĭskoĭ vpadine. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, July 1958, no. 7, p. 37–54, maps, cross-sections.) 18 refs. Text in Russian. ***Title tr.:*** The history of Mesozoic sedimentation in the region west of Verkhoyansk and in the Vilyuy depression.

Outlines cross-sections of Jurassic and Lower Cretaceous deposits in the western part of the Verkhoyansk Range and the Vilyuy depression and examines the intermediate area (approx. 60°–70° N. 123°–130° E.), the lithologic and stratigraphic correlations of various series and facies. The paleogeography of the region is discussed, history of sedimentation of each formation is outlined, and shown on maps. Tectonic activities during Jurassic and Lower Cretaceous periods are dealt with and their influence on sedimentation is indicated. ***Copy seen:*** DLC.

52433. KOSSOVSKAÍÂ, A. G., *and* V. D. SHUTOV. K istorii razvitiíâ zapadnogo Verkhoíân'íâ i Vilûûiskoĭ vpadiny v verkhnem paleozoe i mezozoe. (Moskovskoe obshchestvo ispytateleĭ prirody. Bûlleten', nov. seriíâ, god. 129, t. 63, otdel geologicheskiĭ, Nov.–Dec. 1958. t. 33, vyp. 6, p. 43–57, table, diagrs.) 21 refs. Text in Russian. ***Title tr.:*** On the history of development of the western Verkhoyansk region and Vilyuy depression in the Upper Paleozoic and Mesozoic.

Outlines historical developments in this region and the adjacent platformic provinces (approx. 62°–68° N. 118°–136° E.) during the Lower Permian and Upper Cretaceous periods. Two large-scale cycles, Upper Paleozoic and Mesozoic, are distinguished and treated in detail, the various ages identified, cross-sections examined and stratigraphic division presented. Lithologic complexes and facies of various formations are outlined and compared. ***Copy seen:*** DGS.

52434. KOSSOVSKAÍÂ, A. G., *and* V. D. SHUTOV. Kharakter i raspredelenie mineral'nykh novo-obrazovaniĭ v razreze mezo-paleozoĭskikh otlozheniĭ zapadnogo Verkhoíân'ia. (Akademiíâ nauk SSSR. Geologicheskiĭ institut. Trudy, 1956. vyp. 5, p. 135–68, 11 plates, 2 diagrs.) 7 refs. Text in Russian. ***Title tr.:*** Characteristics and distribution of newly formed minerals in cross-section of Mesozoic-Paleozoic deposits in the western Verkhoyansk region.

Presents results of investigation on minerals newly formed under the influence of epigenesis and metamorphism. Profiles between Sangar and Kitchan on the right bank of the Lena and on the Tumara, Kele, and Boraya, tributaries of the Aldan, were investigated and petrographic characteristics of neogenic mineralization are described. Two factors are believed mainly responsible for the mineralization: (a) the intitial composition of the sedimentary rocks, and (b) their position in the profile determining the degree of their compression. In summarizing his results, the writer distinguishes four stages of neogenic mineralization originated by epigenesis and metamorphism. Processes of this mineralization and their effects are diagrammed (p. 160, 162); newly formed minerals are illustrated by photos.

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KOSTERLITZ, H. W., *see* Innes, I. R., *and others*. The effects of lowering . . . temperature . . . *1957*. No. 51931.

KOSTIAL, KRISTA, *see* Šimonović, I., *and others*. Regeneration of hemoglobin in rats . . . *1958*. No. 54892.

52435. KOSTRIN, K. V. Na severe dal'nem. Neva, Sept. 1957, no. 9, p. 222 illus.) Text in Russian. ***Title tr.:*** In the far North.

Describes Ukhta, the new oil center (approx. 63°34′ N. 53°42′ E.) in the Izhma basin in Komi ASSR, its refineries, bitumen plants, etc.; attempts to exploit these oil fields in the 17th–19th centuries are noted. ***Copy seen:*** DLC.

52436. KOSTRIN, K. V. Neobychnoe obrazovanie na list'íâkh luka-batuna. (Priroda, Jan. 1957. god 46, no. 1, p. 118.) Text in Russian. ***Title tr.:*** Unusual leaf formation of the Welsh onion.

Allium fistulosum has been successfully cultivated in open ground at Ukhta (63°34′ N. 53°42′ E.) since 1946; under natural snow cover it survives winter temperatures of −40° to −45° C., with new leaves in spring. To preserve the leaf flavor, the flower buds are usually cut; after a bud was removed in 1954, a bulb developed at the top of the stalk and when planted in ground, it grew into a healthy specimen of Welsh onion.

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52437. KOSTRIN, K. V. Opyt vyrashchivaniíâ khrena na Kraĭnem Severe. (Sad i ogorod, Sept. 1957. god 95, no. 9, p. 27–28.) Text in Russian. ***Title tr.:*** Growing horse-radish in the far North.

Reports author's experiment near Ukhta in the Pechora basin: in spite of the severe climate, horse-radish prospered in open ground, surviving winter frost to −45° C. The dietary value of this plant, which contains 0.1–0.25% vitamin-C and a considerable amount of lysozyme, is noted. ***Copy seen:*** DLC.

52438. KOSYGIN, ÎÛRIÍ ALEKSANDROVICH, *Editor*. Tektonika neftenosnykh oblasteĭ, t. 2., regional'naíâ tektonika neftenosnykh oblasteĭ SSSR. Moskva, Gos. nauchno-tekhn. izd-vo neftíânoĭ i gorno-toplivnoĭ lit-ry, 1958. 613 p. illus., tables, diagrs. (2 fold.), maps (1 fold.). Approx. 800 refs. Text in Russian. ***Title tr.:*** Tectonics of the oil-bearing provinces, t. 2; regional tectonics of oil-bearing provinces of the U.S.S.R.

This collective and comprehensive work reviews oil-bearing provinces of the entire U.S.S.R. Chapter on the Russian platform (p. 18–232) includes Kola Peninsula, Timan, Arkhangel'sk province and Northern Ural. The Siberian platform (p. 233–98) includes Aldan plateau, Olenek uplift, Tungusska syncline, Vilyuy syncline, Ust'-Yenisey depression, Angara-Lena regional break, Taymyr folded zone. Khatanga depression and other parts of the Soviet Arctic Precambrian, Paleozoic, Mesozoic and Cenozoic tectonic structures are treated. Sedimentary formations thought to contain oil in commercial amounts and with promise of oil discovery are outlined. Each chapter reviews the present status of research in its specific area, and contains a selective bibliography. ***Copy seen:*** DGS.

52439. KOSYGIN, M. K. Metodika poiskov i razvedki zhelozorudnykh mestorozhdeniĭ Angaro-Ilimskogo raĭona. (Moskva. Moskovskiĭ geologo-razvedochnyĭ institut, 1957. t. 31, p. 3–10, illus., map.) Text in Russian. ***Title tr.:*** Methods of search and exploration of iron ore layers in the Angara-Ilim region.

Criticizes methods used and recommends a new approach: geologic mapping was done only in small scale; airphoto survey, geobotanical and hydrochemical methods were not applied. More attention should be paid to the individual volcanic pipes, geologic structure, gravimetric anomalies, and geophysical methods in order to discover new ore locations of this region (approx. 56°–58° N. 102°–104° E.). ***Copy seen:*** DLC.

52440. KOTILAINEN, MAUNO JOHANNES, 1895– . Einige Ausbreitungsprobleme der Weiden, besonders der *Salix pyrolifolia* Led. (Botaniska notiser, 1958. v. 111, no. 1, p. 341–52, 3 illus.) 26 refs. Text in German. ***Title tr.:*** Some distributional problems of the willow, especially *Salix pyrolifolia* Led.

Deals with the peculiar disjoint distribution of *Salix pyrolifolia*, which grows in European arctic Russia (in the Pechora estuary about 68° N. and on Kanin Peninsula at 66°–66°30′ N.), in Siberia on the Lena River about 69° N., and eastward to the Chukotsk Peninsula. But it is not known from Kamchatka, the Okhotsk Sea coast or Sakhalin Island. It also grows in Scandinavia (Kuusamo) and adjoining regions of the Kola Peninsula. ***Copy seen:*** DLC.

52441. KOTILAINEN, MAUNO JOHANNES, 1895– . The *Stratiotes* lakes in Kittilä, Finnish Lapland, as a floristic and Quaternary problem. (Botanisk tidsskrift, 1954. bd. 51, p. 141–56, illus., table, maps.) 18 refs. *Also pub.* in German in Suomalainen tiedeakatemia, Helsinki. Sitzungsberichte 1954, p. 119–31.

Study of the distribution of *Stratiotes* and associated plants in the lakes and bogs of northern Finland. The present-day occurrence of *Najas flexilis, Stratiotes, Ceratophyllum* and eutrophic hydrophytes could be, even in the North, to a considerable extent a relict from the climatically favorable Aleröd period, the plants surviving only in basins rich in electrolytes, or in slightly brackish waters. Data on species and lakes studied in Kittilä are tabulated and mapped. This paper is not based on Quaternary studies but on a field botanist's knowledge of the area and on recent distribution of the eutrophic flora. The exceptional conditions are hard to explain except by the Aleröd period. ***Copy seen:*** DA.

KOTOV, B., *see* Na promyslakh. *1956.* No. 53476.

KOTOV, V., *see* Severnye zori . . . *1957.* No. 54719.

52442. KOTOV, V. L. Ob okhrane i regulirovanii promysla tikhookeanskikh lososeĭ. (Rybnoe khozi͡aĭstvo, Dec. 1957. god 33, no. 12, p. 55–58, tables.) Text in Russian. ***Title tr.:*** Protection and regulation of the Pacific salmon fisheries.

Contains information on catches on both sides of the Pacific and early character of this fishery. Recent advances of Japan into oceanic fisheries are noted, also U.S. and U.S.S.R. stand towards Japanese oceanic salmon fisheries. Russian salmon fisheries in the North Pacific and conservation measures are outlined. ***Copy seen:*** DLC.

52443. KOTS, A. Muzykal'na͡ia shkola na Dal'nem Severe. (Sovetska͡ia muzyka, Oct. 1958. god 22, no. 10, p. 158.) Text in Russian. ***Title tr.:*** The music school in the far North.

Reports on the activities of the Olekminsk junior high-school for music (semiletka), established two years ago under the sponsorship of the Leningrad conservatory: student and teacher concerts, lectures, radio performances. ***Copy seen:*** DLC.

52444. KOTS, A. Muzykal'naîa shkola na Kraĭnem Severe. (Sovetskaîa muzyka, June 1957. god 21, no. 6, p. 155.) Text in Russian. ***Title tr.:*** Music school in the far North.

Note on a seven-year music school (approx. equivalent of American junior high school) in Olekminsk; the second such school in Yakutia, it has departments of piano, violin and accordion.

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52445. KOTSIUBA, T. IA. Par i glubokaîa bezotval'naîa obrabotka v usloviîakh Severa. (Zemledelie, May 1958. god 6, no. 5, p. 39–40, table.) Text in Russian. ***Title tr.:*** Fallowing and deep tillage without turning furrow under conditions of the North.

Experiment with fallowing ground for growing potatoes was made by the Kureyka state farm in 1955; and deep-plowing the soil without turning furrow was tried for forage by the Igarka Agricultural Experiment Station. Both experiments were successful: the potato crop increased to 274 cwt. per hectare after fallowing as against 100 cwt. on other plots at Kureyka; deeper and stronger root systems were obtained in clover and other forage grasses by the Igarka Station. Timing and technical details of both experiments are discussed.

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52446. KOTTHAUS, ADOLF. German market investigations on redfish in 1956; length composition of the landings, sex ratio. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 42–48, illus., tables.)

A study from landings of 142 trawlers with fish originating in western and eastern Greenland waters, northwest Iceland, Bjørnøya, Spitsbergen, Barents Sea and some non-arctic areas. Differences in body length between various areas, migrations, numerical proportion of sexes, seasonal variation in composition of catches, spawning and development are discussed on the basis of material analyzed. ***Copy seen:*** DI.

KOTTHAUS, ADOLF, *see also* Brandes, C. H., *and others.* Rare fishes . . . *1957.* No. 49885.

KOVACS, STEVEN, *see* Stueber, P., *and others.* Regional renal hypothermia. *1958.* No. 55207.

52447. KOVAKINA, V. A. Biologicheskie osobennosti, nekotorykh zimnezelenykh rasteniĭ Kraĭnego Severa. (Botanicheskiĭ zhurnal, Sept. 1958. t. 43, no. 9, p. 1326–32, 9 tables.) 30 refs. Text in Russian. ***Title tr.:*** Biological features of some evergreen plants of the far North.

Growth of the vegetative parts of these plants stops in autumn and the dying-out process continues till December, sometimes February, but not to completion in the green parts; some plants develop new leaves under the snow and continue growth activity during the second part of the winter by accumulation of nitrogen in the leaves.

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52448. KOVALENKO, P. P. Issledovanie okhlazhdennykh i zamorozhennykh kostnykh gomotransplantatov metodom radioautografii. (Éksperimental'naîa khirurgiîa, Sept.–Oct. 1957. god 2, no. 5, p. 45–50, illus.) Text in Russian. Summary in English. ***Title tr.:*** The study of cooled and frozen bone isografts by radioautography.

Report on experiments on rabbits and dogs, with radioactive phosphorus used as tracer. Bone isografts preserved by freezing at −25° C. or cooling at 4° C. were used and the transplants observed for periods of one day to 18 months. Intense P metabolism was noted in the isografts similar to that in homografts. Deposition of radioactive P in the grafts is also discussed. ***Copy seen:*** DNLM.

52449. KOVALEV, S. A. Sdvigi v geografii naseleniîa SSSR za 40 let. (Geografiîa v shkole, Sept.–Oct. 1957. god 20, no. 5, p. 11–22, maps.) 5 refs. Text in Russian. ***Title tr.:*** Changes in the human geography of U.S.S.R. during 40 years.

Includes data on population in northern areas: in Magadan Province, over 180,000 inhabitants, or 76% of the entire population, live in towns; since 1926 the urban population in the northern European part of the U.S.S.R. has increased eight-fold, in Yakut A.S.S.R. thirteen-fold, and in Kamchatka seventy-fold; at the same time, the rural population of Magadan Province has doubled, in Murmansk Province it has more than doubled, and in Kamchatka tripled.

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52450. KOVALEVA, V. I. Vyrashchivanie kapusty na Chukotke. (Sad i ogorod, June 1957. god 95, no. 6,

p. 25–26.) Text in Russian. ***Title tr.:*** Growing cabbage in Chukotka.

Reports work of the Markovo Experimental Agricultural Station on cabbage: selection of strain, planting in hothouses, pricking out seedlings in hotbeds and transplanting to open ground, feeding, etc. Yield of 200–400 cwt./hectare is claimed. Climatic conditions of the area with a 75–105-day vegetation period, etc., are briefly noted. ***Copy seen:*** DLC.

KOVALEVSKIĬ, I., *see* Gal'burt, A. Avtostartery. *1957*. No. 51056.

52451. KOZHANCHIKOV, IGOR' VASIL'EVICH. Physiological conditions of cold-hardiness in insects. (Bulletin of entomological research, Oct. 1938. v. 29, pt. 3, p. 253–62, illus., tables.) 19 refs.

Account of experiments with various developmental stages of insects submitted to temperatures as low as −20° C. Stages in diapause proved to be most resistant to cold, while growing and developing phases were not cold-hardy. The differences in cold resistance were found to be due to differences in respiration and ultimately respiratory enzymes. The effect of narcotics and cyanide on respiration is also discussed.

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52452. KOZHEVNIKOV, G. P. Rybnye resursy ozer Vilûĭskoĭ nizmennosti. (Leningrad. Vsesoûznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozâĭstva. Izvestiâ, 1955. t. 35, p. 168–83, illus. tables.) 12 refs. Text in Russian. ***Title tr.:*** Fish resources of the lakes in the Vilyuy lowlands.

These lakes of central Yakut ASSR (approx. 64° N. 124° E.) are classified according to bathymetric and biological criteria, and the (10) forms making up their ichthyofauna are described: distribution, size classes and growth rate, spawning and spawning seasons, economic value. ***Copy seen:*** DLC.

52453. KOZHEVNIKOV, SAVVA. Sibirskie ogni. (Sovetskiĭ soûz, 1957, no. 1 (83), p. 13–15, illus.) Text in Russian. ***Title tr.:*** *Sibirskie ogni.*

A review of this journal published in Novosibirsk on the Ob River. Its contributors including Chukchi, Tungus, Yakut, etc., writers, and topics featured: industrial achievements in Siberia, new hydroelectric stations on the Angara, Ob and Yenisey, etc., are noted.

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52454. KOZLOV, E. K. O nekotorykh spornykh voprosakh geologicheskogo massiva Sopchuaĭvench, v Monche-tundre. (*In:* Akademiâ nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova, 1958. p. 7–24, tables, cross-sections, maps incl. 1 fold.) 2 refs. Text in Russian. ***Title tr.:*** Some debatable questions on the geological structure of the Sopchuayvench massif in Moncha tundra.

Methodological study of questions (from author's work in 1953 and others') on the origin of gabbro-norite, identity and variety of olivinite, and origin of peridotite, all found in slopes of the Soncha and Nyud massifs. Descriptions are given and petrographic characteristics outlined. ***Copy seen:*** DGS.

KOZLOV, E. K., *see also* Ivanova, T. N., *and* E. K. Kozlov. O differentsiafsii v gorizontal'nom napravlenii . . . *1958*. No. 52018.

52455. KOZLOV, V. Beregite guseĭ. (Okhota i okhotnich'e khozâĭstvo, Sept. 1957. god 3, no. 9, p. 15.) Text in Russian. ***Title tr.:*** Protect the geese.

Geese stock is being depleted in the North by hunting on the resting places during spring migration at Lakes Beloye and Bele in the southern Krasnoyarskiy Kray. Prohibition of such a hunting is urged. ***Copy seen:*** DLC.

52456. KOZLOV, V. V. O zagrâznenii reki Eniseĭ. (Priroda, Dec. 1957. god 46, no. 12, p. 40.) Text in Russian. ***Title tr.:*** Pollution of the Yenisey River.

Pollution by waste from chemical and other industrial enterprises in Krasnoyarsk and Noril'port; the adverse effects on fishes, bathing places, etc.

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52457. KOZLOVA, E. V. Ptiſsy, t. 2, vyp. 3: rzhankoobraznye, podotrâd chistikovye. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1957. 144 p. illus. tables, maps. (*In*: Fauna SSSR, nov. ser. no. 65.) 80 refs. Text in Russian. ***Title tr.:*** Birds, v. 2, pt. 3: plovers, suborder auks.

Monograph on the family *Alcidae*, suborder *Alcae*, order *Charadriiformes*, comprising 11 genera and some 40 forms. Nearly all of these forms are subarctic or arctic, pelagic birds, and they include guillemots, puffins, razorbills, etc. The suborder and its single family are treated: the morphology and anatomy, morphom-

etry, biology and ecology, behavior, propagation, development and growth, geographic distribution. The special part (p. 27–138) deals in a similar manner with the lower taxa, including in addition information on synonyms, sexual dimorphism, seasonal coloration, etc. An alphabetic index of Latin names is added. ***Copy seen:*** DLC.

52458. KOZLOVA, O. G. Redkie zemli v plavikovykh shpatakh razlichnykh mestorozhdeniĭ SSSR. (Geokhimiîa, 1957, no. 1, p. 46–56, illus., plate, table.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** Rare earths in fluorspars of various deposits of the U.S.S.R.

Presents results of semi-quantitative analysis of fluorite by the luminescent method. The method and the sensitivity of the analyses are explained. Fluorite from 44 deposits were tested, among them nepheline pegmatites of Khibiny tundra, dolomite and gypsum of Taymyr Peninsula, and separated granite veins of the Kolyma region. Tabulated data show: formation and location, color of crystalline particles, color and intensity of luminosity, rare earths' elements and average concentration.

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52459. KRAGEL'SKIĬ, I. V. Fiziko-mekhanicheskie svoĭstva snegovogo pokrova. (*In:* U.S.S.R. Armiîa. Upravlenie Voenno-vozdushnykh Sil. Sbornik materialov po stroitel'stvu . . . aèrodromov. Moskva, 1942. vyp. 1, p. 13–31, illus., tables, diagrs., graphs.) Refs. Text in Russian. ***Title tr.:*** Physical and mechanical properties of the snow cover.

"The structure of snow varies depending on the duration of the snow cover, the moisture content, temperatures, and pressures applied. The thermal conductivity coefficient ranges from 0.0002 to 0.0035 cal./cm. sec. degree for snows varying in specific densities from 0.15 to 0.7. An increase in the density as a result of recrystallization was found possible through a volumetric deformation at temperatures close to 0° C. The increased density is explained as a function of time during which a constant pressure is applied. The density of snow depends on its temperature, the initial pressure, and external mechanical action. Instruments to determine the density and the hardness consist of spring scales equipped with known specific volume cylinders and IMASh harness meters."—SIPRE. ***Copy seen:*** DLC.

KRAL, V. A., *see* Grad, B., *and* V. A. Kral. The effect . . . senescence on resistance to stress, 1 . . . *1957.* No. 51319.

KRAL, V. A., *see* Grad, B., *and* V. A. Kral. Response of young and old mice to cold. *1957.* No. 51320.

52460. KRAMER, STANLEY Z. Light induced changes in ventilation and oxygen consumption in birds. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 90.)

Account of experiments with pigeons. An increase in ventilation and possibly O_2-consumption was observed during periods of light, independent of overt activity. Enucleation or removal of cerebral hemispheres abolished these responses to light. ***Copy seen:*** DLC.

52461. KRANCK, ERNST HÅKAN, 1898– . Väinö Tanner, minnestal vid Finska vetenskaps-societetens möte den 19 januari 1953. Helsingfors, 1953. 10 p. photo. (Finska vetenskaps-societeten. Årsbok-vuosikirja, 1952–1953. v. 31, C, no. 2.) Text in Swedish. ***Title tr.:*** Väinö Tanner, memorial speech at the Finnish Scientific Society's meeting, January 19, 1953.

Tribute to the Finnish geographer Tanner (1881–1948) with account of his scientific activities. Trained as an engineer and influenced by the geologists Sederholm and Ramsay, Tanner studied Quaternary geology in Lapland and the coastal region for 25 summers; contributed to mining studies at Pajala, Sweden, and Petsamo, Finland, served on the International Commission on Reindeer Problems, and after World War I, in the Finnish diplomatic service. He became professor of geography at the University of Helsinki; his continued interest in changes in sea level led to expeditions to Labrador in 1937 and 1939. His interest in Lapland and Labrador natives at the end of their isolated ways of life is noted. His ability to present field observations makes his geologic-geographic reports valuable as source materials, though some of his conclusions are debated. His major works are cited.

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KRARUP, TORBEN, *see* Andersen, E., *and others.* Geodetic tables . . . *1956.* No. 49285.

52462. KRASHENINNIKOV, S. M., *and* M. A. VAVILOVA. Kartofel' v Zapolîar'e. (Sovkhoznoe proizvodstvo, July 1958, no. 7, p. 35–36, table.) Text in Russian. ***Title tr.:*** Potato beyond the Arctic Circle.

Reports achievements of the state farm "Industriîa" founded in 1930 on Kola Peninsula, in the vicinity of Kirovsk. Average yield per hectare amounted to 166.9 cwt. of potato (with 50 hectares in potatoes), 423 cwt. of cabbage (25 ha.), 566 cwt. of forage cabbage (29 ha.) and 26 cwt. of hay. Net profit of the farm exceeded 200,000 rubles in 1956 and it was trebled in 1957. Methods of potato cultivation used on the farm are discussed.

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52463. KRASIKOVA, V. A. Okun' *Perca fluviatilis* L. r. Enisefi; promyslovo-biologicheskiĭ ocherk. (Voprosy ikhtiologii, 1958. vyp. 10, p. 99–110, tables.) 5 refs. Text in Russian. ***Title tr.:*** The perch *Perca fluviatilis* L. of the Yenisey River; its fishery and biology.

Study based on extensive material collected during a period of ten years on this economically important fish. Its morphology and morphometry, biology and distribution, rate of growth in various waters of the Yenisey system; food, sexual development, propagation and the young are treated in turn. Its fishery, yields, methods, etc. are also dealt with.

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52464. KRASIUKOV, P. Bolotnyĭ traktor "Vodîanoĭ bulvol." (Mashinno-traktornaîa stanfsiîa, Apr. 1957. god 17, no. 4, p. 56–57, illus.) Text in Russian. ***Title tr.:*** Tractor "Water buffalo" for marshland.

Water-tight tractor of special construction, manufactured by the Albion Motors Ltd. in Scotland is described with illus. The tractor is suitable for reclamation work on marshland, sandy and shifting ground. The tractor is 7433 kg. in weight, 3.96 m. long and 2.19 m. wide; ground contact of the caterpillar tread is 2.59 m.; its pay load is 3 tons; it has a 67 hp. diesel engine and speed of 8 km./hr. with a maximum pull of 6,800 kg. It is equipped with anchor and winch (attached to rear) for pulling the tractor out of mud, and with various attachments for hydro-reclamation work (plowing, digging of drainage ditches, grading, etc.).

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52465. KRASNOKUTSKIĬ, V. I. Dokembriĭ i kembriĭ Kolymskogo kraîa. Leningrad-Moskva, Gos. ob"ed. nauchno-tekhnich. izd-vo, 1939. 76 p. tables, 5 plates. (Dal'stroĭ, Gostrest. Trudy, Materialy po izucheniîu Kolymsko-Indigirskogo kraîa, ser. 2, geologiîa i geomorfologiîa, vyp. 9.) 25 refs. Text in Russian. Summary in English. ***Title tr.:*** The Precambrian and Cambrian of Kolyma Land.

Preliminary study of extensive geological materials collected in 1933–35 by Upper Kolyma Expedition sponsored by State Trust Dal'stroĭ. Two formations of Precambrian rocks and two formations of (supposedly) Cambrian rocks, covering altogether approx. 6,000 sq. km., were found on the right bank of Kolyma, in the region of Bol'shaya Stolbovaya and Bol'shaya Shamanikha Rivers, and on the left bank, in region of Popovka River and Arga-Tas Range. Tectonics, stratigraphy and petrography of these strata are described and their mineralogy is outlined. Occurrence of Precambrian and Cambrian rock formations in northeast Asia and northwest America, including New Siberian Islands, Chukotka and Alaska, is noted in introduction (p. 5–11).

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52466. KRASNOKUTSKIĬ, V. I. Materialy k petrografii granitov Kolymsko-Indigirskogo kraîa. Leningrad-Moskva, Gos. ob"edin. nauchno-tekhnich. izd-vo, 1938. 65 p. tables, 2 fold. diagrs., 2 plates. (Dal'stroĭ, Gostrest. Trudy, Materialy po izucheniîu Kolymsko-Indigirskogo kraîa, ser. 2, geologiîa i geomorfologiîa, vyp. 8.) 10 refs. Text in Russian. Summary in English (p. 60–64). ***Title tr.:*** Contribution to the petrography of granites of the Kolyma-Indigirka region.

Contains a petrographic study of plutonic, hypabyssal and extrusive rocks, based on material collected by the Upper Kolyma Expedition, 1933–35, in the area 145°30′–153°40′ E., 63°10′–65°20′ N. Three main groups of rocks were studied: Precambrian granites found on the right bank of the Kolyma River between 65°10′ and 65°20′ N.; Post-Silurian granites and biotite diorites found in the region of the Popovka River, 63°45′–64° N. 152°32′–153° E.; and Lower Cretaceous granites from various parts of the investigated area and from the Okhotsk Sea region. Site of the rocks' occurrence, their beds and contact formations are described. Results of chemical

analyses of 32 rock samples are tabulated and discussed (p. 36–59).

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52467. KRASNOV, I. I., *and* **V. L. MASAĬTIS.** Tektonika Oleneksko-Vilʹûĭskogo vodorazdela v svîazi so stroeniem okrainnykh zon Tungusskoĭ sineklizy. (Leningrad. Vsesoîûznyĭ geologicheskiĭ institut. Materialy, nov. seriîa, 1955. vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 217–33, fold. map, table, 11 profiles.) 21 refs. Test in Russian. ***Title tr.:*** Tectonics of the Olenek-Vilyuy watershed in connection with the structure of the marginal zones of the Tungusska syncline.

Presents results of field investigations and air-photo survey in 1952–53. Various cross-sections are examined. The structure and composition of deposits are explained and graphically presented. The tectonic structure of the entire Tungusska syncline is treated (map attached). Three structural zones: Angara-Katanga, Angara-Vilyuy, and Vilyuy-Kotuy are distinguished and outlined in turn. Hydrothermal and metasomatic formation of useful minerals is anticipated. ***Copy seen:*** DLC.

52468. KRASNOV, V. Uroven' i sebestoimost' proizvodstva otdel'nykh vidov sel'skokhozîaĭstvennoĭ produktsii po zonam Krasnoîarskogo kraîa. (Sel'skoe khozîaĭstvo Sibiri, 1958, no. 3, p. 8–13, tables.) Text in Russian. ***Title tr.:*** Standards and costs of agricultural production by zones in Krasnoyarsk Province.

Discusses labor consumption and production costs of crops, potatoes and vegetables in collective and state farms of eight zones of Krasnoyarsk Province, including its northern taiga zone. The lower cost of production on state farms is noted, though labor consumption in both forms of farming is rather high.

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52469. KRASOVSKIĬ, V. I. Pervye rezul'taty nablîûdeniĭ verkhneĭ atmosfery. (Priroda, Dec. 1957. god 46, no. 12, p. 87–88.) Text in Russian. English Translation by E. R. Hope, issued as Canada, Defence Research Board. Directorate of Scientific Information Service. Translations, T278R, Jan. 1958. 2 p. Copy at DGS. ***Title tr.:*** Preliminary results of upper atmosphere observations.

Reports results of auroral observations and recordings by means of radar and wide-angle cameras at three IGY stations: Roshchino near Leningrad, Zvenigorod close to Moscow, and Loparskaya near Murmansk. Spectral analyses indicate an atmospheric temperature of 400° K. at 100 km. height in the Arctic. Nearly all observations registered emission of hydrogen of extra-terrestrial origin. Good results have been obtained with auroral reflection in the 3–10 m. band during geomagnetic and ionospheric disturbances.

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52470. KRAT̂S, K. O., *and others.* Professor Petr Alekseevich Borisov. (Akademiîa nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiîa, 1958, no. 2, p. 3–8, port.) 58 refs. Text in Russian. ***Title tr.:*** Professor P. A. Borisov. *Other authors:* V. A. Sokolov *and* G. S. Biskė.

Biographical sketch and appraisal of the scientific work of this geologist, occasioned by his 80th birthday. His explorations in the northern U.S.S.R., especially Karelia and Kola Peninsula, and his participation in the scientific work of the Karelian Branch of the Academy of Sciences are noted. List of his (58) scientific publications is included. ***Copy seen:*** DLC.

KRAUSE, HEINZ, *see* Vogel, G., *and others.* Über . . . Aktionspotential . . . Ranvierschen Schnürringes. *1958.* No. 55851.

52471. KRAUSS, WOLFGANG. Fluctuations of the hydrographic conditions in a section across the Norwegian Current. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 27–29, illus.)

Report on investigations on a profile along approx. 70° N. lat. A system of internal waves was noted whose period and nature is not clear. In the open ocean the pulsations connected with the internal waves appear to be "many times greater than those caused by the surface tides." ***Copy seen:*** DI.

52472. KRAUSS, WOLFGANG. Hydrographic conditions in the north-west and northern Norwegian waters in November–December 1955. (International Council for the Study of the Sea. Annales biologiques 1955, *pub.* 1957. v. 12, p. 24–25, illus., maps.)

Account of investigations by the *Anton Dohrn.* Temperature and salinity of the coastal and offshore waters were studied and currents calculated. The mixing of water bodies in the area is discussed.

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52473. KRAUSS, WOLFGANG. Hydrographic investigations by the R/V *Anton Dohrn* in Greenland waters, September–October 1955. (International Council for the Study of the Sea. Annales biologiques 1955, *pub.* 1957. v. 12, p. 38–39, illus., maps.) ref.

Summary of investigations of coastal waters of southeast and southwest Greenland. Temperature, salinity, currents and water masses are considered, as well as a section across the East Greenland Current.

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52474. KRAUSS, WOLFGANG. Interne Wellen grosser Amplitude, Teil 2: Beobachtungen. (Deutsche hydrographische Zeitschrift, Oct. 1958. Jahrg. 11, Heft 5, p. 194–207, diagrs.) 43 refs. Text in German. ***Title tr.:*** Internal waves of great amplitude, part 2: observations.

Discusses principal results deduced from observations of internal waves on basis of the literature and investigations by the *Anton Dohrn*, 1956–1957, off the Norwegian coast at about 70° N. and in the Denmark Strait. Wave lengths in the northern North Atlantic vary from 25 to 30 km.; max. recorded amplitude is 300 m. It is often difficult to ascertain whether the observed variations are due to waves, vorticity, or turbulence. Analysis of periods indicates that internal tides and inertia oscillations may predominate. Oscillations of several hundred meters, following the tidal rhythm and possibly also conditioned by meteorological processes, frequently occur in the northern North Atlantic. ***Copy seen:*** DN–HO.

52475. KRAUSS, WOLFGANG. Neue hydrographische Untersuchungen mit "Anton Dohrn" in der Island-See. (Deutsche hydrographische Zeitschrift, Feb. 1958. Jahrg. 11, Heft 1, p. 26–30, map, diagrs.) 2 refs. Text in German. ***Title tr.:*** Recent hydrographic investigations by the *Anton Dohrn* in Denmark Strait.

Presents data on circulation collected in three sample profiles north of the Greenland-Iceland ridge during a research cruise in Apr. 1957. Position of the polar front, ice conditions, depth profiles, and temperature and salinity distribution are charted. Evaluation of the data shows no discrepancy with adapted conceptions of circulation in this area.

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52476. KRAUSS, WOLFGANG. New monthly mean charts of the northern North Atlantic Ocean. (International Council for the Study of the Sea. Annales biologiques 1955, *pub.* 1957. v. 12, p. 12–13, maps.)

Charts of mean surface temperature and salinity for Aug. are presented. Similar charts for each month, based on computation of 400,000 temperature and 50,000 salinity observations made from 1868 to 1953 are to be published soon.

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KRAVTSOV, A. G., *see* Miroshnikov, L. D., *and* A. G. Kravtsov. Materialy k stratigrafii . . . *1958*. No. 53330.

KRAVTSOVA, A. I., *see* Zaporozhtseva, A. S., *and* A. I. Kravtsova. Gidrogetitleptokhloritovo-kaolinitovye porody . . . *1956*. No. 56158.

KRAWITZ, L., *see* Panofsky, H. A. A., *and others*. A study . . . tropospheric and stratospheric flow. *1958*. No. 53853.

KRAWITZ, L., *see* Austin, J. M., *and* L. Krawitz. 50-millibar patterns . . . *1956*. No. 49433.

52477. KRCEK, JOSEPH A. Communications in the Arctic. (Signal, Sept. 1958. v. 13, no. 1, p. 40, 42–44.)

Discusses methods to improve naval radio communications at high latitudes, such as: a system employing ionization and tropo scatter combined with a device which stores information to be transmitted until conditions are favorable for propagation, improvement of antennas for low frequency surface wave propagation, reduction in number of transmitters and receivers, and conversion to teletype time or frequency division multiplexing, expanded use of facsimile, etc. Difficulties in maintaining reliable communications are partly ascribed to heavy rolling of the ships, causing changes in antenna impedance and directivity pattern, and distortion of the stability of electronic equipment.

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52478. KREBS, CARL, 1889– . Snesmeltningslaviner. (Grønland, July 1957, nr. 7, p. 278–79, illus.) Text in Danish. ***Title tr.:*** Snow melting avalanches.

Contains details on two avalanches which partially destroyed a building at the naval station of Grønnedal (61°13′ N. 48°07′ W.) and a house at Arsuk (61°10′ N. 41°30′ W.) West Greenland in Feb. 1956. Neither building was near a mountain slope but nearby stream-beds

filled with melt water and seem to have facilitated the progress of the avalanches. ***Copy seen:*** DLC.

52479. KŘEČEK, J., *and others.* Vývoj thermoregulace, 5; vliv odchovu v chladu a v teple na vývoj thermoregulace krýsího mládete. (Československá fysiologie, Aug. 1957. ročnik 6, sešit 3, p. 341–47, illus., table.) 20 refs. Text in Czech. *Other authors:* J. Křečková *and* J. Martinek. ***Title tr.:*** Development of thermoregulation 5; effect of rearing young rats in cold or warmth upon the development of thermoregulation.

A study of animals reared at 34° and O° C. Growing up in the cold environment had no effect on development of thermoregulation; warm environment retarded it. ***Copy seen:*** DNLM.

KŘEČEK, J., *see also* Hahn, P., *and others.* The development of thermoregulation, 1 . . . *1956.* No. 51503.

KŘEČKOVÁ, J., *see* Hahn, P., *and others.* The development of thermoregulation, 1 . . . *1956.* No. 51503.

KŘEČKOVÁ, J., *see* Křeček, J., *and others.* Vývoj thermoregulace, 5 . . . *1957.* No. 52479.

KREFT, G., *see* Brandes, C. H., *and others.* Rare fishes . . . *1957.* No. 49885.

52480. KREĬDA, N. A. O pochvakh vostochno-evropeĭskikh tundr. (Pochvovedenie, Jan. 1958, no. 1, p. 62–67, tables.) 9 refs. Text in Russian. Summary in English. ***Title tr.:*** Soils of the East European tundras.

Contains an outline of soils based chiefly on author's investigation in the Kanin-Timanskaya, Malozemel'skaya and Bol'shezemel'skaya tundras in 1952–55. Three soil sub-zones are distinguished: "arctic" in the southern part of Novaya Zemlya, Vaygach Island and Kara Sea coast at Yugorskiy Shar Strait; "northern" in the northern part of Malozemel'skaya and Bol'shezemel'skaya tundras; and "southern" in the rest of area as far as the northern forest line. Data on the chemical composition of various soils in northern and southern sub-zones are given (tables 1–3). Processes of soil formation are discussed. The main features of tundra soil formation are a superficial gleyization under the influence of biochemical factors and a periodic translocation of soil-formation products along the soil profile. This may be explained by infiltration of precipitation during the warm period of the year and the freezing out of water into the upper soil horizons in autumn and winter. A small degree of podsolization or a cryptopodsolization is occasionally found in tundra soils; it is not, however, a result of a recent process, but a relic of the soil-formation processes at the time of the climatic optimum of the post-glacial period.—From author's summary.

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52481. KREIDER, MARLIN BOOKS, 1922– , *and others.* Effect of continuous cold exposure on nocturnal body temperatures of man. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 90). *Other authors:* P. F. Iampietro, E. R. Buskirk, *and* D. E. Bass.

Summary of observations on five men who lived scantily dressed and covered at 60° F. preceded and followed by control periods at 80° F. Continuous skin and rectal temperatures are compared with each other and evaluated. Evidence of acclimatization is discussed.

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52482. KREIDER, MARLIN BOOKS, 1922– . *and others.* Oxygen consumption and body temperatures during the night. (Journal of applied physiology, May 1958. v. 12, no. 3, p. 361–66, illus., tables.) 20 refs. *Other authors:* E. R. Buskirk *and* D. E. Bass.

Nine young men sleeping in a "comfortable" environment (25.5°–27.8° C.) showed significant decreases in O_2 consumption, rectal and weighted skin temperature. Vo_2 reached a minimum 5.1 hrs., T_r (rectal temperature) 5.6 hrs. after retirement. Skin temperature first rose slightly then decreased slowly. Inter- and intra-individual variations were noted.

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52483. KREIDER, MARLIN BOOKS, 1922– , *and* **E. R. BUSKIRK.** Supplemental feeding and thermal comfort during sleep in the cold. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 75.)

Subjects who received a supplemental 600 or 1200 cal. meal before retiring to their sleeping bags in an environment of −34.5° C. showed significantly higher rectal and skin temperatures and O_2 consumption than with no such supplement. Wakefulness and discomfort due to cold were also reduced.

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52484. KREIDER, MARLIN BOOKS, 1922– , *and* E. R. BUSKIRK. Supplemental feeding and thermal comfort during sleep in the cold. (Journal of applied physiology, Nov. 1957. v. 11, no. 3, p. 339–43, illus. table.) 6 refs.

Account of observations on six men given a supplemental meal of 600 or 1200 cal. before retiring to the sleeping bags at a temperature of −30° F. As a result rectal and toes temperatures and O_2 consumption were higher than in controls, but mean skin temperature remained unchanged. The supplement also reduced wakefulness and discomfort due to cold. ***Copy seen:*** DNLM.

52485. KREĬNOVICH, EROKHIM ABRAMOVICH. Gilîatsko-tungusoman'chzhurskie îazykovye paralleli. (Akademiîa nauk SSSR. Institut îazykoznaniîa. Doklady i soobshcheniîa, 1955. no. 8, p. 135–67.) 41 refs. Text in Russian. ***Title tr.:*** Gilyak-Tungus-Manchurian linguistic parallels.

Compares the morphological and lexical analogies between the Gilyak and southern Tungus languages and postulates that, though the languages of the neighboring Tungus peoples exerted a strong influence on Gilyak, the latter has retained its linguistic originality. A list of about 230 Tungus-Manchurian loanwords used in Gilyak is appended.

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52486. KREĬNOVICH, EROKHIM ABRAMOVICH. Ob inkorporirovanii v nivkhskom îazyke. (Voprosy îazykoznaniîa, Nov.–Dec. 1958. god 7, no. 6, p. 21–33.) 8 refs. Text in Russian. ***Title tr.:*** Incorporation in the Gilyak language.

Discusses complex-word building in Gilyak and defends the opinion that it uses "incorporation" (the joining of a direct object to a transitive verb) as a syntactic means of word formation.

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52487. KREĬNOVICH, EROKHIM ABRAMOVICH. Ob izuchenii îukagirskogo îazyka. (Voprosy îazykoznaniîa, Sept.–Oct. 1957. god 6, no. 5, p. 104–107, table.) 7 refs. Text in Russian. ***Title tr.:*** The study of Yukaghir.

Discusses the morphology of the two Yukaghir dialects, spoken on the lower Kolyma and in the tundra region of the Alazeya River. Some philological and structural comparisons are made between Yukaghir, Samoyed (Nenets, Enets, Nganasan) and Kott (southern Yenisey) languages. ***Copy seen:*** DLC.

52488. KREĬNOVICH, EROKHIM ABRAMOVICH. Opyt issledovaniîa struktury sloga v koriîakskom îazyke. (Akademiîa nauk SSSR. Institut îazykoznaniîa. Doklady i soobshcheniîa, 1958. no. 11, p. 151–67.) 9 refs. Text in Russian. ***Title tr.:*** An attempt to study the structure of syllables in the Koryak language.

Discusses the phonetic structure of the Koryak language characterized by a strong consonantism and the use of very short consonant-separating vowels. The paper is a synopsis of a report to the May 1955 session of the Institute's Sector of languages of the North.

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52489. KREĬNOVICH, EROKHIM ABRAMOVICH. Sistema morfologicheskogo vyrazheniîa logicheskogo udareniîa v îukagirskom îazyke. (Akademiîa nauk SSSR. Institut îazykoznaniîa. Doklady i soobshcheniîa, 1955. no. 7, p. 99–115.) 8 refs. Text in Russian. ***Title tr.:*** The system of morphological expression of the logical stress in the Yukaghir language.

Unlike Russian, the accentuation of a key-word in a sentence is expressed not by intonation or stress of a clause unit, but by morphological changes in the grammatical structure of the word to be stressed. Examples are cited and the morphology of Yukaghir analyzed.

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52490. KRENKEL', ÈRNEST TEODOROVICH, 1903– . V tochke zemnoĭ osi. (Ogonëk, May 1957. god 35, no. 21, p. 9, illus.) Text in Russian. ***Title tr.:*** At the end of the earth's axis.

Progress in organization and equipment of Soviet drifting stations in the last twenty years is noted by the radio operator of the first (1937–38) such station. ***Copy seen:*** DLC.

52491. KRENKEL', ÈRNEST TEODOROVICH, 1903– . Vpervye na severnom polîuse. (*In:* Burkhanov, V. F. Cherez okean na dreĭfuîushchikh l'dakh, 1957. p. 66–100, illus.) Text in Russian. ***Title tr.:*** The first stay at the North Pole.

Sketch of work on the drifting station "North Pole," 1937–1938 by its radio-operator: the flight from Rudolf Island to the North Pole on May 21, 1937; leak

in the aircraft's radiator and the landing on the ice; setting up the camp and the first hydrological, hydrobiological and oceanographic observations; visit of a polar bear; living conditions during the 2,500 km. drift; evacuation of the station. ***Copy seen:*** DLC.

52492. KRENKEL', ÉRNEST TEODOROVICH, 1903– . Zdravstvuĭ, polûs'. (Vokrug sveta, May 1957. no. 5, p. 5–7, illus.) Text in Russian. ***Title tr.:*** Hail, North Pole.

Story of the flight from Franz Joseph Land to the North Pole on May 21, 1937 to set up the first Soviet drifting station "North Pole," 1937–38. Cf. No. 4476. ***Copy seen:*** DLC.

52493. KREPS, E. M. Gidrologicheskiĭ ocherk Chernoĭ guby na Novoĭ Zemle i reliktovykh ozer k neĭ primykaûshchikh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1927. vyp. 5, p. 3–80, illus., tables, maps.) 32 refs. Text in Russian. Summary in German. ***Title tr.:*** Hydrological outline of Chernaya Guba on Novaya Zemlya and of the contiguous relict lakes.

Contains descriptions of this bay (70°40′ N. 54°50′ E.) on the south coast and of the neighboring lakes. Hydrology of the bay (temperature, salinity, pH, etc.), and of the shore pools and lagoons, including their depth-configuration, temperature, salinity, pH, O_2 contents, etc., also the farther removed lakes and their hydrological regime are reported. The lakes are considered to belong to group 2, according to Credner's classification; genetically they represent three types, some of them being of an intermediary or mixed character. ***Copy seen:*** DLC.

52494. KREPS, E. M., *and* **P. V. USHAKOV.** K gidrologii i gidrokhimii reliktovykh vodoemov Chernoĭ guby na Novoĭ Zemle. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1935. vyp. 21, p. 104–112, illus. tables.) 5 refs. Text in Russian. Summary in German. ***Title tr.:*** The hydrology and hydrochemistry of relict basins of Chernaya Guba on Novaya Zemlya.

A review and comparison of investigations conducted in 1925 and 1927. The high salinity (up to 51 °/₀₀) and high temperature of these shore lakes are stressed and explained by their isolation from the sea. The high O_2-content (>300%) during the daytime is also explained as due to isolation and the rich vegetation. ***Copy seen:*** DLC.

52495. KREY, JOHANNES. Die produktionsbiologischen Untersuchungen auf den Fahrten der deutschen Schiffe im Internationalen Geophysikalischen Jahr 1957/58. (Geographische Rundschau, Oct. 1958. Jahrg. 10, Heft 10, p. 374–80, illus. maps.) 7 refs. Text in German. ***Title tr.:*** Organic production research on the trips of German ships during the International Geophysical Year 1957–58.

Outlines the planned plankton research of the ships *Gauss* and *Anton Dohrn*, within the framework of the IGY 1957–58, and discusses the value of planktological studies to the physical oceanographer; the significance of research in biological productivity of the sea; German work in this field, especially in the Atlantic; factors governing sea-productivity; plans for such research on these two vessels. Problem of methods and planning. Denmark Strait is included in the program. ***Copy seen:*** DLC.

52496. KREYBERG, LEIV, 1896– . Development of acute tissue damage due to cold. (Physiological reviews, Apr. 1949. v. 29, p. 156–67.) 45 refs.

An analysis of reactions to cold, with the aim of distinguishing between damage immediately lethal to cells and that caused by subsequent changes in the tissue. The effects of short and prolonged exposure to cold above freezing, and damage to tissues by actual freezing is critically reviewed and summarized. The complexity of both problems is stressed and further research suggested. ***Copy seen:*** DNLM.

52497. KREYBERG, LEIV, 1896– . Local freezing. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 546–47, illus.) 5 refs.

Notes on the role of stasis in cold injury; cellular and organismal survival of cold; similarities between cold and X-ray injuries, etc. ***Copy seen:*** DNLM.

52498. KREYBERG, LEIV, 1896– , and P. L. ROTNES. La stase expérimentale; méthode pour la mettre en évidence au moyen de préparations spéciales. (Société de Biologie, Paris. Comptes rendus, 1931. t. 106, no. 10, p. 895–97.) 2 refs. Text in French. ***Title tr.:*** Experimental stasis;

a method of demonstrating it through special preparations.

Utilizing injections of India ink and lithium carmine, the author demonstrates on the frozen skin of mice or ears of rabbits transudation from the small blood vessels and stasis in the arteries and veins. Both became evident during thawing. Permanent preparations can be made from the organs affected.

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52499. KRINOV, EVGENIĬ LEONIDOVICH. Tungusskiĭ meteorit. Moskva, Izd-vo Akademii nauk SSSR, 1949. 195 p. illus., tables, maps, incl. 3 fold. (Akademiîa nauk SSSR. Seriîa "itogi i problemy sovremennoĭ nauki.") 34 refs. Text in Russian. ***Title tr.:*** The Tunguska meteorite.

Presents comprehensive account of the status of knowledge on the meteorite which fell, June 30, 1908, in Podkamennaya Tunguska basin. First reports on the fallen meteorite are evaluated. Seismic and air waves, lucent clouds, bright nights, atmospheric turbidity and other after-effects of the fall are described. Four expeditions organized by Academy of Sciences in 1927, 1928, 1929–30 and 1939 to locate the meteorite are reported and their results are summarized. The presumed location (within 60°–61° N. 101°–103° E.) is studied from different points of view, which are outlined. Plans for further studies are considered. Work by other authors is reviewed.

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52500. KRISS, ANATOLIĬ EVSEEVICH. Kolichestvennaîa i morfologicheskaîa kharakteristika mikrobnogo naseleniîa v severozapadnoĭ chasti Tikhogo okeana. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 79–83, illus., tables.) Text in Russian. ***Title tr.:*** Quantitative and morphological characteristics of the microbial population in the northwestern Pacific.

Description of conditions at all depths, 180–200 miles east of Kamchatka and of the Kuril narrows. The microbe biomass, vertical distribution of main groups, relation to distribution of life in general is discussed and tabulated.

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52501. KRISS, ANATOLIĬ EVSEEVICH. Mikrobiologicheskie issledovaniîa v TSentral'noĭ Arktike v 1956 g. (Akademiîa nauk SSSR. Doklady, May 1, 1957. t. 114, no. 1, p. 199–202, text map, 2 tables.) 5 refs. Text in Russian. ***Title tr.:*** Microbiological investigations carried on in the central arctic region in 1956.

Stations (43) set up by the drifting stations in 1954–56 are located, methods of investigation are stated, and influence of the hydrological regime on the microbiological fauna is discussed. Vertical distribution of bacteria is summarized (table 2) and seasonal changes in the fauna indicated. In summer, microorganisms were found in almost all water layers, the concentration was small in spring with some increase at 150 m. depth, and in winter time a marked depression of biological productivity was noted.

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52502. KRISS, ANATOLIĬ EVSEEVICH. Mikroorganizmy vostochnoĭ chasti Severnogo Ledovitogo okeana. (Mikrobiologiîa, 1945. t. 14, vyp. 4, p. 268–76, tables, map.) 13 refs. Text in Russian. Summary in English. ***Title tr.:*** Microorganisms from the eastern part of the Arctic Ocean.

A quantitative study of coastal waters and bottoms of part of the East Siberian and of the Chukchi Seas, the area between the latter and Alaska, and the bottom of the Bering Strait. The morphologic, physiologic and culture properties of isolated strains are also investigated and discussed and the organisms classified according to their ecological origin and main physiological function.

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52503. KRISS, ANATOLIĬ EVSEEVICH., *and* **N. A. GRAVE.** Ob anabioze v vechnoĭ merzlote tysîacheletnego vozrasta. (Mikrobiologiîa, 1944. t. 13, vyp. 5, p. 251–55, illus.) 2 refs. Text in Russian. Summary in English. ***Title tr.:*** Anabiosis in permafrost thousands of years old.

Account of bacteriological examination of a block of fossil ice taken from a depth of 9.5 m. in central Yakutia. The core of the block was found to be sterile; its periphery contained various bacteria which are believed to have penetrated during the sampling and transportation of the block. ***Copy seen:*** DLC.

52504. KRISTENSEN, M. O. Forsøk med lakefrossen og tørrfrossen agnsild under skreifisket i Lofoten. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier, 1949, *pub.*

1950. no. 7, p. 51–57, tables.) Text in Norwegian. ***Title tr.:*** Experiments with salt frozen and dry frozen herring used as bait in Lofoten cod fishing.

Most of the herring stored for seasonal cod fishing in Norway is salted before freezing. Unsalted dried frozen bait is reported to keep better. Experimental catches with fresh, dry, and salt frozen bait out of several Lofoten fishing harbors in 1948 and 1949 are tabulated. For the short periods of the test, dried frozen bait gave best results. ***Copy seen:*** DLC.

52505. KRISTENSEN, M. O., *and* **G. ROKSTAD.** Forsøk med nylon i fiske og fangstredskaper. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier, 1949, *pub.* 1950, no. 7, p. 97–102, diagr.) Text in Norwegian. ***Title tr.:*** Experiments with nylon in fishing and sea-hunting gear.

Strength and durability of nylon recommend it for use in nets and lines. Catches of fish and small whales, with equipment of nylon and comparable materials, are compared. Results with nylon are better in some instances but no conclusions are drawn. ***Copy seen:*** DLC.

52506. KRISTENSEN, M. O. Forsøksdrift med motortrålere av størrelse 75–100 fot. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier, 1949, *pub.* 1950, no. 7, p. 58–87, illus.) Text in Norwegian. ***Title tr.:*** Experimental operation of 75–100 foot motor trawlers.

Describes experimental trawling off Bjørnøya and eastwards into Barents Sea in 1947 with two vessels modified under Fisheries Dept. supervision. Poor catching conditions, untrained personnel and repeated breakdowns in equipment prevented conclusion as to economic advantage, but technically, the 95-foot vessel was found suitable for the Barents Sea banks; a smaller action radius is recommended for the 75-foot vessel. Motors of 300 hp. and 150 hp. were found to be above minimum requirements, but pitch-propeller and a coupling between motor and axis are suggested. Outboard iron plates and a strengthening of main deck are necessary requirements for wooden vessels. Models of a Norwegian-made trawl were tried out with good results.

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52507. KRISTENSEN, M. O. Forsøksfiske med nye redskaper i Lofoten. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier, 1949, *pub.* 1950, no. 7, p. 7–46, illus.) Text in Norwegian. ***Title tr.:*** Experimental fishing with new gear in Lofoten.

Post-war investigations are reported, with emphasis on equipment testing. Seine sizes are considered in relation to catch; movement of vessels in congested areas, experiments with aluminum or plastic floats, color and lighting effects, etc., are discussed. Summaries are added of several ships' day-to-day reports.

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52508. KRISTENSEN, M. O., *and* **G. ROKSTAD.** Forsøksfiske med "pareja" slepenot. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier, 1949, *pub.* 1950, no. 7, p. 88–96, illus.) Text in Norwegian. ***Title tr.:*** Experimental fishing with "pareja" trawl net.

A trawl net drawn by paired trawlers (pareja), such as used by Spain for a century, was tried out by Norwegian vessels northeast of Kanin Nos. Ship size and power, nature and arrangement of the net, and technical and economic results are reported. The vessels' daily activities June 11–July 13, 1949, are summarized. ***Copy seen:*** DLC.

52509. KRISTIANSEN, UVDLORIÁN-GUAQ. Rink-ekspeditionen I–III. (Atuagagdliutit: Grønlandsposten, Sept. 20, Oct. 18, 25, 1956. Ukiut 96-iat, nr. 19, p. 3–4, nr. 20, p. 3, +; nr. 21, p. 3–6.) Text in Danish and Eskimo. ***Title tr.:*** The *Rink* expedition I–III.

Describes a good-will mission to Baffin Island, sponsored by the Greenland provincial council and undertaken by a delegation of five Greenlanders, one of them the author. The voyage, in summer 1956, was made in the *H. J. Rink* with naval cutter (*Skarven*) escort. The voyage and the visit to Pangnirtung (66° N. 66° W.) are described in some detail. ***Copy seen:*** DLC.

52510. KRIȗCHKOV, S., *and* **I. KIRIS.** Okhota v Finlȃndii. (Okhota i okhotnich'e khozȋaĭstvo, Sept. 1958. god 4, no. 9, p. 55–58, illus., table.) Text in Russian. ***Title tr.:*** Hunting in Finland.

Outlines industrial and sport hunting in Finland including Lapland and the northern area: regulation of hunting, average annual catch of the main game animals, hunters' organizations, scientific institute for study of wild fauna, etc.

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52511. KRÎUCHKOV, V. V. O faktorakh, opredelîaîushchikh verkhniĭ predel berezy i eli v Khibinskikh gorakh. (Moskva. Universitet. Vestnik. Seriîa biologii, pochvovedeniîa, geologii i geografii, 1957. god 12, no. 3, p. 215–24, illus., diagrs., tables.) 16 refs. Text in Russian. ***Title tr.:*** Factors determining the limits of birch and spruce in the Khibiny Mts.

Results of author's observations in the valley and on slopes of Yukspor in summers of 1955 and 1956. The present forest (spruce and birch) line on the southern slope is at 470 m., and on the northern slope at 400 m. above sea level; the upper limit of the subalpine belt (dwarf birch) goes to 600 m. Detailed data are shown (tables, diagram) on tree growth at these limits in relation to the temperature of air and soil and to the moisture of soil. The tree and forest lines tend to advance due to the warming trend in climate; but lack of moisture restricts somewhat this tendency. The question of present-day advance or recession of tundra is discussed without conclusion. Author's work was sponsored by Khibiny Geographical Station of the Moscow University. ***Copy seen:*** DLC.

52512. KRÎUKOV, S. M., *and* **D. V. LEVIN.** Ob ispol'zovanii samoletov tipa Il–14 dlîa aèromagnitnoĭ s"emki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biûlleten', 1958. vyp. 10, p. 53–59, diagrs.) Text in Russian. ***Title tr.:*** On the use of the Il-14-type aircraft for aeromagnetic survey.

The Li-2-type airplane was used for the aeromagnetic survey at scale 1:1,000,000 of the arctic regions in the U.S.S.R. until 1956. Its fuel consumption was too high and it did not have the necessary speed; so in 1956–57 the Il–12 was introduced, and in 1958 the Il–14. Use of the Il–14 substantially increased the coverage and the survey was completed. The magnetometer can be attached to aircraft, and gondola is not needed. Detailed data are given on the Il–14 and on the magnetic survey. ***Copy seen:*** DGS.

KRÎUKOV, S. M., *see also* Levin, D. V., *and* S. M. Krîukov. Predvaritel'nye rezul'taty aèromagnitnoĭ s"emki Tungusskoĭ sineklizy. *1957.* No. 52780.

52513. KRÎUKOV, V. *and* **Îû. KOREV.** Na Dal'nem Vostoke. (Sovetskaîa muzyka, Feb. 1958. god 22, no. 2, p. 121–23.) Text in Russian. ***Title tr.:*** In the Far East.

Discusses the musical and artistic life of Khabarovsk and the work of local Russian, Gold and Tungus (Evenki, Udegeitsy) composers. The "Nanaian suite" by V. Rumîantsev, a symphonic oratoria based on Nanaian (Gold) folklore is favorably reviewed and a wider use of local folklore and folksong material is advocated. ***Copy seen:*** DLC.

52514. KRÎUKOVA, IRINA ALEKSANDROVNA. Russkaîa narodnaîa rez'ba po kosti. Moskva, Vses. kooperativnoe izd-vo, 1956. 119 p. illus. (Khudozhestvennye promysly RSFSR) 18 refs. Text in Russian. ***Title tr.:*** Russian bone carving, a folk art.

Deals with bone and ivory carvings of the 17th–20th centuries, including the craft centers of Kholmogory (p. 12–34) and Tobol'sk (p. 35–54). The carving and engraving techniques, tools and materials (mammoth and walrus tusks, reindeer antlers and mammal bones) are described, subject matter and styles are discussed, with illus. (p. 73–86, 87–102). Of particular interest are the 19th–20th century Tobol'sk statuettes and reliefs representing, mainly, Ostyak daily life (hunting scenes, dog driving, etc.), reindeer and bear groups, etc. A list of artists with biographic notes is appended.
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52515. KRIVOBOK, V. N. Properties of austenitic stainless steels at low temperatures. (U.S. National Bureau of Standards. Circular, May 7, 1952, no. 520, p. 112–36, diagrs., graphs, tables.) 18 refs.

The effect of composition on the mechanical properties at room and subzero temperatures, the calculations of true strength from test results, and the influence of heat treatments, especially those that might result either in carbide precipitation or sigma formation, on the mechanical properties at low temperatures are discussed. The important beneficial influence of extra low carbon content is presented. Data on modulus of elasticity, fatigue, impact, tensile impact, effect of notches, distribution of ductility at the notch and the beneficial effects of low temperature on ductility characteristics are summarized and appraised.—From author's abstract. ***Copy seen:*** DI.

52516. KRÖGER, ANNEMARIE. Geomorphological work along the north

shore of Great Bear Lake. (Arctic, 1958. v. 11, no. 4, p. 253.)

Describes field studies of glacial morphology in this part of Mackenzie District during summer 1958. Raised beaches were measured; the dip toward the west is 115 feet over 100 miles along the lake shore north of Dease Arm; the highest is about 290 feet above the lake in the east and 175 feet in the west.

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KROG, JOHN, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

KROG, JOHN, *see* Scholander P. F., *and others.* Critical temperature in Lapps. *1957.* No. 54620.

52517. KROGERUS, HARRY. Bemerkungen über einige finnische Kleinschmetterlinge. (Notulae entomologicae, 1957. v. 37, no. 4, p. 121–26, 6 illus.) 6 refs. Text in German. ***Title tr.:*** Notes on some Finnish small butterflies.

Describes seven, five of them new from western Finnish Lapland.

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KROGH, AUGUST, 1874–1949, *see* Johansen, A. C., *and* A. Krogh. The influence . . . temperature . . . *1914.* No. 52083.

52518. KROGIUS, F. V., *and* **E. M. KROKHIN.** Rezul'taty issledovaniĭ biologii nerki-krasnoĭ, sostoâniâ ee zapasov i kolebaniĭ chislennosti v vodakh Kamchatki. (Voprosy ikhtiologii, 1956. vyp. 7, p. 3–20, illus.) 32 refs. Text in Russian. ***Title tr.:*** Results of biological investigations of red salmon, composition of its reserves and numerical fluctuation in Kamchatka waters.

A comprehensive study of the problem with information and data on: earlier investigations in Kamchatka, condition of reserves, migration and numbers, fry and its growth in the fresh waters, its distribution and migration, food, enemies, ecology, etc. Migration of this salmon into the sea, percentage of returning fish into some lakes and survival rates are dealt with, as well as age composition of anadromous fishes and yield prognoses; direction of future research and main conservation measures are discussed.

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KROKHIN, E. M., *see* Krogius, F. V., *and* E. M. Krokhin. Rezul'taty issledovaniĭ biologii nerki-krasnoĭ . . . *1956.* No. 52518.

KROPOTKIN, PETR ALEKSEEVICH, *Kniaz'* 1842–1921, *see* Velichko, A. A. P. A. Kropotkin . . . *1957.* No. 55779.

52519. KROPOTKIN, PETR NIKOLAEVICH. Fundamental features in the tectonics of Priamurie, Sikhota-Alin, Sakhalin Island, Kurile Islands and Kamchatka Peninsula. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 132–33.)

Describes structures of mainly Mesozoic and Cenozoic folding, with some stable Paleozoic and Precambrian massifs, among them: a supposed pre-Mesozoic region in central and northern Okhotsk Sea; a zone of upper Cretaceous and Tertiary effusives extending into southern Chukotsk Peninsula; Kamchatkan anticlinoriums and depressions; and the Kuril-Kamchatka trough.

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52520. KROTOV, A. I. Stratigrafiâ verkhnemelovykh i paleogenovykh otlozheniĭ vostochnogo sklona severnogo i srednego Urala i Zaural'â po diatomovym vodoroslâm. (Akademiâ nauk SSSR. Ural'skiĭ filial. Gorno-geologicheskiĭ institut. Trudy, 1957. vyp. 28, p. 17–33, diagr.) 22 refs. Text in Russian. ***Title tr.:*** The stratigraphy of Upper Cretaceous and Paleogene deposits of the eastern slope of the north-central Ural and Trans-Ural, according to the diatomaceous algae.

Reports results from an investigation of diatomaceous algae collected in 1949 over this broad region, with special attention to the Ivdel' district (60°24′ N. 60°24′ E.) and Serovsk farther south. More than 1500 samples from over 100 drill holes were studied, and materials mostly of these districts, and of Senonian and Tertiary periods only, are reported here. The algal studies were by a method developed by A. P. Zhuze. A new stratigraphic division is proposed and comparison made with other divisions.

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52521. KROTOV, MODEST ALEKSEEVICH. Na severe dal'nem. Moskva, Sovetskaâ Rossiâ, 1957. 214 p. plates. Refs. Text in Russian. ***Title tr.:*** In the far North.

Describes the physical conditions, resources, economic activities of Yakutia. Its size, population, main geographic features, climate and permafrost are outlined. Development of agriculture, hunting and trapping (sable, squirrel, arctic

fox, ermine, etc.), muskrat acclimatization, and fur farming are described (p. 34–47). The forests and wood industry (p. 48–53), gold, mica, diamonds and other minerals and their development (p. 54–72), road, river and air transportation are discussed (p. 73–84). The Lena River valley is described, its landscape, floods, etc. (p. 84–93). Mammoth finds, ivory, and native bone carvers are mentioned (p. 94–101). Discovery and explorations of the area, mapping and glacier studies, the problem of hypothetical lands are sketched (p. 102–131). Russian political exiles of earlier years and their influence on the development of Yakutia are dealt with at some length (p. 146–214). Progress of Yakutia is stressed in a preface (p. 3–8) by A. Danilova. ***Copy seen:*** DLC.

52522. KROTOV, MODEST ALEKSEEVICH. Rodnaîa ÎAkutiîa, izd. 2-oe, perer. i dop. Yakutsk, ÎAkutskoe knizhnoe izd-vo, 1957. 510 p. illus., ports., maps (1 fold). Text in Russian. ***Title tr.:*** Our Yakutia, 2nd rev. and enl. ed.

Popular sketches of the history, geography, ethnography, exploration, economic conditions, acculturation and industrialization of Yakutia, occasioned by the 325th anniversary of its incorporation into Russia. The influence of exiles in the pre-Revolutionary period and events in the establishment of the Soviet rule in Yakutia are stressed and leading persons are characterized. Discovery of gold in the Aldan and diamonds in the Vilyuy basin (p. 328–80) is recounted; development of river, sea, land and air transportation in Yakutia is outlined. Transfer is noted (p. 391–92) of four river steamers from Arkhangel'sk to Yakutsk under F. V. Naîanov Aug. 17–Sept. 26, 1952. ***Copy seen:*** DLC.

KROTOV, MODEST ALEKSEEVICH, *see also* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Istoriîa ÎAkutskoĭ ASSR, t. 2 . . . *1957*. No. 49168.

KROTOV, MODEST ALEKSEEVICH, *see also* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Revolûtsionnye sobytiîa 1905–1907 . . . *1956*. No. 49167.

52523. KROTOV, V. Puteshestvie v 1966 godu. (Ogonëk, July 1956. god 34, no. 29, Sibirskiĭ nomer, p. 5, port.) Text in Russian. ***Title tr.:*** A journey in 1966.

Lists new features of Siberia which are not yet on maps but which will be "discovered" by a hypothetical traveler in 1966, among them the cascade of Angara power plants surrounded by great industrial centers, a new fresh-water sea at Bratsk, new industrial cities along the Tayshet - Ust'-Kut railroad, etc.

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KROTOV, V. A., *see* Akademiîa nauk SSSR. O sozdanie instituta geografii . . . *1958*. No. 49154.

52524. KROTT, PETER. Tupu-tupu-tupu. Translated from the German by Edward Fitzgerald. London. Hutchinson & Co., 1958. 232 p. illus., maps. American ed. pub. 1959 with title *Demon of the North* (259 p.).

A study of the wolverine in Lapland by a longtime resident Austrian forester and agronomist, who became an animal raiser and dealer. Over thirty wolverines were husbanded and trained by him and much of the book deals with this activity. Numerous observations on the behavior and psychology of these animals and their relation to other animals, in the open and those reared by the author are also included. A considerable number of excellent instructive photographs illustrate the narrative. ***Copy seen:*** DLC.

KRUCHININ, ÎU. A. *see* Zhadrinskaîa, N. G., *and others*. Metel' v razgar leta. *1958*. No. 56195.

52525. KRUGLIKOV-GRECHANYĬ, L. Pivnichnyĭ mors'kyĭ shlîakh. (Ukraîna, Nov. 1956, no. 22 (181), p. 31.) Text in Ukrainian. ***Title tr.:*** The Northern Sea Route.

History, development, and economic importance. ***Copy seen:*** DLC.

52526. KRUPIN, ALEKSEĬ NIKOLAEVICH. Preobrazhennyĭ kraĭ; sotsialisticheskie preobrazovaniîa v Nenetskom natsional'nom okruge za gody sovetskoĭ vlasti. Arkhangel'sk, Arkhangel'skoe knizhnoe izd-vo, 1957. 68 p. illus., tables. Text in Russian. ***Title tr.:*** A transformed region; the socialist transformation of the Nentsy National District during the years of the Soviet regime.

Outlines the economic, industrial and cultural development of northeastern part of Arkhangel'sk Province, including Kaninskaya, Timanskaya, Malozemel'skaya and Bol'shezemel'skaya Tundras, also Kolguyev and Vaygach Islands, inhabited chiefly by Nentsy (Samoyeds). Primitive living conditions in pre-Revolu-

tionary times, organization of the National District in 1929, rise of Nar'yan-Mar (12,000 inhabitants) and other population centers, the achievements of 14 reindeer-breeding collective farms and of three state farms are reviewed (p. 9–33). Work of the Nar'yan-Mar Agricultural Experimental Station, development of fisheries and 27 fishers' collectives (p. 32–45) are outlined. Acculturation of the native population, development of schools and health service are described (p. 46–58), and some outstanding and representative Samoyeds are characterized. Natural resources of the area are rich and the development prospects are good. At the beginning of 1957, the population of the district passed 39,000; its main sources of income are reindeer breeding, fisheries and hunting. In spite of some progress in agriculture, only 163.9 hectares were under cultivation in 1955; cattle increased from 3,310 in 1932 to 7,938 in 1956. The 16 fur bearers of the district, which has 19 million hectares of hunting grounds, include arctic fox, ermine, muskrat and squirrel and the fur take has increased 75 fold since 1930. Fish caught in 1956 amounted to 87,237 cwt., as compared with 13,485 cwt. in 1931. ***Copy seen:*** DLC.

52527. KRUSEMAN, G. *Bombus agrorum* (F.) in Sweden. (Opuscula entomologica, 1958. bd. 23, häfte 1–2, p. 76.)

Contains notes on four subspecies, including *B. a. erlandssoni* in the high mountains of the Swedish-Norwegian border and in northern Norway; locus typicus: Bjørkvik near Narvik.

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52528. KRUTA, VLADISLAV. L'action de l'adrénaline et de la noradrénaline sur les oreillettes isolées de mammifères aux basses températures. (Journal de physiologie, 1957. t. 49, no. 1, p. 236–39, illus.) 7 refs. Text in French. ***Title tr.:*** Action of adrenaline and noradrenaline upon isolated mammalian auricles at low temperatures.

The chronotropic effect of both substances upon isolated auricles persisted during low temperatures but the inotropic action disappeared. Relative acceleration of the rhythm varied with the species, temperature, and with the average initial frequency within the species.

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KRUTOĬARSKIĬ, M. A., *see* Dukhanin, S. F., *and* M. A. Krutoĭarskiĭ. O deshifrovanii aėrofotosnimkov . . . *1958.* No. 50647.

KRUTSKIKH, B. A., *see* Gakkel', ĬA. ĬA. Razrushenie ostrova Semenovskogo. *1958.* No. 51051.

KRUZENSHTERN, IVAN FEDOROVICH, 1770–1846, *see* Lomonosov, M. V. Proėkt Lomonosova i ėkspeditsiia Chichagova. *1854.* No. 52907.

52529. KRYLOV, GEORGIĬ VASIL'EVICH, *and* **L. A. LAMIN.** Vtoraia nauchno-proizvodstvennaia konferentsiia po ratsionalizatsii lesnogo khoziaĭstva Sibiri. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia, 1958. no. 1, p. 150–52.) Text in Russian. ***Title tr.:*** The second scientific-industrial conference for rationalization of forestry in Siberia.

Reports conference called by the Academy of Sciences and Academy of Agriculture at Novosibirsk, Sept. 12–15, 1957, and attended by over 200 from scientific, economic and industrial organizations; 29 papers in various fields of forestry in Siberia, including Tyumen' and Krasnoyarsk Provinces, are summarized; special attention (6 papers) was paid to prevention and combatting of forest fires. ***Copy seen:*** DLC.

KRYLOV, MIKHAIL MIKHAĬLOVICH, *see* Voĭtkovskiĭ, K. F. Opytnyĭ ledianoĭ sklad. *1957.* No. 55855.

52530. KRYMGOL'TS, G. ĬA., *and* **N. N. TAZIKHIN.** Novye materialy k stratigrafii iurskikh otlozheniĭ Vilĭuĭskoĭ sineklizy. (Akademiia nauk SSSR. Doklady, Sept. 1, 1957. t. 116, no. 1, p. 129–30.) 8 refs. Text in Russian. ***Title tr.:*** New data concerning the stratigraphy of Jurassic deposits of the Vilyuy syncline.

Contains descriptions of *Osperleioceras* n. gen. and *O. viluiense* n. sp. found in ammonitic deposits in the outcrops on the left bank of the Vilyuy River, 45–50 km. from Suntar. They belong to marine deposits of the Toarcian stage of the Jurassic system. ***Copy seen:*** DLC.

52531. KRYMSKIĬ, L. D., *and* **I. ĬA. UCHITEL'.** Morfologicheskie izmeneniia vnutrennykh organov pri gipotermii. (Eksperimental'naia khirurgiia, Nov.–Dec. 1956. god 1, no. 6, p. 31–40, illus.)

6 refs. Text in Russian. Summary in English. ***Title tr.:*** Morphological changes of internal organs in hypothermia.

Prolonged hypothermia in rabbits caused fatty distrophy of the liver, kidney and myocardium, changes indicative of tissue hypoxia. Structure of internal organs reverts to normal ten days after prolonged hypothermia. Use of ganglioplegics and hypnotics with hypothermia caused greater changes than when used separately.

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KRŽALIĆ, L., *see* Mihailović, L., *and others.* The effects of epinephrine . . . *1958.* No. 53272.

KRZEMIŃSKA-LAWKOWICZOWA, I., *see* Bober, S., *and others.* Zmiany elektrokardiograficzne . . . *1957.* No. 49782.

KRZHIZHANOVSKIĬ, G., *see* Steklov, IU. M. Kak ia bezhal iz ssylki. *1958.* No. 55147.

KU, CHING-HSIEN, *see* Dao, C., *and others.* Electrocardiographic changes . . . hypothermia. *1958.* No. 50443.

52532. KUBANSKIĬ, G. Daleko na Severe. (IUnyĭ naturalist, Nov. 1957, no. 11, p. 39–40, col. plate.) Text in Russian. ***Title tr.:*** Far in the North.

Sketches agricultural developments in Kola Peninsula: cabbage, beet, carrot and radish growing in the open ground near Kirovsk (cf. illus. on front cover); corn growing for green fodder at Sayda-Guba (69°15′ N. 33° 14′ E.); the utilization of algae and fish meal for fodder; electric light in hen-houses during the winter, etc. ***Copy seen:*** DLC.

KUCHAEVA, A. G., *see* Korenĭako, A. I., *and others.* Rasprostranenie aktinomitsetov-antagonistov . . . *1955.* No. 52408.

52533. KUCYNIAK, JAMES. A boreal liverwort of rare occurrence new to North America: *Scapania crassiretis.* (Svensk botanisk tidskrift, July 2, 1958. bd. 52, häfte 1, p. 68–72, text map.) 10 refs.

Reports a rare liverwort, known to occur in the Kuusamo region of Finland, in Swedish Lapland and Troms, Norway; now found in Quebec, north of Roberval, 53°35′ N. 67°30′ W. ***Copy seen:*** DA.

52534. KUCYNIAK, JAMES. Muscinées nouvelles pour le Québec: *Calypogeia fissa, Odontoschisma elongatum, Didymodon rufus* et *Hypnum bambergeri.* (Naturaliste canadien, Nov.–Dec. 1950. v. 77, no. 11–12, p. 305–312, 2 text maps.) 19 refs. Text in French. ***Title tr.:*** Mosses new for Quebec: *Calypogeia fissa, Odontoschisma elongatum, Didymodon rufus* and *Hypnum bambergeri.*

Includes data on the distribution of *Odontoschisma elongatum* (Greenland), *Didymodon rufus* (Canadian Arctic, Ellesmere Island) and *Hypnum bambergeri* (Canadian Arctic, Baffin Island, Novaya Zemlya, Vestspitsbergen); the last species is probably circumboreal.

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52535. KUCYNIAK, JAMES. Notes sur les *Pohlia* du Québec, 1; des espèces peu fréquentes: *P. filiformis* et *P. proligera.* (Naturaliste canadien, June-July 1952. v. 79, no. 6–7, p. 233–38, text maps.) 10 refs. Text in French. ***Title tr.:*** Notes on Quebec *Pohlia,* 1; some infrequent species: *P. filiformis* and *P. proligera.*

Contains notes on the distribution of these two species: the first one recorded in Greenland and Alaska and the latter one in the Ungava region of northern Quebec. Pt. 2 and 3 of this paper do not include arctic material.

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52536. KUCYNIAK, JAMES. Notes sur les *Pohlia* du Québec, IV; réintégration du *P. cucullata* dans notre flore. (Naturaliste canadien, Apr. 1958. v. 85, no. 4, p. 94–100, text map.) 12 refs. Text in French. Summary in English. ***Title tr.:*** Notes on *Pohlia* of Quebec, IV; Reintegration of *P. cucullata* in our flora.

P. cucullata is removed from the bryophyte flora of Quebec, because the collection of Marie-Anselme proved to be erroneously determined. The species is known to be distributed in Greenland, Labrador and Pribilof Islands.

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52537. KUCYNIAK, JAMES. On *Drepanocladus cadius* in continental North America. (Bryologist, June 1958. v. 61, no. 2, p. 124–32, map.) 23 refs.

A review of studies of the genus *Drepanocladus,* especially its morphology and taxonomy and of the distribution of *D. cadius.* The latter, given in detail with map, includes all of subarctic and arctic America. Habitats, association with other mosses, reproduction, etc. are also noted. ***Copy seen:*** DA.

KUCYNIAK, JAMES, *see also* Löve, D., *and others.* Plant collection from interior Quebec. *1958.* No. 52893.

52538. KUDERSKIĬ, L. A. K voprosu o mnogoletnikh izmeneniiakh biologicheskikh svoĭstv bespozvonochnykh Belogo moria. (Zoologicheskiĭ zhurnal, Apr. 1958. t. 37, vyp. 4, p. 495–503, tables, maps.) 11 refs. Text in Russian. Summary in English. ***Title tr.:*** On the problem of long term changes in biological properties of White Sea invertebrates.

Data are presented on the maximal sizes, growth rate and occurrence of some molluscs in the Onega Bay, White Sea. On the basis of these observations, author questions the contention of V. V. Kuznetsov (No. 52593) that within the last century these forms declined in size, frequency and growth rate in this area. ***Copy seen:*** DLC.

52539. KUDRIASHOVA, V. I. K voprosu ob obrazovanii sharovykh lav srednego techeniia r. Nizhneĭ Tunguski. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Feb. 1958. god 23, no. 2, p. 94–99, illus.) 18 refs. Text in Russian. ***Title tr.:*** On pillow lava formation in the middle course of the Nizhnyaya Tunguska River.

Reviews recent literature on this controversial question, and author's investigation in the valley of Nizhnyaya Tunguska, west of Tura. Pillow lava there is described and illustrated. It is considered (corroborating opinion of I. V. Lewis) a product of the rapid cooling of lava flows in water. ***Copy seen:*** DLC.

KUDRIASHOVA, V. I., *see also* Vasil'eva, Z. V., *and* V. I. Kudriashova. Apatit iz Sibirskoĭ trappovoĭ formatsii. *1958.* No. 55744.

KUDRIAVTSEV, N. F., *see* Baskakov, G. A., *and* N. F. Kudriavtsev. Dolgovremennye avtonomnye stantsii . . . *1957.* No. 49571.

KUDRITSKAIA, T. E., *see* Raĭko, Z. A., *and others.* O vliianii gipotermii . . . *1957.* No. 54205.

52540. KÜHN, HERBERT, 1895– . Das Problem des Urmonotheismus. (Akademie der Wissenschaften und Literatur in Mainz. Geistes- und sozialwissenschaftliche Klasse. Abhandlungen, Jahrg. 1950, Nr. 22, p. 1639–72, illus.) Refs. Text in German. ***Title tr.:*** The problem of proto-monotheism.

Suggests that monotheism, the belief in a primordial hunt-deity, preceded polytheism in the religions of prehistoric and modern primitive peoples. The bear sacrifice rites of the early paleolithic age are compared to those of present-day Gilyaks, Tungus, Samoyeds, and Eskimos. The monotheistic aspect of these religions as reflected in their one supreme deity is analyzed (p. 1646–50). The Aurignacian so-called Venus statuettes representing, according to the author, the primeval "mother" deity created by the monotheistic male deity, are dealt with and the "Venus" finds, including those in the Angara River region (p. 1659, 1667–69) are described (cf. No. 29234, 53739). Their ice-age religious significance and cult still preserved among the reindeer-hunting Ostyaks, Golds, and Yakuts (p. 1669–70) are discussed. ***Copy seen:*** DLC.

52541. KÜHNEL, OLE. Rigdomme fra havet, til Grønland og Danmark. (Dansk teknisk tidsskrift, 1958. årg. 82, nr. 4, p. 63–66, +, illus.) Text in Danish. ***Title tr.:*** Riches from the sea, to Greenland and Denmark.

Discusses the rich yield of fish from West Greenland waters, which are principally exploited by foreign fishermen. A visit to a modern quick-freeze plant in Sukkertoppen is described. Over 200 organized fishermen are attached to this plant. Problems connected with fishing in Greenland waters, the non-participation of Danish fishermen, etc. are discussed. ***Copy seen:*** DLC.

KUGAEVSKIĬ, A. E., *see* Akademiia nauk SSSR. Iakutskiĭ filial. Za sovetskuiu vlast' . . . *1957.* No. 49170.

KUHL, A., *see* Pirson, A., *and* A. Kuhl. Dependence . . . light . . . *1958.* No. 54011.

52542. KUHN, LESLIE ALVIN, 1924– , *and* J. K. TURNER. Alterations in pulmonary and peripheral vascular resistance in hypothermia; the effects of sympatholytic and sympathomimetic agents on the course of immersion hypothermia. Fort Knox, Ky., April 25, 1957. 41 p. illus., tables. (U.S. Army, Medical Research Laboratory, Report no. 265.) 68 refs.

Pulmonary and systemic vascular resistance in dogs increased progressively with hypothermia. Nor-adrenaline, a sympathomimetic agent, increased the rate of survival to low body temperatures;

the sympatholytic agent dibenzyline, had the opposite effect. "It is concluded that it is desirable to maintain a high systemic vascular resistance and a low pulmonary resistance during hypothermia." ***Copy seen:*** DNLM.

52543. KUHN, LESLIE ALVIN, 1924– , *and others.* The effect of exposure to severe cold on resistance to hemorrhage in unanesthetized dogs. Fort Knox, Kentucky, Dec. 1957. 2, 15 p. illus., tables. (U.S. Army, Medical Research Laboratory. Report no. 306.) 22 refs. *Other authors:* L. B. Page, J. K. Turner, *and* J. Frieden.

Account of experiments with dogs which indicate that exposure to −25° C. does not decrease resistance to hemorrhagic hypotension but rather somewhat raises it. The significance of these observations for field medicine, is discussed. ***Copy seen:*** DNLM.

52544. KUÎANTSEV, P. Ispol'zovanie RLS "Neptun" pri plavanii vo l'dakh. (Morskoĭ flot, Apr. 1957. god 17, no. 4, p. 23, diagrs., table.) Text in Russian. ***Title tr.:*** Use of the "Neptun" radar in ice navigation.

Describes navigational procedures of the steamship Kamenets-Podol'sk through 40 miles of broken ice during foggy weather in the Chukchi Sea in 1955. Computations of course were made with the radar operating in the 1.5 and 5 mi. ranges; astrofixation at the point of arrival showed a position discrepancy of 0.3 mi. ***Copy seen:*** DLC.

52545. KUJALA, VILJO VILHO, 1891– , *and others.* Sientemme suomenkieliset nimet. Lakkisienet (Agaricales). (Karstenia, 1953. v. 2, p. 51–64.) Text of introduction in Finnish. Summary in Swedish and English. *Other authors:* T. Rautavaara, R. Tuomikoski, A. Ulvinen and L. Pohjanpalo. ***Title tr.:*** The Finnish names of Agaricales.

About three hundred of the most important of these fungi are listed in three languages: Latin, Finnish and Swedish; the listing is alphabetically by the genera, and by the species for each genus. Some arctic species are included. ***Copy seen:*** DA.

52546. KUKHARENKO, A. A. Paleozoĭskiĭ kompleks ul'tra-osnovnykh i shchelochnykh porod Kol'skogo poluostrova i svîazannye s nim redkometall'nye mestorozhdeniîa. (Vsesoûznoe mineralogicheskoe obshchestvo. Zapiski, 1958. ser. 2, chast' 87, vyp. 3, p. 304–314.) Text in Russian. ***Title tr.:*** The Paleozoic complex of ultrabasic and alkaline rocks of Kola Peninsula and related rare metal deposits.

Presents the main geologic and petrologic features of various phases of Paleozoic alkaline and ultrabasic rocks of Kola. Outline is given of the principal bedrock conditions under which rare metal accumulation occurred, and description of the origin of two genetic groups (magmatic and post-magmatic) comprising together six types of rare metals occurrence. These metals include tantalum, zirconium, beryllium, thorium and others. Attention is drawn to the massive appearance of rare elements in early phases of intrusive ultrabasic rocks, through metasomatic changes. Niobium, tantalum and zirconium seem of exploitable quantity. ***Copy seen:*** DGS.

52547. KUKOVETZ, W. Die Leistungsreserve des hypothermen Herzmuskels am Herz-Lungen-Präparat der Ratte. (Naunyn-Schmiedeberg's Archiv für experimentelle Pathologie und Pharmakologie, 1957. Bd. 231, Heft 5, p. 496–506, illus., tables.) 27 refs. Text in German. Summary in English. ***Title tr.:*** The work capacity of the hypothermic cardiac muscle in the heart-lung preparation of the rat.

Account of a comparative investigation of cardiac work capacity under different arterial and venous work loads at temperatures of 37°, 32°, 27° and 22° C. Under normal work loads cardiac output increased with the fall of temperature to 32° C. and decreased at lower temperatures (27°, 22° C.).

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52548. KULACHKOVA, V. Novyĭ vid pochechnykh sosal'shchikov *Renicola mollissima* nov. sp. iz obyknovennoĭ gagi. (Leningradskoe obshchestvo estestvoispytateleĭ. Otd. zool. Trudy, 1957. t. 73, vyp. 4, p. 198–203, 2 illus.) 9 refs. Text in Russian. Summary in German. ***Title tr.:*** A new species of kidney trematode *Renicola* from *Somateria mollissima.*

Renicola mollissima, n. sp. was found on the eider in Kandalaksha Bay of the White Sea in 1950–52. It has a year's life-cycle, wintering in the birds, but naturally released in June. The worms live in various hosts during June, and the ducks become infected again in July at the nesting time. ***Copy seen:*** DLC.

52549. KULAKOV, ÍŪ. N. Nakhodka zuba slona *Elephas* cf. Wüsti M. Pavl. v basseĭne nizhnego techeniĭa reki Indigirki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bŭlleten', 1958. vyp. 11, p. 31–33.) 4 refs. Text in Russian. ***Title tr.:*** Find of tooth of elephant *Elephas* cf. Wüsti M. Pavl. in the lower Indigirka basin.

Reports on a molar found in 1957 with bones of other mammals in talus near the Elon'River, left tributary of the Indigirka, on the northeastern slope of the Elon' Mts. (approx. 71° N. 147° E.). The local complex of Quaternary deposits is outlined and the importance of this find for Quaternary stratigraphy stressed. The collection of mammal bones is under further study. ***Copy seen:*** DGS.

52550. KULAKOV, ÍŪ. N. Predvaritel'nye itogi Primorskoĭ ėkspedit͡sii. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bŭlleten', 1957. vyp. 5, p. 51–54.) Text in Russian. ***Title tr.:*** Preliminary data on work of the Maritime Expedition.

Reports geological surveying at scale 1:1,000,000 of 54,000 km². area between the Chondon River in the west and the Indigirka in the east; the southern boundary of the region is the Polousnyy Ridge and the northern, the East Siberian Sea (approx. 70°–73° N. 138°–148° E.). Its geographic features, geologic structure, lithology and stratigraphy are briefly reported. The so-called "mammoth" grave-yard or mammoth horizon discovered is described. Other fossil fauna and flora are indicated.
Copy seen: DGS.

KULAKOV, ÍŪ. N., *see also* Voronov, P. S., *and* ÍŪ. N. Kulakov. O svīazi . . . gidroseti . . . *1958.* No. 55882.

KULANTAĬ, VASILIĬ. *See* Protod'iakonov, Vasiliĭ Andreevich, 1912– .

52551. KULCHAR, ISHTVAN. Nash drug Rytkhėu; perevod s vengerskogo. (Na severe dal'nem, 1955. vyp. 2, p. 204–205.) Text in Russian. ***Title tr.:*** Our friend Rytkhėu; translation from Hungarian.

Characteristic of the Chukchi poet and writer ÍŪriĭ Sergeevich Rytkhėu, 1930– , by a fellow-student (in 1955) at Leningrad University, Dept. of the Peoples of the Far North: Rytkhėu's childhood, his participation in Chukchi sea hunting, work on a local newspaper, *Sovetskaia Chukotka,* studies at the university, plans for the future, etc. ***Copy seen:*** DLC.

52552. KULESHOV, A. A. Opyt primeneniia shtangovoĭ krepi na gorizonte grokhocheniia. (Gornyĭ zhurnal, May 1958, no. 5, p. 24–25, illus.) Text in Russian. ***Title tr.:*** Use of reinforcement rods on the ore crushing level.

Describes reinforcement of unstable ceilings in the Kirov apatite mines. Mass cracking and crushing of ore rocks with explosions in the underground chamber dangerously loosen the upper layers of the ore deposits; therefore special reinforcing of them is required by regulation. ***Copy seen:*** DLC.

52553. KULESHOV, G. F. Nekotorye osobennosti asbestoproiavleniia v karbonatnykh porodakh Vangyrskogo raĭona na Urale. (Vsesoiūznoe mineralogicheskoe obshchestvo. Zapiski, 1958. ser. 2, chast' 87, vyp. 3, p. 373–79, illus., diagrs., tables.) 4 refs. Text in Russian. ***Title tr.:*** Some features of asbestos appearance in carbonaceous rocks in the Vangyr River area of the Urals.

Asbestos was discovered in the Lower Cambrian or Proterozoic metamorphous rocks of this North Ural region (approx. 65°20′ N. 58°45′ E.) by G. A. Sadovskiĭ and V. D. Lidina in 1944. Its type was undetermined however, and further investigation was not made till the writer's in 1956. The asbestos is described as occurring in carbonaceous rocks; its mineralic composition is outlined, and chemical, spectral and optical characteristics are presented. This asbestos is believed to be of the anthophyllite-aktinolite type, hitherto considered unsuitable for production; but new advances in science may make its development feasible. ***Copy seen:*** DGS.

KULIK, LEONID ALEKSEEVICH, 1883–1942, *see* ÍAvnel', A. A. Meteoritnoe . . . *1957.* No. 51906.

52554. KULIKOV, ÍŪ. Kapishcha, orientiry. (Vokrug sveta, Sept. 1958, no. 9, p. 31, illus.) Text in Russian. ***Title tr.:*** Cult sites, orientation points.

Describes piles of reindeer antlers 1.5–2 m. high in Yamal Peninsula, on sites of Samoyeds' former religious rites; in the uniform tundra landscape, these piles serve for orientation of travelers.
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52555. KULIKOV, N. N. Grunty ûgo-zapadnoĭ chasti Karskogo morîa, k severo-vostoku ot ostrova Vaĭgacha. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biûlleten', 1958. vyp. 7, p. 35–37.) Text in Russian. ***Title tr.:*** The bottom of the southwestern part of the Kara Sea, northeast of Vaygach Island.

Reviews results of investigations of marine sediments collected by the expeditionary vessel *Ăna* in 1956 (70°43′–72°00′ N. 60°37′–64°32′ E.) using nine type–TNKhL coring tubes. The tubes, of 15–20 m. length on average, were driven 80–180 m. deep into the sediments. The size of sediment particles (measurements given), their composition, color, and marine organisms are outlined. The stratification and mineral composition of the various distinguished sediment fractions are summarized.

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52556. KULIKOVA, E. B. Rost i vozrast glubokovodnykh ryb. (Akademiîa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 20, p. 347–55, illus., tables.) 5 refs. Text in Russian. ***Title tr.:*** Growth and age of deep-sea fishes.

A study of conditions in species of Myctophidae and Macruridae of the Bering and Okhotsk Seas and the Kuril-Kamchatka trench. Age and size limits of the forms examined and relative growth age at various ages are analyzed and growth rate among closely related species compared. Notes on occurrence, horizontal and vertical distribution, etc., are also supplied. The material was collected on the R/V *Vitiaz'* expeditions.

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52557. KULIKOVA, V. N. Sluchaĭ germafroditizma gonady u meduzy *Rathkea octopunctata*. (Akademiîa nauk SSSR. Doklady, June 1, 1957. t. 114, no. 4, p. 899–900, illus.) 9 refs. Text in Russian. ***Title tr.:*** A case of hermaphroditism of the gonad in *Rathkea octopunctata*.

Describes a case of ovicells found in the male gonad of this medusa obtained in the summer of 1954 on the Murman Biological Station: three specimens among 92 were found with hermaphroditic gonads. Similar cases of hermaphroditism among medusae and other marine animals are cited. ***Copy seen:*** DLC.

52558. KULKA, JOHANNES PETER, 1921– , *and* G. J. DAMMIN. Pathogenesis of experimental frostbite. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 443.)

A study of rabbit feet exposed to −25° C. under conditions otherwise resembling those causing human frostbite. The cold injury was studied by vascular injection, bacteriologically, hemato- and histologically, etc. Four stages in the development of cold injury are recognized and described. ***Copy seen:*** DLC.

52559. KULKA, JOHANNES PETER, 1921– , *and others.* Physiopathology of cold injury; cutaneous circulation in the feet of rabbits following prolonged exposure to sub-freezing air. Fort Knox, Ky., Feb. 1958. 2, 19 p. illus. (U.S. Army. Medical Research Laboratory. Report no. 326.) 11 refs. *Other authors:* T. B. Roos, G. J. Dammin *and* J. B. Blair.

Account of experiments with rabbits having their depilated hind feet exposed in a varying degree to −25° C. Alterations in blood flow were determined in two different ways. Circulatory impairment in the skin after thawing were found to consist in arteriospasm, limitation of capillary circulation to focal regions, abnormal shunting of blood from arteries to veins, secondary capillary stasis, and thrombosis. ***Copy seen:*** DNLM.

52560. KULLBERG, GÖSTA. Försök med snöplogar. (Svenska vägföreningen. Tidskrift, 1950. årg. 37, häfte 2, p. 64–69, illus., table, graphs.) Text in Swedish. ***Title tr.:*** Experiments with snow plows.

Describes experiments carried out at the Swedish Government's Road Institute to find the most suitable form for snow plows. Three methods are applied: mathematical calculations of the most suitable form; laboratory tests with model scale plows; and experiments with full-sized plows in Östersund. The Institute's snow plows are compared with the standard Swedish product (table). Differences in performance, etc., were demonstrated in experiments. The best of the experimental models throws the snow 30% farther than the comparable standard models. These results are derived from laboratory tests, no field-test results are indicated.

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52561. KULLING, OSKAR, 1898– . Om begreppen vojtjakonglomerat, rokonglomerat och mesketlava i Västerbottensfjällen. (Geologiska föreningen i Stockholm. Förhandlingar, Mar.–Apr.

1958. bd. 80, häfte 2, no. 493, p. 226–34.) 19 refs. Text in Swedish. Summary in English. ***Title tr.:*** On the conception of Vojtja conglomerate, Ro conglomerate, and Mesket lava in the Caledonian mountain range of Västerbotten county.

The terms Vojtja conglomerate and Mesket agglomerate have become widely used in descriptions of northern Swedish mountain geology since 1922. Vojtja conglomerate has become a common term describing quartzite conglomerate. Mesket agglomerate, or the Mesket series, includes volcanic rocks with sedimentary intercalations. It is now recognized that rocks included in each group differ in age. In the type locality, the Mesket is now recognized to be probably lower Ordovician and should retain the original name. The name Seima series is proposed for similar rocks lower to middle Ordovician in age. The Vojtja conglomerates are proposed to be separated into three groups: the Gimja of about middle Silurian age; the Vojtja at the Ordovician-Silurian boundary; and Rotik for serpentine conglomerates of lower Ordovician age. The term Ro conglomerate had been introduced earlier for serpentine and quartzite conglomerates of the same age. Outcrops of these rocks are common in the Lapland mountain region.

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52562. KULLING, OSKAR, 1898– . Om lavabergarter på havsbotten i Nordpolsområdet och om pimpsten och drivved i höjda strandvallar på kusten av Nordostlandet och angränsande delar av Västspetsbergen. (Geologiska föreningen i Stockholm. Förhandlingar, Jan.–Feb. 1958. bd. 80, häfte 1, p. 108–113, map.) 9 refs. Text in Swedish. Summary in English. ***Title tr.:*** Lava bedrock on the sea bottom in the north polar region and pumice and driftwood on raised shorelines on the coast of Nordaustlandet and adjacent parts of Vestspitsbergen.

Abundant pumice boulders on beaches about five meters above sea level in West Spitsbergen may have originated in the north polar region where volcanic rocks have been discovered on the sea floor. Carbon ^{14} dating of Siberian driftwood associated with the pumice on beaches may be used for dating the volcanic activity. The driftwood has been identified as *Larix sibirica, Picia obovata, Abies sibirica, Pinus cembra, P. silvestris, Populus tremula,* and *Salix vitellina.*

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KULLING, OSKAR, 1898– , *see also* Gavelin, S., *and* O. Kulling. Beskrivning till berggrundskarta . . . *1955.* No. 51100.

52563. KULP, JOHN LAURENCE, *and others.* Isotopic studies on the Greenland continental glacier. Palisades, N.Y., Oct. 31, 1957. 48 p. tables, diagrs. (Columbia University. Lamont Geological Observatory, Contract AF 19 (604) 1891, final report.) 13 refs. *Other authors:* B. J. Giletti, *and* G. P. Erickson.

Results of reconnaissance study of limited number of snow and ice samples, collected in summer 1956 at SIPRE Site 2 (Fist Clench) about 220 mi. east of Thule, and from a traverse across the icecap; glacial meltwater samples were analyzed at Thule, Sondrestrom and Narsarssuak Air Force Bases. Sr^{90}, absent prior to 1950, had nearly doubled each year since 1952. Total integrated Sr^{90} fallout at Site 2 was estimated at one millicurie per sq. mi., compared with 20 mc./mi^2 in eastern United States. Enrichments of O^{18} and deuterium were found to be parallel in snow and ice samples from the center of the icecap; tritium concentration exhibited considerable range, vertical profiles (ice) showed a decrease in T:H, while surface (snow) T:H in 1956 was about five times that for 1955; meltwaters had considerably less tritium than snow in 1956.

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52564. KUMARI, È. V. K teorii proletnykh puteĭ i migratsiĭ shirokim frontom. (*In:* Pribaltiĭskaia ornitologicheskaia konferentsiia, 1954. Trudy, *pub.* 1957. p. 4–12, maps.) 26 refs. Text in Russian. ***Title tr.:*** Theory of flight routes and migrations on a broad front.

Contains an historical outline of ideas on avian flight routes versus migrations on a broad front as applied to northern Europe. The concepts of "route" and "front" are discussed on basis of the observations at hand, and it is pointed out that as far as this area is concerned migration proceeds largely on a front. Movements from and to arctic areas are included. ***Copy seen:*** DLC.

52565. KUNDT, H. W., *and others.* Hypothalamustemperatur und Hautdurchblutung der nichtnarkotisierten Katze. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd 264, Heft 2, p. 97–106, illus.) 16 refs. Text in German.

Other authors: K. Brück *and* H. Hensel. ***Title tr.:*** Hypothalamus temperature and cutaneous circulation in the non-narcotized cat.

Account of continuous records of skin (ear) circulation and temperatures of the hypothalamus and rectum. Cooling of the extremities first caused vasoconstriction and then a rise of up to 0.4° C. in the hypothalamus. Rectal temperature followed hypothalamic temperature but with a considerable time lag.

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52566. KUNDT, H. W., *and others.* Hypothalamustemperatur und Hautdurchblutung der nichtnarkotisierten Katze. (Pflügers Archiv für die gesamte Physiologie, Dec. 1957. Bd. 266, Heft 1, p. 49–50.) Text in German. *Other authors:* K. Brück *and* H. Hensel. ***Title tr.:*** Hypothalamus temperature and skin circulation in the not narcotized cat.

Changes in cutaneous circulation preceded temperature changes of the hypothalamus, indicating that the former are effected by local thermal stimuli. Cooling of the hypothalamus evoked cutaneous vasoconstriction, shivering and cuddling.

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KUNLIN, JEAN, *see* Leriche, R., *and* J. Kunlin. Physiologie pathologique des gelures . . . *1940.* No. 52770.

52567. KUPEROV, L. P. O metodike kratkosrochnogo radioprognozirovaniîa. (Problemy Arktiki, sbornik statei, 1957. vyp 2, p. 141–47, tables, graphs.) 3 refs. Text in Russian. ***Title tr.:*** Method of short-term radio prognoses.

This method, used in predicting maximum frequencies of short-wave (6–30 mc/s) communications between Moscow and the polar stations at Tiksi, Dikson, and Amderma, was developed by processing materials on receiving conditions collected at Tikhaya Bay 1932–33 and 1945–47, at Dikson Island 1951–52, and at Tiksi Bay in 1955. Continuous recordings of the frequency, strength, readability, call-sign, etc., were made of all signals intercepted (including 2nd harmonics), whereupon the number of stations heard was arranged in sectors according to the location of the transmitter. Data collected during magnetic storms showed a similar graphic pattern dependent on the position of the sun in relation to the point of observation, on which basis suitable frequencies may be recommended for any specific path (sector). ***Copy seen:*** DLC.

52568. KUPETSKIĬ, V. N. Gidrobiologicheskie osobennosti statsionarnykh polynel. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiîa, July–Aug. 1958. t. 90, vyp. 4, p. 315–23.) 84 refs. Text in Russian. ***Title tr.:*** Hydrobiological features of stationary polynyas.

Reviews stationary polynyas in the arctic and subarctic seas and discusses their hydrological, -chemical and -biological conditions. Plankton, benthos, sea plants, water circulation and other features of polynyas are characterized and the latter's importance to marine flora and fauna is stressed. The life of sea mammals, walruses, seals, belugas is considered in relation to the occurrence of polynyas. Most widely distributed of the pinnipeds is the ringed seal (nerpa), which inhabits the White, Barents, Kara, Laptev, East Siberian, and Bering Seas, Baffin Bay, and other waters. The importance of polynyas to arctic hunters, and to the development of phyto- and zoobenthos is noted. Polynyas may be considered physical geographic features of the sea, with individual as well as common characteristics, and should be studied as such. ***Copy seen:*** DLC.

52569. KUPETSKIĬ, V. N. Sushchestvovala li Zemlîa Sannikova? (Leningrad. Universitet. Vestnik, 1958. god 13, no. 18, ser. geologii i geografii, vyp. 3, p. 152–58.) 25 refs. Text in Russian. Summary in English. ***Title tr.:*** Did Sannikov Land exist?

For 150 years, since the Russian hunter Sannikov sighted unknown land north from Kotel'nyy Island, explorers have tried to find it and scientists have tried to explain why it has been seen by many but reached by none. From analysis of the evidence, author concludes that fog and mirage over a stationary lead or polynya have been mistaken for land. Several other hypothetical lands in the Arctic and Antarctic are mentioned.

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KUPFER, CHRISTA, *see* König, W., *and* C. Kupfer. Ethnographische Bibliographie . . . *1955.* No. 52354.

52570. KUPREVICH, VASILIĬ FEOFILOVICH, 1897– , *and* V. G. TRANSHEL'. Rzhavchinnye griby, vyp. 1, sem. Melampsorovye. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1957.

419 p. 160 illus., 21 ports., fold. map. (*In:* Savich, V. P., *ed.* Flora sporovykh rasteniĭ, v. 4:1) Approx. 1200 refs. Text in Russian. ***Title tr.:*** Rust fungi, fasc. 1, fam. Melampsoraceae.

Contains in the general part (p. 9–166) an outline of the study of rust fungi, the morphology, systematics and biology of Uredinales, and their geographic distribution. Statistical data are given on rust fungi in the U.S.S.R., United States and Canada, and their economic importance as parasites of cultivated plants. The systematic part (p. 167–396) contains tables for the determination of the families, subfamilies, genera and species, followed by a systematic annotated list of 180 species, with synonyms, descriptions and data on biology, host plants and geographic distribution. Indices of these fungi and host plants are added (Latin names). Many species native to northern regions of the U.S.S.R. are included.

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52571. KUPRIIANOVA, L. A. Analiz pyl'tsy rastitel'nykh ostatkov iz zheludka berezovskogo mamonta; k voprosu o kharaktere rastitel'nosti épokhi berezovskogo mamonta. (Akademiia nauk SSSR. Botanicheskiĭ institut. Sbornik pam. A. N. Krishtofovicha, 1957. p. 331–58, illus., tables, maps.) 14 refs. Text in Russian. ***Title tr.:*** Pollen analysis of plant remnants from the stomach of the Berezovka mammoth; contribution to the problem of the character of vegetation during the epoch of the Berezovka mammoth.

Account of analysis of some 8,000 pollen cells, over 97% of them from cereals, the remainder from grasses, trees and mosses, in that order of frequency. The microscopic appearance of the pollen grains is described and reproduced and the present distribution of the plants themselves, outlined.

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52572. KUPRINA, N. P. Novye dannye ob oledenenii Zapadnogo Verkhoian'ia. (Akademiia nauk SSSR. Doklady, Aug. 21, 1958. god 26, t. 121, no. 6, p. 1071–74, cross-section.) 5 refs. Text in Russian. ***Title tr.:*** New data on glaciation in the region west of Verkhoyansk.

Presents the results of author's 1957 investigation of cross-sections of the glacial deposits in the Tumara River valley, 60 km. above its discharge into the Aldan (approx. 63°45′ N. 130° E.). Differences in moraine material, described in detail, indicate two glaciations: one smaller, possibly in the Pliocene, and other, larger, in the upper Pleistocene. Various scientists' views on the extent and development of these glaciations are discussed; that of V. S. Varlamov and I. P. Vyshemirskiĭ (one glaciation) is refuted, and support given others, who also have indicated two glaciations here.

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KUPRINA, N. P., *see also* Chebotareva, N. S., *and others.* Geomorfologiia . . . *1957.* No. 50192.

KUPRINA, N. P., *see also* Chebotareva, N. S., *and* N. P. Kuprina. K istorii doliny Leny. *1958.* No. 50193.

KUPTSOV, M. G., *see* Udel'nova, I. M., *and* M. G. Kuptsov. Mikroskopicheskoe izuchenie . . . *1958.* No. 55573.

52573. KURATA, T. B. Two new species of Ontario spiders. Toronto, Univ. of Toronto Press, 1944. 6 p., 2 illus. (Toronto. Royal Ontario Museum of Zoology. Occasional papers, no. 8.)

Contains descriptions of *Ozyptila gertschi,* n. sp. a thomisid spider, collected at Fort Albany on James Bay in June 1942, and *Pirata bryantae* n. sp., a female wolf spider obtained at Favourable Lake (53° N. 94° W.) in June 1938.

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KURDINA, E. I., *see* Fel'dshteĭn, IA. I. *and* E. I. Kurdina. Magnitnye variatsii . . . *1958.* No. 50869.

52574. KURENKOV, I. I. Vozdeĭstvie vulkanizma na rechnuiu faunu. (Priroda, Dec. 1957, no. 12, p. 49–54, 4 illus.) 2 refs. Text in Russian. ***Title tr.:*** The influence of volcanism on river fauna.

Contains account of observations on the effects of the 1955 eruption of Bezymyannaya Sopka on the fauna of Kamchatka River and its tributaries. Complete absence of molluscs and a pronounced reduction in numbers of chironomid larvae and oligochaetes are noted; but a diatom, *Melosira crenulata,* is apparently thriving. As the result of hydrochemical changes, salmon fry was completely destroyed; and many whitefish and other species were found dead. Benthos, plankton, and fish fauna were all adversely affected. Even chemical characteristics of hot and cold springs of the region underwent some changes. Data from hatcheries of Kamchatka

show that the production of fish spawn is unfavorably influenced by earthquakes and volcanic eruptions.

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52575. KURILOV, S. Severnai͡a zoobaza. (Okhota i okhotnich'e khozi͡ai͡stvo, July 1957, no. 7, p. 23.) Text in Russian. ***Title tr.:*** A northern zoological base.

Notes activities of the base in Arkhangel'sk, which supplies zoological gardens in the U.S.S.R. with specimens of arctic animals and birds; a catch of six polar bears by hunters of Novaya Zemlya is reported. ***Copy seen:*** DLC.

52576. KURILOV, S. V. Akklimatizat͡sii͡a osetrovykh v reke Pechore. (Rybnoe khozi͡ai͡stvo, Mar. 1958. god 34, no. 3, p. 16–17.) Text in Russian. ***Title tr.:*** Acclimatization of sturgeons in the Pechora River.

Report on transplantation of sterlets from the Severnaya Dvina into the Pechora River begun in 1949, and of sturgeons from the Ob, begun in 1956. The experiments are claimed to have proven successful. ***Copy seen:*** DLC.

52577. KURILOV, S. V. Organizatsii͡a i tekhnika promysla sterli͡adi na Severnoĭ Dvine. (Rybnoe khozi͡ai͡stvo, Sept. 1957. god 33, no. 9, p. 25–26.) Text in Russian. ***Title tr.:*** Organization and technique of sterlet fisheries on the Severnaya Dvina.

Information is presented on the fishing season, and methods; recent developments in local fishing gear; evaluation of the fishing methods.

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52578. KURILOVA, L. M., *and* **S. L. BLI͡AKHER.** O svoĭstvakh kholodovykh retseptornykh tochek. (Bi͡ulleten' ėksperimental'noĭ biologii i medit͡siny, Apr. 1958. god 23, no. 4, p. 13–17, illus.) 14 refs. Text in Russian. Summary in English. ***Title tr.:*** Properties of cold receptors.

Outline of investigations with temperature stimuli of equal intensity but different area. The number of receptors was found to increase with the area; and they differ from each other in their long-term functioning. It was also noted that a "cold receptor point" may contain a single receptor element or a group of them. ***Copy seen:*** DLC.

52579. KUROIWA DAISUKE, *and* **K. YAMAJI.** Study of elastic and viscous properties of snow by the vibration method, 2. (Teion kagaku, 1956. ser. A, v. 15, p. 43–58, illus., tables.) 2 refs. Text in Japanese. Summary in English.

A rectangular bar of new snow was subjected to lateral vibrations by the resonance method and its modulus of elasticity and vibration losses were calculated. The modulus of elasticity increased with decreasing temperature from 0° to −35° C., while vibration losses decreased. No definite relation was found between vibration losses and snow density, probably due to the complicated structure of snow, indicating that the dissipation of vibrational energy is very sensitive to snow structure—From SIPRE. ***Copy seen:*** DWB.

KUROIWA, DAISUKE, *see also* Yamaji, K., *and* D. Kuroiwa. Visco-elastic property of ice . . . *1956.* No. 56134.

52580. KURTÉN, BJÖRN. Sex dimorphism and size trends in the cave bear, *Ursus spelaeus* Rosenmüller and Heinroth. Helsingforsiae, 1955. 48 p. 10 illus., 8 tables. (Acta zoologica fennica, no. 90.) 39 refs.

Contains a study of fossil and recent populations of bears (*Ursus spelaeus, U. arctos* and *U. maritimus*) with quantitative data on sex dimorphism. The dimorphism is especially strong in the size of the canines, less pronounced in skull dimensions, and still less in the cheek teeth. Evolution in size of the bears was extremely rapid in the Quaternary. Simple adaptation by phyletic growth to cold climate was not the sole factor involved. The rapid rate was probably made possible by means of gene transport from neighboring populations. The study is partly based on a collection of recent *Ursus maritimus* from Greenland. ***Copy seen:*** DLC.

KURYKOVA, M. F., *see* Akademii͡a nauk SSSR. Mezhduvedomstvennyĭ komitet. Mezhdunarodnyĭ geofizicheskiĭ god. Informat͡sionnyĭ bi͡ulleten' . . . *1957.* No. 49182.

52581. KUSHNER (KNYSHEV), P. I. Novai͡a uchebnai͡a ėtnograficheskai͡a karta SSSR. (Sovet͡skai͡a ėtnografii͡a, 1951, no. 1, p. 181–82.) Text in Russian. ***Title tr.:*** A new ethnographic school map of the U.S.S.R.

Reports the completion of a map of the peoples of the U.S.S.R. (karta narodov SSSR) in scale 1:5,000,000 for use in secondary schools. Prepared by a team

of cartographers headed by P. E. Terlefskiĭ, it shows the territorial distribution of 82 nationalities and ethnic groups. Areas of a single ethnic group and a mixed population are differentiated; those of low population density are distinguished: in those of the hunting and reindeer herding peoples of the Far North, only places of annual migration and hunt are hachured. The map is based on the 1926 census, but with corrections, as to recent migrations and changes in ethnic composition, based on investigations to 1950.

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52582. KUSHNEREVSKIĬ, IŪ. V. V verkhnikh sloiakh atmosfery. (Nauka i zhizn', Mar. 1957. god 24, no. 3, p. 11–13, illus., map.) Text in Russian. ***Title tr.:*** In the upper layers of the atmosphere.

Outlines the plans for ionospheric investigations during the IGY: Soviet stations (map) include Murmansk, Dikson, Tikhaya, Tiksi, Provideniya, Yakutsk, Petropavlovsk-na-Kamchatke, also two in the Arctic Basin (drifting stations North Pole 6–7?).

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52583. KUSUNOKI, KOU. A hand-operated ice corer. (Teion kagaku, 1956. ser A, v. 15, p. 197–99, illus.) 4 refs. Text in Japanese.

Description of corer consisting of an Al-alloy core bit with helical threads on the outside surface, an adapter rod 70 cm. long and a brace. Average boring speed is about 1 cm./sec. in flat sea-ice 20 cm. thick at air temperatures of 0° to 15° C. Speed is slower in lake or pond ice.

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52584. KUSUNOKI, KOU. The present situation of sea ice observation in Japan. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 39–47.) 20 refs.

Japanese studies on sea ice since 1892 (cf. No. 40892, 45000–45003, 46177) are reviewed, and present observation and reporting methods are described. Standard observations are made daily Dec.-April, at about 30 shore stations and lighthouses, and are complemented since 1957 by aerial surveys. The phenomena observed include: the development and decay of the ice, bearing and distance to ice and water features, total ice concentration, concentration by ice types, types of ice, ice thickness and surface relief, and ice drift. The terminology of the International Ice Nomenclature is used. Data are sent to Otaru, whence forecasts are issued a few days in advance. The code for shore stations of the Hakodate Marine Observatory is included.—From SIPRE. ***Copy seen:*** DN–HO.

KUTAS, FERENC, *see* Kemény, A., *and others.* A vér anorganikus phosphor . . . *1957.* No. 52232.

52585. KUTEĬNIKOV, E. S. Tektonika mezhdurech'ia Oleneka, Markhi, Muny i Linde. (Akademiia nauk SSSR. Doklady, Sept. 11, 1958. god 26, t. 122, no. 3, p. 453–56, map.) 6 refs. Text in Russian. ***Title tr.:*** Tectonics of the Olenek, Markha, Muna and Lindya interfluves.

Reviews (for 1954–1957) geologic mapping at scale 1:200,000, the material collected by the Vilyuy and Amakin expedition, and air photo interpretation in the area (65°20′–68°40′ N. 113°–122° E.). In the various horizons of Cambrian formation six tectonic structures are distinguished and briefly characterized. ***Copy seen:*** DLC.

52586. KUTUZOV, NIKOLAĬ IVANOVICH. Zapiski izyskatelia. Moskva, Izd-vo "Molodaia gvardiia," 1957. 270 p. illus., plates, map. Text in Russian. ***Title tr.:*** Memoirs of a surveyor.

In 1933–37, the author headed the survey party for a highway from Magadan to the upper Kolyma and Indigirka Rivers. Between Strelka and the Nera River, the road was to run through virgin mountain taiga, almost uninhabited and virtually unmapped. The party's topographic reconnaissance, general determination of the route, locating of the road and making blue prints for the construction party are recounted. The primitive, though improving, working and living conditions are described: difficulties of transportation and supply, hardships of the wintering, coping with engineering problems posed by a rugged terrain, crossed by deep ravines, with steep slopes, the struggle with marshes, land slides, permafrost and naleds, etc. The local inhabitants (Yakuts) and hunting and fishing adventures are noted. A considerable supply of alcohol and its salutary effect in fatigue and sickness are noted. Schematic map of the area (p. 6) shows the party's route.

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KUVAEV, V. B., *see* Egorov, A. D., *and* V. B. Kuvaev. O dvukh . . . kormovykh rasteniiakh . . . *1958*. No. 50706.

52587. KUZ'MENKO, M. V. K voprosu o klassifikatsii i genezise shchelochnykh pegmatitov. (Akademiia nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh ėlementov. Trudy, 1957, vyp. 1, p. 138–54, illus. tables, diagr.) 4 refs. Text in Russian. ***Title tr.:*** On the question of classification and genesis of alkali pegmatites.

Classification of pegmatites in the Lovozero alkali massif of Kola Peninsula has been dealt with by several scientists, but insufficient attention has been given to the internal structure of pegmatite bodies and their paragenetic association of minerals. Classifications are compared; associations of pegmatite minerals are outlined, and divided in four types and fifteen subtypes. Stages of pegmatite genesis are discussed.

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52588. KUZ'MIN, P. I. Snegozashchitnye ustroĭstva aktivnogo deĭstviia. (Gornyĭ zhurnal, Jan. 1958, no. 1, p. 69–71, illus., graphs.) Text in Russian. ***Title tr.:*** Active snow control measures.

Methods employed at the Noril'sk Industrial Combine (located in a mountain area) are described; various snow fences are illustrated; and air-flow diagrams are presented. The principle of the active method, which is most effective at wind speeds not exceeding 8 m./sec. is to accelerate air flow at the bottom of the fence so that it will carry the snow across the area to be protected. Built without angle brackets and provided with deflectors at the top (on the windward side), such fences may be installed at angles as low as 20° to the wind. Portable snow shields are installed 50–70 m. in front of the fences and at a slight angle thereto to increase effectiveness during weak winds. Higher fences are used with a ground clearance of up to 3 m. on slopes of more than 45°. The vertical inclination can be varied from 0° to 45°. The fences are installed three m. from the center of railways and on the outer fringe of roads or at the foot of embankments. During storms, snow is transported 6–8 m. and deposited beyond the roads.—From SIPRE.

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52589. KUZ'MIN, P. P. Hydrophysical investigations of land waters. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Toronto, 1957. Report 1957, v. 3, *pub.* 1958. p. 468–77.)

Brief survey of developments in the U.S.S.R. on evaporation, ice formation and snow melting as a result of the heat exchange process. Determination of evaporation from a water surface by the formula

$$E = 0.15\ n(1+0.72\ W_2)(e_0-e_2)$$

is discussed, also from soils and forest land by similar formulas; the heat balance method of determining evaporation, and more simple and practicable methods, based on meteorological records, are presented. Investigations of certain problems of ice formation, founded on the theories of V. Altberg and V. Makkaveev are considered; problems of snow melting and their study are discussed, and formulas used are given.

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52590. KUZ'MINA, A. I. Fitoplankton vod, omyvaiushchikh ostrova Kuril'skoĭ griady i ego znachenie v poznanii vodoobmena mezhdu Okhotskim morem i Tikhim okeanom. (Vsesoiuznoe gidrobiologicheskoe obshchestvo. Trudy, 1957. t. 8, p. 130–42, illus., table, maps.) 10 refs. Text in Russian. ***Title tr.:*** Phytoplankton of the Kuril banks waters and its value in the study of water exchange between the Okhotsk Sea and the Pacific.

A study of composition and distribution of this plankton, commencing with the waters off southern Kamchatka and proceeding to the Japanese islands. In the two northernmost areas investigated, arctic and arctic-boreal species made up 28–31% of the forms, in the area as a whole 15%. The number of arctic species declined towards, and finally reached a zero point in the south.

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52591. KUZNETSOV, I. M. O vychislenii skorosti vetra po gradientu atmosfernogo davleniia dlia polĭarnykh stantsiĭ o. Chetyrekhstolbovoĭ i mys Vankarem. (Problemy Arktiki, sbornik stateĭ, 1958, vyp. 4, p. 93–95, diagrs.) 2 refs. Text in Russian. ***Title tr.:*** Calculation of wind velocity from the gradient of atmospheric pressure for the Chetyrekhstolbovoy Island and Cape Vankarem polar stations.

In 1941, D. B. Karelin computed an empirical formula expressing relation of wind velocity (V) to the gradient of atmos-

pheric pressure (Δp in mb./km.) for Kara Sea: $V=315\Delta p$. Other formulas were found for Uyedineniya Island, Laptevykh, East Siberian ($V=550\Delta p-3.3$) and Chukchi ($V=680\Delta p-6.6$) Seas. The formulas are compared and discussed.

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52592. KUZNETSOV, V. A. K itogam operatsii na zheludke v usloviiakh zapoliar'ia. (Khirurgiia, Jan. 1958. god 34, no. 1, p. 114–17, tables.) Text in Russian. Summary in English. ***Title tr.:*** Results of stomach operations under arctic conditions.

Report on a follow-up of 780 patients for periods up to 13 years, from the Noril'sk city hospital. The great majority of cases (563) were peptic and duodenal ulcers and showed a postoperative mortality of 3.5%. Cancer (103 cases) showed 16.5% postoperative mortality. The methods applied are discussed.

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52593. KUZNETSOV, V. V. Mnogoletnie izmeneniia biologicheskikh svoistv nekotorykh bespozvonochnykh Belogo moria. (Zoologicheskii zhurnal, Mar. 1957. t. 36, vyp. 3, p. 321–27.) 11 refs. Text in Russian. Summary in English. ***Title tr.:*** Long-term changes in biological properties of some White Sea invertebrates.

A study of invertebrates with long life cycles (mainly bivalves and cirripedians) led the author to the conclusion that within the past hundred years or so, there occurred in the White Sea a decline in their range, growth and longevity and the degeneration or disappearance of some species. These changes he attributes to the mouth of this sea becoming shallow, which caused an increase of temperature and salinity ranges, and to an increase of O_2-deficiency due to accumulation of organic sediments. He suggests that these changes may have similarly affected some fish and fisheries.

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52594. KUZNETSOV, V. V. O nekotorykh osobennostiakh biologicheskoi produktivnosti bespozvonochnykh s dlitel'nym zhiznennym tsiklom v severnykh moriakh. (Zhurnal obshchei biologii, Nov.–Dec. 1958. t. 19, no. 6, p. 467–71.) 7 refs. Text in Russian. ***Title tr.:*** Some peculiarities of biological productivity among invertebrates of northern seas with a long life cycle.

Contains discussion of life span among various groups of invertebrates of the Barents and White Seas; length of life of the same species at various latitudes and environments. Biomass and productivity are considered; the productivity of the sea (or its parts) cannot be expressed by its biomass alone.

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52595. KUZNETSOV, V. V. Vliianie kolebanii faktorov vneshnei sredy na nekotorye biologicheskie protsessy u morskikh bespozvonochnykh. (Zhurnal obshchei biologii, Nov.–Dec. 1953. t. 14, no. 6, p. 413–23, illus. table.) 5 refs. Text in Russian. ***Title tr.:*** Effect of fluctuation in ambient factors upon some biological processes of marine invertebrates.

A study of the barnacle *Balanus balanoides* of the east Murman waters. Summers with small temperature amplitude produced earlier maturation, greater fertility and larger animals. Similar conditions were observed in the hermit crab *Pagurus pubescens* and in a number of molluscs.

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KUZNETSOV, V. V., *see also* Akademiia nauk SSSR. Zashchita dissertatsii . . . *1957*. No. 49162.

KUZNETSOVA, L., *see* Evgen'ev, I., *and* L. Kuznetsova. Podvig uchenogo. *1957*. No. 50810.

52596. KUZNETSOVA, L. N., *and others.* Vliianie okhlazhdeniia organizma na obmen piridinovykh i tiaminovykh soedinenii. (Akademiia nauk URSR, *Kiev.* Instytut biokhimii. Vitaminy, 1956. t. 2, p. 86–97, illus. tables.) 26 refs. Text in Russian. *Other authors:* E. V. Lakhno, V. A. Ostroukhova, A. A. Rybina and R. V. Chagovets. ***Title tr.:*** The effect of cooling the organism upon the metabolism of pyridine and thiamine compounds.

Account of experiments with rabbits submitted to local and general cooling. Blood, brain muscle and skin, heart, lung, liver, kidney and spleen were examined. The most significant changes were noted in ascorbic acid and thiamine.

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52597. KUZNETSOVA, M. Vsemerno uluchshat' prepodavanie rodnogo i russkogo iazykov v natsional'nykh shkolakh. (Narodnoe obrazovanie, 1956, no. 1, p. 14–20.) Text in Russian. ***Title tr.:*** Improve to the utmost the teaching of

the native and Russian languages in nationalities' schools.

Includes a sharp criticism of the low scholastic achievements, level of instruction, teachers' training, etc. in schools for minority peoples of the far North in the Evenki, Chukchi and Koryak national districts, Magadan Oblast' and Yakut A.S.S.R. Based on data disclosed during a recent pedagogical conference at Khabarovsk. ***Copy seen:*** DLC.

52598. KUZNETSOVA, V. G. Materialy po prazdnikam i obriadam amguèmskikh olennykh chukcheĭ. (Akademiia nauk SSSR. Institut ètnografii. Trudy, 1957. nov. ser., t. 35, Sibirskiĭ ètnograficheskiĭ sbornik, pt. 2, p. 263–326, illus.) 5 refs. Text in Russian ***Title tr.:*** Feasts and rites of the reindeer-herding Chukchis from the Amguema River.

The study, based on the author's investigations of 1948–1951 during the expedition of the Institute of Ethnography headed by G. F. Debets (cf. No. 21378), describes the old festivals of a small group of nomad reindeer herders living in the most remote tundra region (approx. 67° N. 179° W.) in the Amguema River basin. The festivals connected predominantly with reindeer herding and the associated rituals: reindeer slaughtering (originally sacrifices), preparation of special foods, reindeer and foot races, wrestling matches, etc., are described and their local names explained. A detailed account is given (p. 300–308) of one of the oldest festivals, the reindeer-horn worship, celebrated by Chukchis and Eskimos. ***Copy seen:*** DLC.

KUZNETSOVA, V. G., *see also* Levin, M. G. Polevye issledovaniia . . . *1949.* No. 52792.

KUZNETSOVA, V. G., *see also* Levin, M. G. Polevye issledovaniia . . . *1950.* No. 52793.

52599. KVARBY, NILS, *and others.* Skogliga arronderingsfrågor. (Skogen, *Stockholm,* Mar. 15, 1957. årg. 44, nr. 6, p. 169, +, illus.) Text in Swedish. ***Title tr.:*** Problems in regulating forest lots. *Other authors:* P. Porenius, N. Hultmark, and G. Östlund.

Lot regulation is essential for the advance of forestry in Västernorrland, despite owners' reluctance. Regulation is aimed: to replace long narrow lots with those of a shape suited to modern methods; to eliminate wood-geld and pasture servitude, now obsolete; and to add wood lots to poor farms. In the process of exchange and adjustment, roads are a factor to be considered, also quality class of the lots involved, and present owners' attitude.

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52600. KVARNING, LARS-ÅKE. Stänga ute och inne; hägnadstyper i Porsi-trakten. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1957, p. 68–80, illus.) Text in Swedish. ***Title tr.:*** Shutting out and shutting in; fence types in the Porsi area.

Describes in detail various types of fencing in northern Sweden along the road between Porsiforsen and Messaure, a distance of approx. 30 km., the road crossing the Arctic Circle (at approx. 20°30′ E.). This inventory was made prior to removal of fences for widening the road. ***Copy seen:*** SPRI.

52601. KVARTSOVA, L. I. Differentsirovannaia intruziia trappov v basseĭne reki Dzhaltul v Prieniseĭskom raĭone. (Leningrad. Nauchno issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958, vyp. 9, p. 53–55.) 5 refs. Text in Russian. ***Title tr.:*** A differentiated intrusion of trap in the Dzhaltul River basin west of the Yenisey.

Reports petrographic characteristics of material found in 1957 in a trap intrusion in the Dzhaltul basin (67°14′ N. 87°41′ E.). Picrite gabbro norite-dolerites, olivine gabbro-norite-dolerites, olivine-gabbro-dolerites, gabbro-dolerites, and dolerites are briefly described. Structure and the differentiation of materials distinguish this intrusion from others of the region, therefore study of it may serve to determine trap magnetism of this region. ***Copy seen:*** DGS.

52602. KYANK, H. Die Körpertemperatur Neugeborener bei normaler und pathologischer Schwangerschaft. (Archiv für Gynäkologie, 1957. Bd. 189, p. 213–17, illus.) 6 refs. Text in German. ***Title tr.:*** Body temperature of newborn following normal and pathological pregnancy.

Author found, in conformity with earlier investigations, that the body temperature of the fetus (4 cases) is higher than that of the mother. Rectal temperature in 171 infants 45 seconds after birth was also higher than that of the mothers in normal and toxicosis conditions. With febrile mothers, body

temperature of the newborn baby was also increased. ***Copy seen:*** DNLM.

52603. KYLE, ROBERT HENRY, 1920– , *and* C. K. KIRBY. The use of potassium chloride for defibrillation of the ventricles of the hypothermic dog. (Archives of surgery, Jan. 1957. v. 74, no. 1, p. 136–38, tables.) 15 refs.

Report on investigation aimed to compare the effectiveness of potassium chloride and electric shock in defibrillating the heart of hypothermic dogs. Both were successful in stopping fibrillation; KCl more so in its initial stages, shock in later stages. ***Copy seen:*** DNLM.

52604. KYTE, ROBERT M. Bulk handling of Alaska herring meal. (Commercial fisheries review. U.S. Fish and Wildlife Service, May 1957. v. 19, no. 5, p. 9–14, illus.)

Report on early investigation of this problem, by plant observations and tests as well as laboratory experiments. It was found that herring meal can be stored in bulk without the risk of spontaneous heating, by allowing it an initial heating under controlled conditions, prior to bulk storage. ***Copy seen:*** DI.

52605. KYTE, ROBERT M. Potential byproducts from Alaska fisheries; utilization of salmon eggs and salmon waste. (Commercial fisheries review, U.S. Fish and Wildlife Service, Mar. 1958. v. 20, no. 3, p. 1–5, illus., tables.) 20 refs.

About 60 million pounds of offal is discarded annually and largely wasted due to presumed lack of economic soundness in utilizing it. Oil and protein content of salmon eggs is analyzed and discussed. Preparation of an oil-and-protein slurry by not elaborate means is suggested as way of utilizing the roe.
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52606. LAAGE - HELLMAN, BROR. Synpunkter på Norrlandsskogbrukets biltransporter. (Svenska skogsvårdsföreningen. Tidskrift, 1950. årg. 48, nr. 2, p. 167–87, illus., tables.) Text in Swedish. *Also pub.* with summary in English, *as* Föreningen skogsarbetens och Kungl. domänstyrelsens arbetsstudieavdeling. Meddelande nr. 42, 1950. ***Title tr.:*** Viewpoints on the use of motor vehicles in Norrland forestry.

Discusses construction and maintenance of various types of roads; organization of transport operations; advantages of owning or hiring trucks. Costs of transportation by horse, truck, tractor, railroad, and floating are compared.
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52607. LABORIT, H. Sur la physiopathologie et le traitement des gelures. (Presse médicale, Sept. 1952. t. 60. no. 60, p. 1256–58.) 28 refs. Text in French. ***Title tr.:*** Physio-pathology and treatment of frostbite.

Author describes and analyzes vasomotor changes due to cold, which he, with others, holds to be the main cause of injuries due to low-temperature exposure. Biological and bio-chemical responses in tissues and blood are also considered. Rewarming as first aid and therapy centered on rehabilitation of the vasomotor system are indicated.
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52608. LACAUX, J. M. F., *and* VERGER. Les gelures en pratique courante; leur prophylaxie, leur traitement. (Revue du Corps de Santé militaire, June 1952. t. 8, no. 2, p. 262–74.) Ref. Text in French. ***Title tr.:*** Frostbite in current practice; its prophylaxis and treatment.

Includes, in concise form, information on causes (cold and humidity, racial and individual factors, food, hygiene, etc.); clinical course; physiological and therapeutic aspects of French and American schools; treatment: vasodilators, therapy of secondary effects upon the tissue, therapy with heparin, general treatment; practical conclusions.
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LaCHAPELLE, EDWARD R., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

LaCHAPELLE, EDWARD R., *see* American Geographical Society. Geographic study of mountain glaciation. *1958*. No. 49276.

LaCHAPELLE, EDWARD R., *see* Thiel, E., *and others*. The thickness of Lemon Creek Glacier . . . *1957*. No. 55399.

52609. LACHENBRUCH, ARTHUR HEROLD, 1925– . Dissipation of the temperature effect of drilling a well in arctic Alaska. Washington, D.C., 1958. 62 p. 7 diagrs., 8 tables. (U.S. Geological Survey. Reports, open file series, no. 459.) 10 refs. Abstract of this report was listed as No. 40907.
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52610. LACHENBRUCH, ARTHUR HEROLD, 1925– . Periodic heat flow in a stratified medium with application to permafrost problems. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, p. 1907.)

Abstracts paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957. Describes applicability of the Fourier heat equation for quasi-steady periodic flow in a stratified semi-infinite medium to: studies of periodic variations in temperature at the ground surface; determining the minimum thickness of gravel fill required to maintain the material on which it rests in a perennially frozen state in permafrost areas; studies of the influence of thermal properties of the soil beneath the layer supporting plant growth on temperatures in that layer; and to estimating effects of snow cover on the mean annual temperature of the ground surface.

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52611. LACHENBRUCH, ARTHUR HEROLD, 1925– . A probe for measurement of thermal conductivity of frozen soils in place. (American Geophysical Union. Transactions, Oct. 1957. v. 38, no. 5, p. 691–97, diagr., graphs.) 7 refs.

Describes a probe built and used at Barrow, northern Alaska, 1952–53 for several hundred determinations *in situ* of the thermal conductivity of naturally frozen and thawed soils, snow, freshwater ice, and sea ice. About 20 in. long, ¼ in. in diameter, it contains a small bead thermistor as the temperature-sensitive element. Under normal field conditions, conductivity determined is reproducible within about two percent; absolute accuracy is estimated to be within five percent. A modification in design is expected to enable simultaneous determination of thermal conductivity and thermal diffusivity *in situ*. Results of a test made in frozen gravel fill are presented to illustrate the method of handling the data.—From author's abstract.

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52612. LACHENBRUCH, ARTHUR HEROLD, 1925– . Some geothermal problems in the Arctic. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1693.)

Contains abstract of a paper presented at the Society meeting in Eugene, Oregon, Mar. 27–29, 1958. Problems created by the steep temperature gradients between land and water surfaces in northern areas are discussed. Study of their effects may elucidate the chronology of post-Pleistocene climatic events and shoreline movements.

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52613. LACHENBRUCH, ARTHUR HEROLD, 1925– . Thermal effects of the ocean on permafrost. (Geological Society of America. Bulletin, Nov. 1957. v. 68, no. 11, p. 1515–29, 8 diagrs., 2 tables.) 15 refs.

"In high latitudes the large difference between the mean annual temperature of the ground surface and in the unfrozen sediments beneath bodies of water can affect ground temperatures to depths of several hundred feet (e.g. in Alaska). The effect is of particular interest near the edge of the ocean where it depends upon the magnitude of the temperature difference between the land surface and ocean bottom, the thermal properties of the ground materials, and past changes in climate and/or shore-line configuration. Theoretical considerations suggest that, except where there are transgressing shore lines, permafrost to depths greater than 100 feet beneath the ocean bottom is not to be expected at points farther than a few thousand feet offshore. Similar considerations indicate that geothermal installations along the arctic coast can give information regarding post-Pleistocene shore-line changes. The geothermal effects of bodies of water offer an explanation for the anomalously large outward earth-heat flow recently reported by A. D. Misener [No. 41424] for Resolute Bay, Cornwallis Island, N.W.T., Canada."—Author's abstract.

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52614. LACHENBRUCH, ARTHUR HEROLD, 1925– . Three-dimensional heat conduction in permafrost beneath heated buildings. Washington, D.C., U.S. Govt. Print. Office, 1957. 69 p. tables, graphs, 3 diagrs. in pocket. (U.S. Geological Survey, Bulletin 1052–B.) 3 refs.

Presents two theoretical methods for evaluating transient principal temperature disturbance and equilibrium seasonal effects in semi-infinite homogeneous medium in which surface temperature varies sinusoidally, but with different mean temperatures and amplitudes inside and outside a surface region of arbitrary shape, and the application of the methods to problems of foundation engineering in

permafrost areas. Both graphical, the first method involves summing integrated contributions to the temperature; the second involves a graphical integration with respect to solid angle. The methods apply to other thermal problems in permafrost as, for example, disturbance caused by the presence of a roadway.

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52615. LACKEY, EARL EMMET, 1878– . A graphic method for assessing hourly temperature probabilities. Natick, Mass., Mar. 1957. 18 p. 5 graphs, 7 tables, map. (U.S. Quartermaster Research and Development Center. Environmental Protection Research Division, Technical report EP–46.) 3 refs.

Contains a short-cut method for predicting the percentage of time that January temperatures at individual weather stations in interior Alaska will probably be at, or below a given level. A straight line probability scale was constructed utilizing hourly temperature frequencies in January for eight selected Alaskan stations for the period 1950–1954. This "adjusted probability scale" is compared with actual data for Fort Greely and shows good agreement. The scale can also be used for Fort Churchill and Anchorage as well as more southerly stations. Possible further studies and refinements are briefly outlined.

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52616. LACKEY, EARL EMMET, 1878– . A method for assessing and mapping the January daily minimum temperatures of northern North America. Natick, Mass., May 1958. 32 p. 6 text maps, diagrs., tables. (U.S. Quartermaster Research and Development Center. Environmental Protection Research Division. Technical report EP–88.)

Describes a simple, graphic method of determining and mapping the probabilities (in days/month or in percentage days/month) for any given minimum temperature in northern North America; it may be used for any month. Data required are: mean daily minimum, absolute minimum, and length of record. Frequency or percentage distribution of daily minimum temperatures for a station may be calculated quickly by use of these data and an adjusted probability scale. Method of establishing and using this scale is explained and illustrated. It was used to estimate daily minimum probabilities for 71 stations in northern North America. Five maps show how the table may be used to give an overall estimate for the whole arctic area, featuring any selected temperature frequency. Appendix shows method of obtaining similar, but less accurate, results from mean monthly temperature.

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52617. LACKS, HYMAN, *and others.* Ice adhesion apparatus and test method. (American Society for Testing Materials. Bulletin, Sept. 1957. no. 224, p. 48–50, illus., tables.) 5 refs. *Other authors:* M. Quantinetz *and* A. Freiberger.

During search for a coating to prevent ice formation on decks and superstructures of ships, an apparatus which provides capacity for routine testing of large numbers of test panels, was developed. Coatings are applied on mild steel specimen panels, which are demagnetized and electrically grounded. Distilled water is frozen to the surface, and the applied force required to shear it from the panel, is measured. Uncontrolled experimental error in tests was calculated to 11%.

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52618. LACROIX, E., *and* **I. LEUSEN.** Hypothermie et dynamique cardiovasculaire. (Archives internationales de physiologie, Feb. 1958. v. 66, fasc. 1, p. 89–91, table.) 8 refs. Text in French. ***Title tr.:*** Hypothermia and cardiovascular dynamics.

Report on experiments with dogs made hypothermic to 25° C. and then rewarmed. Cardiac deficiency, circulatory resistance, arterial and venous pressure are recorded, analyzed and discussed.

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52619. LACROIX, E., *and* **I. LEUSEN.** Réchauffement après hypothermie et fonction cardiaque. (Journal de physiologie, Mar. 1958. t. 50, no. 2, p. 352–54, table.) 7 refs. Text in French. ***Title tr.:*** Rewarming after hypothermia and heart function.

Report on experiments with dogs made hypothermic to about 23° C. and quickly rewarmed. Cardiac index and frequency, arterial and venous pressure were studied before cooling and after rewarming. A prompt return to normal was noted.

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52620. LA FAY, HOWARD. DEW Line, sentry of the far North. (National geographic magazine, July 1958. v. 114, no. 1, p. 128–46, illus., map.) 2 refs.

Describes the Distant Early Warning

Line: its purpose, physical makeup, problems overcome during construction, life on the Line, and changes it has made in the Arctic. Completed in July, 1957, on a 3,000-mile arc from western Alaska to Baffin Island, the radar installations can detect enemy planes approaching Canada and the United States. Each of its six sectors covers roughly 500 miles and consists of a main station, auxiliary stations, and intermediate stations ("I-sites"). For buildings, module "trains" with wooden panels mounted on pilings to let snow blow under were devised. Communication difficulties were solved by the Forward Propagation Tropospheric Scatter; at most stations, beds of gravel beneath installations prevent permafrost unstability. Problems of white-out, polar bears, high wind, transportation of materials are described; also drifting snow, protection of radar antenna, boredom of isolated personnel.

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LAFORET, E. G., *see* Angelakos, E. T., *and others.* Ventricular excitability . . . hypothermic dog. *1957.* No. 49323.

52621. LAGERCRANTZ, ELIEL, 1894– . Lappische Volksdichtung; Bd. 1, west- und südlappische Texte; Bd. 2, Lyngenlappische, nordwestlappische und westfjordlappische Texte. Helsinki, 1957–1958. 2 v.: 216, 244 p. (Suomalais-ugrilainen seura. Toimituksia, v. 112, 115.) Refs. in text. Text in German. ***Title tr.:*** Lappish folklore; v. 1, west- and south-Lappish texts; v. 2, Lyngen- , northwest- , and Vestfjord-Lappish texts.

Contains 174 texts (in transliteration and German translation) of mythologic, magic and folkloristic content, grouped by dialect and by topic within each dialect. A short linguistic analysis of the dialect and data on the informants precedes each chapter. Texts (30) in the mountain dialects of Jemtland and Härjedalen recorded by K. A. Jaakkola in 1884–1899 have been deciphered from his manuscript, re-transliterated, supplied with German translations by Lagercrantz and published as appendix to v. 1 (p. 142–216). For "practical reasons" Lagercrantz has regrouped his own material and presents parts 7–8 in v. 1, parts 4–6 in v. 2; the other parts are to appear in subsequent volumes.

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52622. LAGERCRANTZ, STURE. Some Eurasian release systems. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 175–97, illus., maps.) Refs. in text.

Discusses the stock- , pole- , and spring-pole snares used in northern Eurasia and North America by, among others, Lapps, Zyryans, Eskimos, Tlingit, Haida, Athapaskans, Montagnais Indians. The construction, operation, release-systems, etc., of these snares and their local variants are described and illustrated; their geographic distribution in Sweden and northern North America is mapped.

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52623. LAGERHEIM, NILS GUSTAF, 1860–1926. Bidrag till kännedom om snöfloran i Luleå Lappmark. (Botaniska notiser, 1883, p. 230–35.) Text in Swedish. ***Title tr.:*** A contribution to knowledge of the snow flora of Lule Lappmark.

Contains a general sketch of snow flora observed in the vicinity of Kvikkjokk in July 1883; with reference to *Hydrurus foetidus, Sphaerella nivalis, Synechococcus aeruginosus, Gloecapsa magma,* and other protozoan and algal species.

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LAGERKRANZ, J., *see* Persson, H. Arctic bryophytes . . . Lagerkranz. *1942.* No. 53938.

LAGET, P., *see* Mamo, H., *and others.* L'influence des variations de température . . . *1957.* No. 53096.

52624. LAGOW, H. E., *and others.* Rocket measurements of the arctic upper atmosphere. (Annales de géophysique, Apr.–June 1958. v. 14, no. 2, p. 131–39, illus., 8 diagrs.) 9 refs. *Other authors:* R. Horowitz *and* J. Ainsworth.

Study of the structure of the arctic upper atmosphere as measured by rockets in the summers of 1953 and 1954. Tentative results are reported for two Aerobee-Hi rockets fired at Fort Churchill, Manitoba, winter 1956 and summer 1957. Comparison of results shows: at 200 km., atmospheric density at 59° N. lat. in daytime in summer is 2.5 times the winter daytime value; the summer daytime value 15–20 times the winter night-time value. The summer daytime value is 6.5 times the corresponding White Sands value of 1.4×10^{-7} gm./M^3. Between 30 and 45 km., density measurements indicate that seasonal and latitude variations are less than 10%; summer measurements show arctic temperatures and pressures to be significantly higher

than White Sands values. This meridional pressure gradient leads to an easterly geostrophic wind, in general agreement with anomalous sound propagation and high altitude balloon measurements.

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52625. LAGUNOV, I. I., *and* **V. V. AZBELEV.** O sostoi͡anii Tulomskogo stada semgi v svi͡azi s rabotoĭ rybokhoda na reke Tulome. (Rybnoe khozi͡aĭstvo, May 1958. god 34, no. 5, p. 16–19, tables.) Text in Russian. ***Title tr.:*** Condition of the Tuloma clan of salmon as related to the work of the fishway on the Tuloma River.

Discusses changes in this river since it was dammed in 1936; type of fishpath and number of fish which ascended it annually, size composition of salmon in the Tuloma and Kola Rivers (1953–57), relation between the number of spawning fish and the number of returning migrants. The Tuloma (68°52′ N. 33° E.) flows into Kola Bay of the Barents Sea.

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LAGUNOV, I. I., *see also* Azbelev, V. V., *and others.* Opyt ucheta semgi . . . *1958.* No. 49455.

LAGUNOV, I. I., *see also* Nikol'skiĭ, G., *and others.* Notes . . Atlantic salmon investigations . . . *1958.* No. 53605.

LAHEY, J. F., *see* U.S. Navy, Weather Research Facility. Normal 500-mb. charts . . . *1957.* No. 55652.

52626. LAĬKHTMAN, D. L., *and* **L. A. KLIŪCHNIKOVA.** Rol' razvodiĭ v teplovom balanse Arktiki. (Leningrad. Glavnai͡a geofizicheskai͡a observatori͡ia. Trudy, 1957. vyp. 69, tables, diagrs.) Ref. Text in Russian. ***Title tr.:*** The influence of open water on the heat balance in the Arctic.

The components of the heat balance are calculated on the basis of physical properties of sea ice and water and data collected by an expedition of the Central Geophysical Observatory and the Arctic Institute in Oct.–Dec. 1955. The intensity of heat flow into the atmosphere from open water at an air temperature of −30° C. was found to be 17 times larger than over ice-covered areas. Heat loss from open water (about 5% of the area) in winter accounts for about 50% of the total heat loss from the Arctic Ocean.—From SIPRE.

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LAĬKHTMAN, D. L., *see also* Volkov, N. A. Na l'dine cherez okean. *1957.* No. 55863.

52627. LAKELA, OLGA, 1890– . A monograph of the genus *Tiarella* L. in North America. (American journal of botany, June 1937. v. 24, no. 6, p. 344–54, illus., 2 text maps.) 10 refs.

Contains a taxonomic diagnosis of *Tiarella* (foam flower), keys, and descriptions of twelve taxa, of which one species, one variety and two forms are new. From Alaska are *T. unifoliata* f. *typica* n. nom., (Yes Bay) and *T. trifoliata* (Ketchikan, Wrangell, Juneau).

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LAKELA, OLGA, 1890– , *see also* Rosendahl, C. O., *and others.* A monograph . . . *Heuchera. 1936.* No. 54386.

LAKHNO, E. V., *see* Kuznet͡sova, L. N., *and others.* Vlii͡anie okhlazhdeniia . . . obmen piridinovykh i tiaminovykh . . . *1956.* No. 52596.

52628. LAKOZA, I͡U. I. Klinicheskie osobennosti techeniia i͡azvennoĭ bolezni na Kraĭnem Severe. (Terapevticheskiĭ arkhiv, Jan. 1958. t. 30, no. 1, p. 62–68.) 3 refs. Text in Russian. ***Title tr.:*** Clinical peculiarities in the course of ulcers in the far North.

An appraisal of special conditions favoring duodenal ulcer in the Pechora region, such as: climate and seasons; excessive depletion of vitamins, especially C and B_1; difficulties in acclimatization in persons from moderate and warm climate. Vitamin therapy, proper diet, long hospitalization (45–50 days), etc., are recommended. Based on observation of 365 patients during 1946–1956 at Railway Hospital no. 2 in the town of Pechora, Komi ASSR.

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52629. LAKTIONOV, ALEKSANDR FEDOROVICH. The effects of ice upon shipping routes, sea and river ports and the means to combat it. (*In:* International Congress of Navigation. 19th, *London,* 1957. Section 1, Inland navigation, Communication 3, pub. 1958?, p. 177–217, illus., table, diagrs., maps.) Refs. in text. "Prepared by M. K. Fedorov, I. S. Peschansky, T. I. Sandzheevich, I. M. Konovalov, B. B. Balanin and B. S. Borodkin."

Types of ice and ice formations, ice thickness, navigation season and difficulties, etc. are outlined for major inland

waters and seas bordering the U.S.S.R., including the White, Barents, Kara and other arctic seas, Bering and Okhotsk Seas; methods and means of ice observation are dealt with; symbols used in ice charts are illustrated. Basic data are presented on the ice regime of the nation's rivers (in particular, the Lena and Volga); the influence of various types of ice on navigation and operation of hydro plants is outlined. Several formulae for practical application of heat exchange data are presented; physical properties of sea and river ice are tabulated and discussed. Means of combatting the ice (ice-breakers, blasting operations, pneumatic installations, utilization of solar radiation to melt channels) are described for specified seas, rivers, and ports; protection of ships and port structures, and salvage of ice-bound vessels are discussed. Ice forecasting methods for the Northern Sea Route are outlined; a formula for forecasting ice thickness is presented. ***Copy seen:*** DLC.

52630. LAKTIONOV, ALEKSANDR FEDOROVICH. Ice observation methods. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 48–56, 4 illus., 5 diagrs., 2 text maps.) 48 refs.

Present Soviet ice-surveying procedures and instruments are described. Aerial observations are made periodically to determine ice conditions in all seas throughout the year. More detailed ice research is conducted by ice-hydrological patrols, which investigate the ice edge and make repeated standard hydrological sections during the navigation period. Ice concentration is determined with Gakkel's graphical scale; ice forms and types are distinguished according to special atlases. Coastal observations are made daily, and additional data are gathered from advanced ice posts, ice-profiles, and observations along routes in the region of coastal stations. Ice thickness is measured directly from the ice with various instruments and from the deck of a vessel with ordinary field glasses or an optical device, essentially a metal rod (60 cm. long) graduated at 2-cm. intervals, and a plexiglass plate with a reticule graduated at 1-cm. intervals traveling along the rod. Ice thickness is determined with an accuracy of 3% by counting the reticule points corresponding to the thickness of the floe viewed through the plate. The speed of ice drift in the open sea is determined either by the lead method, a driftograph, or radio-beacons, set up on drifting ice; the direction of drift is determined by means of an azimuthal dial. Aerial photography is used extensively in the study of various ice characteristics.—From SIPRE. ***Copy seen:*** DN–HO.

52631. LAKTIONOV, ALEKSANDR FEDOROVICH. Primenenie aviat͡sii v okeanograficheskikh issledovanii͡akh v Arktike. (Problemy Arktiki, sbornik statei, 1957. vyp 2, p. 19–31, tables, map, diagr.) 19 refs. Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Use of aircraft for oceanographic investigations in the Arctic.

The development of methods of aerial investigations in the Arctic since 1914 is outlined, and the efficiency of ice scouting and of aircraft landing on the ice for hydrological studies is noted. Since 1950 over 1 million km. are covered annually in air surveys; fixed routes and air photographs enable analysis of regularities in ice-cover formation and modifications associated with weather changes and other physiographic phenomena. Regular oceanographic investigations since 1948 covering the Arctic Ocean have collected important data on the ice cover, its properties and drift, and heat exchanged by the ice with the atmosphere and water. The use of aircraft, helicopters in particular, makes investigations in hitherto inaccessible areas possible at any season, including completion of drift data with radio beacons.—From SIPRE. ***Copy seen:*** DLC.

52632. LAKTIONOV, ALEKSANDR FEDOROVICH. Recent Soviet scientific investigations in the North Polar regions, translated by Kenneth R. Whiting, Maxwell Air Force Base, Ala. Documentary Research Division, Research Studies Institute, 1956. ix, 104 p. maps, diagrs. (U.S. Air University. Documentary research study, AU–272–56–RSI.) English translation of p. 347–426 of No. 46219, on work of the Soviet drifting stations. ***Copy seen:*** DI.

LAKTIONOV, ALEKSANDR FEDOROVICH, *see also* Zenkevich, L. A. Deĭatel'nost' . . . *1958*. No. 56186.

52633. LAMB, HUBERT H. Differences in the meteorology of the northern

and southern polar regions. (Meteorological magazine, Dec. 1958. v. 87, no. 1038, p. 364–79, 3 tables, 3 graphs, 5 text maps.) 23 refs. Paper read at International Union of Geodesy and Geophysics, Toronto, Sept. 1957.

Differences in the extent and distribution of land, ocean and ice, and in the heat budget, introduce important differences of general atmospheric circulation between the Arctic and Antarctic. The geographic setting, radiation and heat budget are briefly treated; their effects on weather are discussed. Climatic changes resulting from variations in the general circulation are described.

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52634. LAMB, HUBERT H. On the frequency of gales in the Arctic and Antarctic. (Geographical journal, Sept. 1957. v. 123, pt. 3, p. 287–97, 4 text charts, 6 tables.) 40 refs.

Contains maps showing distribution of gale frequency in Davis and Denmark Straits, Greenland and Barents Seas, Svalbard waters for periods 1930–1935, 1945–1949; also data on number of days a year with storm for five stations in Greenland and two in Iceland during 1890–1935, 1938–1950; average yearly wind force in Svalbard for five periods between 1912–1953. Since about 1935–1940, gale frequency has decreased in high latitudes and increased over Iceland. Conclusions: broadest regions of high frequency of gales are over open water south of Greenland and Iceland; most intense maxima of gale frequency and strongest gales are at points on or near East and Southeast Greenland coasts; minima along the West Greenland coast. Very low temperatures are observed during gales fed by katabatic drainage of cold air off inland ice. *Appendix* includes table showing number of days with gale (Beaufort force 8) at nine stations in Greenland between 1930–1954 and on a Soviet North Pole drifting station 1954–1955. ***Copy seen:*** DGS.

LAMB, HUBERT H., *see also* Hamilton, R. A., *and* H. H. Lamb. Meteorological Office . . . *1957*. No. 51532.

LAMBERT, HAYDEN, *see* Spurr, G. B., *and others.* Influence of body temperature on cardiac sensitivity to potassium. *1958*. No. 55103.

LAMIN, L. A., *see* Krylov, G. V., *and* L. A. Lamin. Vtoraя . . . konferentsiя . . . Sibiri. *1958*. No. 52529.

52635. LANAHAN, FRANCIS H. Interim report on operating & maintaining the DEW Line. (Signal, Mar. 1958. v. 12, no. 7, p. 27–30, illus.)

Outlines program of the Federal Electric Corporation, an organization of the International Telephone & Telegraph Corp., responsible for operation and maintenance of the Line. Formal training of the all-civilian personnel is supplemented by exchange-of-skills experience for familiarization with various phases of the operation; all forms of testing are utilized in personnel selection. An air transport service supplements the annual re-supply missions by ship. An Operations Analysis Dept. studies air routes and aircraft utilization, personnel turnover, telegraph traffic, cost accounting patterns, etc.; it issues bulletins of potential technical failures and their remedy, etc. A Logistics group anticipates supply requirements, and an engineering organization is responsible for communications (comprising over 12,000 mi. of duplex telegraph), transportation, water supply, power generation, etc.

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LANDAU, A., *see* Beals, C. S., *and others.* A search . . . lunar and terrestrial topography. *1956*. No. 49591.

52636. LANDAUER, JOSEPH K. On the deformation of excavations in the Greenland névé. Wilmette, Ill., Apr. 1957. 14 p. diagrs., tables. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–56, v. 2. SIPRE research report 30.) 7 refs.

Describes results of deformation measurements made for two years in a tunnel, two trenches, and a pit 30-m. deep, excavated in the summer of 1954 at SIPRE Test Site 2 on the icecap, about 200 mi. east of Thule. Results indicate that closure rates increase with lateral distance from a restraining boundary up to distances of about one meter. At greater distances, the boundary has little effect. Observed results generally agree with theoretical calculations. *Also pub.* in: International Union of Geodesy and Geophysics, Association of Scientific Hydrology, 11th assembly report 1958. v. 4, p. 475–91. ***Copy seen:*** CaMAI.

52637. LANDAUER, JOSEPH K. Some preliminary observations on the plasticity of Greenland glaciers. Wilmette, Ill., July 1957. 6 p. text map,

diagrs., tables. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–56, v. 2. SIPRE research report 33.) 5 refs.

Discusses measurements obtained from tunnels excavated at Red Rock and TUTO sites near Thule, in the summers of 1954 and 1956. Three topics are considered: the shearing of an initially vertical peg system at Red Rock, the deformation of core holes at TUTO, and tunnel closure at both sites. Experimental data were uncertain; calculated results, possibly of limited reliability, suggest that very large changes in motion are reflected by very small changes in shear stress.

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LANDAUER, JOSEPH K., *see also* Bader, H., *and others.* Excavations and installations . . . *1957.* No. 49471.

52638. LANDERGREN, STURE. On the geochemistry of Swedish iron ores and associated rocks. Stockholm, 1948. 182 p. 67 tables, 31 diagrs. (Sweden. Geologiska undersökningen, ser. C, no. 496.) 128 refs. *Also pub. as:* Stockholm högskolas mineralogiska institut. Meddelanden, 1953, ny följd., bd. 9, no. 183.

Problems connected with the enrichment of iron and the ore formation are considered. Development of the lithosphere, and the distribution of some major constituents of igneous rocks and iron ores are discussed in relation to problems in Sweden The research materials, methods used, and analytical results are presented. On geochemical premises, the principles governing iron ore formation in the lithosphere are advanced. ***Copy seen:*** DGS.

52639. LANDGREN, SVEN. Cortical reception of cold impulses from the tongue of the cat. (Acta physiologica scandinavica, 1957. v. 40, no. 2–3, p. 202–209, illus.) 3 refs.

Out of 36 cortical cells studied with extracellular microelectrode technique, 12 responded to cooling only, while 24 responded also to other stimuli, mainly mechanical. Four different patterns of "cold-cell" discharge were found; the latency, duration and frequency of these responses depended on the intensity of cooling. Short latency responses were found in the "cold cells" only; long latency reactions in the others.

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52640. LANDMARK, BJØRN, *and others.* Ionospheric h'f-observations obtained during the period of the solar eclipse of 30th June 1954. (Norske videnskaps-akademi i Oslo. Geofysiske publikasjoner, 1956. v. 19, no. 8, p. 6–28, tables, diagrs.) 9 refs. *Other authors:* F. Lied *and* S. Skribeland.

Describes and analyzes observations from Kjeller, Tromøya, and Tromsø (69°59′ N. 18°46′ E.). Values of foF2, foF1, and FoE are plotted together with median values from the control period; observed critical frequencies for the E, F_1, and F_2-layers are tabulated. Only the recombination of free electrons is taken into account in interpreting the results; the results cannot be explained in terms of a uniform distribution of the ionizing agency over the sun's disc; a solar model was postulated to give better agreement with observed and calculated curves. With regard to the F_2-layers it was found that at a period around max. eclipse, the observations could only be explained in terms of a marked solar control of the ionizing agency; a small dip some time before the optical eclipse may possibly be explained in terms of a corpuscular eclipse.

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LANDMARK, BJØRN, *see also* Holt, O., *and* B. Landmark. Some . . . properties . . . fine structure in ionospheric scatter . . . *1958.* No. 51792.

52641. LANDMARK, KÅRE, 1912– . Landet som reiser seg av havet. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4) p. 28–31, illus.) Text in Norwegian. ***Title tr.:*** The land which rises from the sea.

Land-elevation in Scandinavia.

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52642. LANDMARK, KÅRE, 1912– . Om fosser og stryk. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4), p. 19–21, illus.) Text in Norwegian. ***Title tr.:*** On waterfalls and rapids.

Describes three rapids in Måls and Bardu Rivers, north Norway; their formation is due to veins of granite and gabbro in the river bed which have withstood erosion. ***Copy seen:*** DLC.

52643. LANDTMAN, CHRISTIAN. M/S Aranda, ett nytt vinterfartyg för Åland. (Tekniska föreningen i Finland. Förhandlingar, Apr. 1953. årg. 73, nr. 4, p. 81–86, illus., diagrs.) Text in Swedish. ***Title tr.:*** M/S *Aranda,* a new ship for the Åland winter traffic.

Describes this Finnish-built vessel launched in May 1951. It is a 906 br. reg. t., ice-strengthened diesel-electric cargo and passenger ship with arrangements for loading and unloading on ice; three engines, each of 440 i.hp., drive one fore- and one aft-propeller. The ship is intended for the Åland archipelago traffic in winter, and for use as a research vessel in the summer season.

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52644. LANG, ARTHUR HAMILTON, 1905– . On the distribution of Canadian uranium occurrences. (Canadian mining and metallurgical bulletin, May 1958. v. 51, no. 553, p. 294–303, 4 text maps, table.) 34 refs.

Location of reported occurrences is described in general and by principal types. The occurrences, mainly in the Shield, are discussed, and the segregation of the three main types of deposits (vein, conglomeritic and pegmatitic) is explained. "Metallogenetic" and geological provinces are considered, particularly with regard to possible uranium provinces. Such possible sources as the Grenville province, the Great Bear, East Arm and Taltson sub-provinces (Slave province), and the Athabaska sub-province (Churchill province) are suggested.

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LANGE, BODIL, *see* Holmen, K., *and* B. Lange. *Sphagnum wulfianum . . . 1958.* No. 51783.

52645. LANGE, MORTEN. Mykologiske indtryk fra Lapland. (Friesia, 1946. bd. 3, hefte 3, p. 161–70.) 4 refs. Text in Danish. Summary in English. ***Title tr.:*** Mycological impressions from Lapland.

Contains notes on distribution of Agaricaceae in the different alpine zones: mountainous birch forest (650 m. above sea-level); lower, medium (1,000–1,300 m.), and higher (1,300–1,800 m.) alpine zones. Agarics (about 100) were found in all zones but many species have zonal preferences. Presence of lime seems to be the main factor in the distribution of many species, especially of the genus *Inocybe*. ***Copy seen:*** DA.

52646. LANGENHEIM, R. L., *Jr., and others.* Cretaceous amber from the arctic coastal plain of Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1759.) *Other authors:* C. J. Smiley *and* J. Gray.

Abstracts paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957. Describes rock formations and fossils associated with occurrences of amber derived from Cretaceous conifers between 69°40′ N. and 70°05′ N. along the Kaolak River and lower Ketik River above Wainwright. ***Copy seen:*** DGS.

52647. LANGSAETER, ALF. Noen tiltak for å intensivere skogsbruket i Norge. (Svenska skogsvårdsföreningen. Tidskrift, 1956. årg. 54, nr. 1, p. 1–9.) Text in Norwegian. ***Title tr.:*** Some efforts to intensify forestry in Norway.

Effective forest policy in Norway began with the national forest law of 1932. With some changes, this law has served to raise both production and forestry standards. Systematic levies on standing and marked timber provide funds used for supervision, education, and for both reforestation and afforestation programs. The latter is important in the west and north coastal areas. Millions of trees are produced in nursery and set out each year. State support for improvement of management and forests reaches to 75% in northern Norway. Although costs are high, it is generally agreed that the forestry program is economically sound and beneficial to the country. ***Copy seen:*** DA.

52648. LANTERNARI, VITTORIO. Gli eschimesi della Terra di Baffin. (Vie del mondo, Apr. 1958. anno 20, no. 4, p. 403–412 illus., map.) Text in Italian. ***Title tr.:*** The Eskimos of Baffin Land.

Sketches the geographic features of Baffin Island and describes the present-day life of its Eskimo population: seal, bear and caribou hunting, winter and summer housing (igloos, tents), contacts and trade with whites, etc. Though some features of original customs and traditions persist in their mode of life, religious rituals and moral code, the process of acculturation is strongly felt both in its positive (missionary work, schools, health services) and negative results (weakening of the authority of community elders, spread of tuberculosis).

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52649. LANTIS, MARGARET L., 1906– . American arctic populations: their survival problems. (Biology Colloquium, 18th, 1957. p. 119–130, illus., tables.) 33 refs.

Cultural adaptation study of Eskimos in Canada, Greenland and Alaska. Pop-

ulation (increasing) data are given; physical and cultural characteristics are briefly described. Prehistoric ecological changes as revealed by archaeologists, and Eskimo methods of survival in the arctic environment are presented as background against which current problems are viewed. These people adjusted to a difficult physical environment and survived several fundamental changes in the past; they are now faced with the problem of adjusting to a new social environment brought in by white men, and of changing from a subsistence to a money economy. Efforts of U.S., Canadian and Danish governments to aid adjustment are reviewed and factors hindering acculturation are examined. The importance of preserving the self-assurance of the Eskimos is stressed.

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LANZA, M., *see* Delphaut, J., *and* M. Lanza. "Gangliopléqiques" et résistance à l'agression . . . *1957.* No. 50485.

52650. LAPINA, NINA NIKOLAEVNA. Izmenenie poristosti i gazopronit͡saemosti porod pri otrit͡satel'nykh temperaturakh. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956, t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 189–200, illus., fold. diagr., 3 tables.) 9 refs. Text in Russian. ***Title tr.:*** Changes of rock porosity and gas permeability at sub-zero temperatures.

Outlines the behavior of gas, water and rocks below 0° C. Investigations were made at positive and negative temperatures of the porosity and impermeability of partly and completely saturated sandstones. Results are presented of a series of tests at sub-freezing temperatures on the permeability in dried and wetted sandstones, also in those ("water-bearing") with natural moisture. In the dry rocks, gas permeability rises with dropping temperature and reaches a maximum at −2° to −5° C. In the wet rocks, gas permeability decreases with diminishing temperature. In the "water-bearing" rocks, however, no substantial changes are noted. Testing instruments are described and results are diagrammed.

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52651. LAPINA, NINA NIKOLAEVNA. Novye dannye po stratigrafii karbona ust'ia r. Leny. (Akademiia nauk SSSR. Doklady, Nov. 21, 1958. god 26, t. 123, no. 3, p. 528–29.) 3 refs. Text in Russian. ***Title tr.:*** New data on the stratigraphy of the Carboniferous at the Lena River mouth.

Notes a summer 1957 investigation by E. M. Lut͡kevich and V. D. Nikiforova on brachiopods of the Kharaulakh Mts. and Lena delta, and enumerates brachiopods species found in the Tiksi series; its age is considered Middle Carboniferous.

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52652. LAPINA, NINA NIKOLAEVNA. Osnovnye rezul'taty raboty po izucheniiu uslovii obrazovaniia donnykh otlozheniĭ Severnogo Ledovitogo okeana. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ biul'leten', 1957. vyp. 6, p. 19–22.) Text in Russian. ***Title tr.:*** Main results from work of investigating the development of bottom sediments in the Arctic Ocean.

Reports that this kind of investigation initiated in 1956 has been carried on through 1958 by the high latitude expeditions, the expeditionary vessels, *Ob', F. Litke, Lena, Gorizont, Mogilev,* and by drifting stations. Some 400 bottom sediment samples have been collected from the central Basin, 60 from northern Greenland Sea, and about 300 in the Kara Sea and Franz Joseph Land straits. Arctic Basin bottom sediments are distinguished in three mineralogic provinces: epidote-amphibole, ore-epidote pyroxene, and chloritic. Each province is briefly characterized; vertical stratification and variation of bottom sediments are outlined. Differences in the Greenland Sea sediments are noted. The Arctic Ocean's connection with the Atlantic, it is concluded, is limited not by the Nansen Rise but by the Wyville Thomson Ridge.

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52653. LAPINA, NINA NIKOLAEVNA. Usloviia migrat͡sii gaza i vody v peschanikakh pri otrit͡satel'noĭ temperature. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 67, Sbornik stateĭ po geologii Arktiki, vyp. 7, p. 177–217, illus., diagrs., 11 tables.) 21 refs. Text in Russian. ***Title tr.:*** The conditions of gas and water migration in sandstones at negative temperatures.

Presents description of instruments, methods and experimental tests on determination of gas and water penetration in rocks at sub-freezing temperature. The special refrigerator, micro-electrometer, and instruments for measuring rock porosity, and gas and water permeability in

rocks are described. Changes of the physical properties of the rocks, gas and water, are characterized. Several series of experimental tests on gas and water migration in sandstones and shales are presented and conclusions drawn.

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LAPINA, NINA NIKOLAEVNA, *see also* Belov, N. A., *and* N. N. Lapina. Novye dannye o stratifikat͡sii donnykh otlozheniĭ . . . *1958*. No. 49644.

52654. LAPPO, S. D. O vrashchatel'nom dvizhenii dreĭfuiushchikh ledi͡anykh poleĭ. (Problemy Severa, 1958. vyp. 1, p. 30–41, diagrs.) 15 refs. Text in Russian. ***Title tr.:*** Rotation of drifting ice fields.

Analyzes the drifts of the *Sv. Anna* 1912, *Chelii͡uskin* 1933, *Severnyĭ Polii͡us-1* 1937–38, *Sedov* 1938–39, and T-3 in 1952 to determine the cause and general trend of rotation at various locations. Large ice fields in the Arctic Basin as a rule maintain a fixed orientation during their drift. The same tendency is observed also in the shelf seas, and it contributes to the development and maintenance of extensive ice fields in the winter season. Rotation of drifting fields is initiated by the influence of unequal currents and winds, change in direction of drift, by collision and friction with shores and with ice fields of a different drifting speed.

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52655. LAPPO, S. D. Opredelenie predel'nogo rasstoi͡anii͡a mezhdu opornymi polii͡arnymi meteorologicheskimi stant͡sii͡ami. (Problemy Arktiki, 1958. vyp. 3, p. 83–94, diagrs., tables.) 7 refs. Text in Russian. ***Title tr.:*** Determination of the critical distance between polar meteorological substations.

Allowing for a maximum error of 0.35° C. in interpolated values of diurnal temperature fluctuations, the critical (maximum) distances in summer and winter between air temperature observation stations are determined for 30 regions in the Soviet North (including off-shore islands), through inter- and extrapolation of long-term (10–20 years) temperature data. ***Copy seen:*** DLC.

LAPWORTH, E. D., *see* Snyder, L. L., *and* E. D. Lapworth. A comparative study . . . red-wings. *1953*. No. 55013.

LARGE, ROSEMARY E., *see* Schönbaum, E., *and others*. Comparison of certain methods for assessing adrenocortical activity in rats . . . *1958*. No. 54617.

LARGIN, I. P., *see* Tiuremnov, S. N., *and* I. P. Largin. K voprosu metodiki oprobovaniia zalezheĭ . . . *1956*. No. 55455.

LARIN, N. I., *see* Anikeev, N. P., *and others*. Mezhvedomstvennoe stratigraficheskoe soveshchanie . . . *1957*. No. 49330.

52656. LARIONOV, P. D. Materialy po pitaniiu i razmnozheniiu vostochnosibirskogo perepeliatnika, *Accipiter nisus nisosimilis* Tickell i I͡Akutskogo sokola *Falco peregrinus kleinschmidti* Dem. (Yakutsk. Universitet. Uchenye zapiski, 1957. vyp. 1, p. 120–32, tables.) 8 refs. Text in Russian. ***Title tr.:*** Materials on the food and reproduction of the East Siberian hawk, *Accipiter nisus nisosimilis* Tickell and the Yakut falcon, *Falco peregrinus kleinschmidti* Dem.

Account of summer 1953 field observations, including habitat, morphology, sexual dimorphism; composition of food (the first species: almost exclusively birds, the second: birds and rodents); nests, eggs and young, food and growth of the young, etc. ***Copy seen:*** DLC.

52657. LARIONOV, VI͡ACHESLAV FEDOROVICH. O spet͡sifichnosti deĭstviia sveta na razmnozhenie ptit͡s. (Akademiia nauk SSSR. Doklady, 1957. t. 112, no. 4, p. 779–81, table.) 11 refs. Text in Russian. ***Title tr.:*** On the specificity of light's action upon bird reproduction.

Account of experiments with chicken, six months old at the beginning of this two-year study. The number of eggs laid and feathers moulted were recorded. By changing the light regimen it was possible to induce three periods of oviposition in two years instead of two, as in the controls. ***Copy seen:*** DLC.

LARIONOV, VI͡ACHESLAV FEDOROVICH, *see also* Parovshchikov, V. I͡A., *and* V. F. Larionov. Zalety golenastykh ptit͡s . . . *1958*. No. 53870.

52658. LA ROCHELLE, PIERRE. Results of research on frost susceptibility in soils. (Roads and engineering construction, Oct. 1956. v. 94, no. 10, p. 189+, illus., diagrs., tables, graph.) 10 refs.

Laboratory equipment and investigation procedure are described in detail.

36 samples of pit run gravel of fines content ranging 0.0–10% were examined; each group of 6.0 and 10.0% fines content included one sample each of 0.0–4% calcium chloride. Properties and characteristics of the gravel are described. Tabulated results show that the average heaving is 40% with 4.0–2.0% fines content, and 25% with 2.0%–0.0% fines content. Calcium chloride in a low concentration reduced the frost-heaving considerably in well-graded gravel, besides increasing the density and lowering permeability. ***Copy seen:*** DLC.

52659. LARSEN, AAGE H. Principper for bygning af isbrydere. (Søfart, Oct. 1950. årg. 1, nr. 3, p. 14–16, illus.) Text in Danish. ***Title tr.:*** Principles of ice-breaker construction.

Basic principles in hull shape and propulsion arrangements are explained and illustrated by examples from the Danish ice-breaker fleet. ***Copy seen:*** DLC.

52660. LARSEN, BJØRN, *and* **A. JENSEN.** The determination of nitrate and nitrite in algal material, and the seasonal variations in the nitrate content of some Norwegian seaweeds. Oslo, 1957. 22 p. illus., tables. (Norsk institutt for tang- og tareforskning. Rapport, no. 15.) 30 refs.

Investigations by the methods described showed no nitrite in seven common algae. Considerable amounts of nitrate were detected in *Laminaria digitata* and *L. saccharina;* its amount in fronds of these species increased ten-fold and returned to normal in four spring months. In the other species studied seasonal variations were less pronounced. ***Copy seen:*** DA.

52661. LARSEN, BJØRN. The influence of season, habitat and age of tissue on the niacin content of some brown algae, Oslo, 1958. 13 p., illus., tables, map. (Norsk institutt for tang- og tareforskning. Rapport no. 19.) 8 refs.

Monthly analyses of the more common algae of the Norwegian coast showed a pronounced fluctuation in niacin content with a maximum in the spring and a minimum in the fall. *Alaria esculenta* showed an exceedingly high content and *A. nodosum* showed differences with age and between stalk and apex. Differences in the same species were found at different localities. ***Copy seen:*** DA.

LARSEN, BJØRN, *see also* Haug, A., *and* B. Larsen. Carotene . . . seaweed . . . meal. *1958.* No. 51626.

52662. LARSEN, ESTHER LOUISE, *Editor.* The Eskimos, an American people. (Alaska. University. Anthropological papers, May 1957. v. 5, no. 2, p. 83–90.) 2 refs.

A translation of Andreas Abrahamus Indrenius' *Specimen academicum de Esquimaux, gente Americana,* Aboae, 1756 (copy in DLC), a dissertation in Latin based in part on information collected by the Swedish naturalist, Pehr Kalm (1716–1779), and printed in vol. 3, p. 446–51, of his *En resa til Norra America,* Stockholm, 1753–1761 (copy in DLC). The dissertation reflects the ideas (part fact, part fiction) prevalent in the 18th century and deals with the customs, etc. of the Labrador Eskimos. A list of approx. 100 Eskimo words is appended. A short introduction by the editor describes P. Kalm's visit to North America. ***Copy seen:*** DLC.

52663. LARSEN, HELGE EYVIN, 1905– . The material culture of the Nunamiut and its relation to other forms of Eskimo culture in northern Alaska. (International Congress of Americanists, 32nd. *Copenhagen,* 1956. Proceedings, 1958. p. 574–82, illus.) Refs. in text.

Based on author's 1950 investigations and the studies of R. Rausch (No. 25394) and H. Ingstad (No. 22821). This small Eskimo group living in the Brooks Range, known under the collective name of Nunamiut (i.e., people of the land) comprises several inland units. Their material culture, yearly migration cycles, economy, etc., are described and compared with other Alaskan Eskimo groups. The Nunamiut are semi-nomads with an inland-coast culture based on caribou hunting and sealing, a pattern predominant in northern Alaska except for large coastal villages. This inland-coast culture is considered older than the true inland culture. The fishing and hunting gear of the Ipiutak and Denbigh Flint Complex people are examined and their attribution to an inland-coast culture suggested. ***Copy seen:*** DSI.

52664. LARSEN, HELGE EYVIN, 1905– , *and* **J. MELDGAARD.** Paleo-Eskimo cultures in Disko Bugt, West Greenland. København, C. A. Reitzels Forlag, 1958. 75 p., illus., 5 plates, diagr.,

tables, maps. (Meddelelser om Grønland, bd. 161, nr. 2.) 53 refs.

Report on the archeological finds made in the summer of 1953 by the Danish National Museum party on Disko Bay. The first chapter (p. 9–32) dealing with the excavations at Sermermiut, near Jakobshavn, is written by J. Meldgaard, the preface (p. 5–7) and second chapter (p. 32–71) on the motorboat survey of all known and likely Paleo-Eskimo sites of Disko Bay are by H. Larsen. Two main pre-Thule cultures, Sarqaq and Dorset, were established, radiocarbon dated and related to periods of comparatively warm continental climate. At Sermermiut, sterile layers separate the Sarqaq, Dorset and Thule stages indicating definite time-limited periods of occupation. The artifacts are described in turn and tabulated, the Sarqaq grinding technique compared to the middle layer of Cape Denbigh, and the latter's lower C–14 dating (2016 ± 250 years old) favored for the Sarqaq finds. The construction of Sarqaq dwellings is speculated upon from three rather disturbed remains, two at Igdluluarssuk and one at Tuperssuit, and tentring structures covered by skins suggested. A sequence of at least five independent immigrations to Greenland proposed: Independence I, Sarqaq, Independence II and West Greenland Dorset, "classical" Dorset, Thule.

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LARSEN, HENRY A., *see Arctic circular.* Monument to Otto Sverdrup. *1957.* No. 49360.

52665. LARSEN, JOHN. Weather information as an air navigation aid on the polar route. (Navigation, summer 1958. v. 6, no. 2, p. 86–88.)

Points out the requirements for lightweight navigational equipment in commercial aircraft, the high-density passenger load precluding use of heavy (though highly perfected) military equipment. The less elaborate gyro compasses and radars increase the navigator's dependence on interpretation of meteorological data. Navigational problems on Trans World Airlines' route Los Angeles-Paris, due to inadequate weather charts and forecasts, are outlined. It is suggested to change from the Standard Lambert conformal projection charts to curved plastic charts in Mercator projection, with identification data glued to the under side of the transparent sphere section. Without distortion in scale and meridian convergence, this chart would give a true perspective and eliminate the correction factors. ***Copy seen:*** DLC.

52666. LARSEN, P. GLUD. Lidt om livet i vore dages Nordøstgrønland. (Vor viden, Jan. 1958. no. 9, haefte 217, p. 257–61, illus.) Text in Danish. ***Title tr.:*** Notes on life in today's northeast Greenland.

Describes daily duties at the weather station Danmarkshavn, 300 km. from the nearest settlement. Mail and supplies for the 10–12 men operating the station are brought by ship annually.

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52667. LARSEN, TORBEN KJELD. Fra stenalder til jet-tid. (Atuagagdliutit: Grønlandsposten, Apr. 25, 1957. Ukiut 97-iat, nr. 8, p. 14–15, illus.) Text in Danish. ***Title tr.:*** From stone age to jet age.

Tells of a flight over the North Pole in a rescue plane, based at Thule. One of the passengers was the Eskimo Odâq, who accompanied Peary to the Pole in 1909. ***Copy seen:*** DLC.

52668. LARSEN, TORBEN KJELD. Pelsjaeger på Grønland (Atuagagdliutit: Grønlandsposten, June 6, 1957. Ukiut 97-iat, nr. 11, p. 4–7, 23, illus.) Text in Danish and Eskimo. ***Title tr.:*** Trapper in Greenland.

Recalls experiences from three years spent at various trapping stations in East Greenland. ***Copy seen:*** DLC.

LARSON, ANNA M., *see* Hannon, J. P., *and others.* Effect . . . cold acclimatization on plasma electrolyte . . . *1958.* No. 51547.

LARSON, CARL LEONARD, 1909– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

52669. LARSSEN, A. K. Tales from the Alaska fish patrol. (Norseman, Nov.–Dec. 1957. v. 15, no. 6, p. 397–404.)

Account of experiences as a motor boat operator patrolling the salmon fisheries in Bristol Bay. Describes the countryside and the efforts of the U.S. Fish and Wildlife Service to conserve the salmon resources by prevention of illegal fishing. ***Copy seen:*** DLC.

52670. LARSSON, GUNNY. Tetraploid *Rubus arcticus,* framställd genom colchicinbehandling. (Botaniska notiser,

1957. v. 110, no. 2, p. 151–59, illus.) 7 refs. Text in Swedish, Summary in English. ***Title tr.:*** Colchicine-induced tetraploidy in *Rubus arcticus*.

Contains results of an experiment with the seeds of the diploid arctic raspberry (northern Scandinavia and Alaska) for the purpose of obtaining bigger fruit, yet retaining the rich aroma. The seeds treated with concentrated sulphuric acid for two hrs. were soaked in 0.5% colchicine-solution. From all treatments only five tetraploids were obtained. A cross between one of them and *R. stellatus* (2n=14) gave also a triploid plant (2n=21), and another open-pollinated tetraploid produced plants with 28 chromosomes in the root-tips.

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52671. LARSSON, WILLIAM. Lapplandsflyg. (Ett år i luften, flygets årsbok, 1954. p. 311–18, illus.) Text in Swedish. ***Title tr.:*** Lapland Air Lines.

Popular account of the activities of AB Lapplandsflyg, small Swedish company serving Lapps and tourists in charter flights to the fishing lakes, freighting fresh salmon to markets in the south, moving Lapp camps and delivering supplies, etc. The Lapland base is at Luspenbryggan (approx. 67° N. 19°45′ E.) at Stora Lulevatten.

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52672. LASHUK, L. P. O drevnikh ėtnicheskikh obrazovaniiakh na territorii Komi ASSR. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1958. vyp. 29, p. 38–43.) 9 refs. Text in Russian. ***Title tr.:*** Ancient ethnic formations on the territory of Komi A.S.S.R.

Distinguishes two separate neolithic culture centers: the Vychegda and the Pechora River basins. The Sukhona-upper Volga region is considered as origin of tribes moving down the Sukhona and Severnaya Dvina and up the Vychegda Rivers in the 3rd or 2nd millennium B.C. Their racial affiliations (Finno-Ugric?) are discussed but no conclusion reached. The lower Pechora basin culture of the 1st-2nd millennium B.C., extending from the Bol'shezemel'skaya Tundra eastward to Kola Peninsula, is related to the pre-Samoyed, proto-Paleo-Asiatic, population of western Siberia (lower Ob' River). Their ethnic affinities to eastern Paleo-Asiatics, especially Yukaghirs, is discussed. ***Copy seen:*** DLC.

LÁSZLÓ, KATALIN, *see* Hársing, L., *and others*. The effect of hypothermia on ischaemic changes . . . kidney. *1956*. No. 51606.

52673. LATHRAM, ERNEST H., *and others*. Progress report on the geologic mapping of southeastern Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1755.) *Other authors:* R. A. Loney, W. H. Condon, *and* H. C. Berg. Abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958.

Describes the stratigraphy and structure of the areas mapped: northeastern Chichagof Island, northern Admiralty Island and the Chilkat Mts. Rocks of Chichagof, of Silurian(?) Devonian and Mississippian age, form a broad syncline. Those on Admiralty, forming an anticlinorium, are Permian and Late Triassic. Indications are that rocks of the Chilkats are of Silurian(?) to possibly Triassic, and complexly folded and faulted with a large igneous intrusive believed present in the south. ***Copy seen:*** DGS.

LATTERI, S., *see* Navarra, S., *and others*. Variazioni del flusso . . . di ossigeno del sangue . . . *1957*. No. 53517.

52674. LAUDANI, ANGELO A. Exercise Shiver. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, June 1948. v. 1, no. 2, p. 109–110.)

Report on tests with rations of 1,100 to 5,500 calories. For control, the 32 test subjects were first studied in Florida for two weeks. In January, the group was flown to a camp in Canada where the study continued. In addition to caloric value the 14 rations differed in type and composition. ***Copy seen:*** DNLM.

LAUDER, J. R., *see* Burbidge, F. E., *and* J. R. Lauder. A preliminary . . . break-up and freeze-up . . . *1957*. No. 50001.

52675. LAUGHLIN, WILLIAM SCEVA, 1919– . Blood groups of the Anaktuvuk Eskimos, Alaska. (Alaska. University. Anthropological papers, Dec. 1957, v. 6, no. 1, p. 5–16, tables.) 16 refs.

A study of 43 members of this village for antigens of the A, A_1, B, O system, the MN system and three antigens of the Rhesus system. The presence of blood type B has been established for this group; this they share with other western Eskimos as well as a high proportion of

type A. The Indians of Alaska and the Mackenzie River lack B or have an extremely small amount. The study was carried out Dec. 17–24, 1955 at the Arctic Aeromedical Laboratory, Ladd Air Force Base, Alaska.

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52676. LAUGHLIN, WILLIAM SCEVA, 1919– . Blood groups of the Anaqtuavik Eskimos, Alaska. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958, p. 594.)

Abstract of a paper on the results of a blood-typing test sponsored by the Arctic Aeromedical Laboratory, Ladd Air Base and conducted in Dec. 1955 among a group of these Eskimos in the Brooks Range. Forty-three members of the 72-person isolate were typed for the presence of antigens of the ABO, MN and Rh systems. Phenotype distribution showed a higher than expected frequency of A_1 and of B, a fact attributed to a selective migration of coastal Eskimos and not to a genetic drift. No evidence of Indian or European admixture was found (No. 46264). ***Copy seen:*** DSI.

52677. LAUGHLIN, WILLIAM SCEVA, 1919– . Neo-Aleut and Paleo-Aleut prehistory. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958. p. 516–30, diagrs., tables.) 19 refs.

Compares the skeletal records and associated artifacts to determine the factors of foreign immigration versus local evolution in cultural changes, taking as test case the finds from Chaluka, Umnak Island. The differences in workmanship and type of stone artifacts (weights, projectile points, knives, etc.) found at different excavation levels suggest a change in population stock. A change from dolichocephaly to brachycephaly is noted corresponding to the general trend toward brachycephaly among Aleuts and Eskimos. An immigration from the west about 4,000 years ago (figure based on radio-carbon dating) is considered likely for the original occupancy of the island by dolichocephalic Paleo-Aleuts or proto-Aleut-Eskimos and a later (unspecified) arrival of a brachycephalic Neo-Aleut variant from the east is suggested. Comparisons are drawn between the cultural and anthropological developments of the Aleuts and Greenlandic Eskimos. The Chaluka excavations provide a minimum date of 2000 B.C. for the evolution of boats and establishment of sea-mammal hunting among Eskimos, as the settlement of the island presupposes the existence of a marine economy. ***Copy seen:*** DSI.

LAUGHLIN, WILLIAM SCEVA, 1919– , *see also* Marsh, G. H., *and* W. S. Laughlin. Human anatomical knowledge . . . Aleutian Islanders. *1956.* No. 53149.

52678. LAUGHLIN, WINSTON M., *and others.* Fertilizers for Alaska; general recommendations 1958–1959. College, Jan. 1958. 8 p. (Alaska. University. Extension Service. Circular 513 rev.) *Other authors:* R. L. Taylor, M. F. Babb, A. H. Mick, *and* C. H. Dearborn.

Lists by crop, the most effective ready-mix fertilizer, amount/acre, methods of application, and directions for home mixes; based on the needs of Alaskan soils. Starter solutions and greenhouse and garden crops are included, also estimated acre costs based on 1957 prices. Revision of No. 35811. ***Copy seen:*** DA.

52679. LAURITZEN, C. Untersuchungen über den Einfluss von ACTH und Cortisonderivaten auf die basale Körpertemperatur der Frau. (Zentralblatt für Gynäkologie, 1957. Bd. 79, Heft 47, p. 1829–33, illus.) 6 refs. Text in German. ***Title tr.:*** Investigations on the effect of ACTH and cortisone derivatives upon the basal body temperature of women.

ACTH and glycocorticosteroids in therapeutic doses lowered basal temperature in women. They also were found to act antagonistically to progesterone and desoxycorticosteron by lowering temperature increase produced by them. Lowering of temperature is possible during all phases of the cycle and in pregnancy. ***Copy seen:*** DNLM.

52680. LAURITZEN, KNUD. Polar navigation, ships for polar operation. (Shipping world and world shipbuilding, Jan. 9, 1957. v. 136, no. 3315, p. 39–41, 54, diagrs., illus.)

Design features and operating characteristics of the Danish ice-strengthened ships *Kista Dan*, *Magga Dan*, and *Thala Dan* are described. The vessels are capable of working in the ice without assistance from ice-breakers. The hulls are egg-shaped to reduce ice pressure and all are equipped with twin radars to facilitate navigation in the ice. The economic risk involved in ships of this

design is mentioned. Classification of ice-strengthened vessels by Lloyds register is compared with that (superior) of the Finnish Board of Navigation (Söfartsstyrelsen). ***Copy seen:*** DLC.

52681. LAURSEN, DAN. Kampen om Nordpolen; et decenniums undersøgelser i Polarbassinet. (Grønland, Feb. 1957. nr. 2, p. 57–64, illus., maps.) Text in Danish. ***Title tr.:*** The struggle for the North Pole; ten years' investigations in the polar basin.

Contains a general survey of Russian and American exploration, particularly the work done on drifting ice floe and ice island stations. ***Copy seen:*** DLC.

LAURSEN, DAN, *see also* Petersen, J. C. A. Ujuâts dagbøger . . . 1894–1935 . . . *1957*. No. 53953.

LAURY, M. C., *see* Chevillard, L., *and others*. Action comparée de quelques vasodilatateurs . . . *1958*. No. 50228.

LAUZIER, L., *see* Hachey, H. B., *and others*. Oceanographic features of submarine topography. *1956*. No. 51470.

52682. LAVERDIÈRE, CAMILLE. M. Albert Courtemanche, nouveau secrétaire de l'ACFAS. (Revue canadienne de géographie, Jan.–Mar. 1957. v. 11, no. 1, p. 58–60.) 4 refs. Text in French. ***Title tr.:*** Mr. Albert Courtemanche, new Secretary of ACFAS [Association canadienne-française pour l'Avancement des Sciences].

Biographical sketch of this Canadian ecologist and biogeographer, whose studies include postglacial history of vegetation, climate, and lake evolution in northern Quebec since 1952 through pollen analyses of peat bogs.

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52683. LAVERDIÈRE, CAMILLE. M. Jacques Rousseau, le premier directeur du Musée de l'Homme. (Revue canadienne de géographie, Jan.–Mar. 1957. v. 11, no. 1, p. 56–58.) Text in French. ***Title tr.:*** Mr. Jacques Rousseau, first Director of the Musée de l'Homme.

Biographical sketch of the former Director of the Montreal Botanical Garden (1944–1956) appointed director of this museum in Ottawa. Some of his more than 400 publications in botany, ethnology, history, linguistics and geography (many on arctic areas) are mentioned; his positions in various scientific organizations and the UN. ***Copy seen:*** DLC.

52684. LAVERDIÈRE, CAMILLE. Une des dernières lettres de Claude Desgoffe. (Revue canadienne de géographie, Apr.–Sept. 1957. v. 11, no. 2–3, p. 179–80.) 3 refs. Text in French. ***Title tr.:*** One of the last letters of Claude Desgoffe.

Quotes a letter written Apr. 1955 by this French ethnologist and anthropologist who died in the Belcher Islands in Aug. 1955, proposing an article on place names in the Belcher Islands and the Port Harrison-Great Whale River area on east coast of Hudson Bay. Desgoffe mentions that he collected about 100 names (none given) during his 1954 trip (No. 39520). Author also lists four publications by Desgoffe.

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LAVERDIÈRE, CAMILLE, *see also* Dansereau, P. M. Bibliographie . . . Dansereau . . . *1957*. No. 50441.

LAVRENEV, ÎU. B., *see* Ginzburg, A. I., *and others*. Geologiîa mestorozhdeniĭ redkikh élementov . . . *1958*. No. 51198.

52685. LAVRENKO, EVGENIĬ MIKHAĬLOVICH, 1900– , *and* V. B. SOCHAVA. Pamîti Genrietty Ippolitovny Poplavskoĭ. (Botanicheskiĭ zhurnal, July 1957. v. 42, no. 7, p. 1115–20, port.) 60 refs. Text in Russian. ***Title tr.:*** In memoriam. Genrietta Ippolitovna Poplavskaîa.

Contains a brief biography of this plant geographer and plant ecologist, with a list of her works. Her expeditions to Kola Peninsula and Siberia, and achievements in the study of ecology of alpine arctic plants (No. 13724 and 25207) are noted. ***Copy seen:*** DLC.

52686. LAVRENT'EV, MIKHAIL ALEKSEEVICH, 1900– . Novye nauchnye t̂sentry v Sibiri. (Geografiîa v shkole, May–June 1958. god 21, no. 3, p. 63.) Text in Russian. ***Title tr.:*** New scientific centers in Siberia. Summarized from *Pravda*, Nov. 29, 1957.

Notes organization of the Siberian Division of the Academy of Sciences, plans for 13 scientific research institutions at Novosibirsk, nine institutes at Irkutsk, an institute of diamonds in Yakutsk and an oceanographic institute at Vladivostok.

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52687. LAVRENT'EV, MIKHAIL ALEKSEEVICH, 1900– . Razvitie nauki v Sibiri i na Dal'nem Vostoke. (Akademiîa nauk SSSR. Vestnik, Dec.

1957. god 27, no. 12, p. 3–7.) Text in Russian. ***Title tr.:*** The development of science in Siberia and Far East.

Abridged text of a paper (to the General Meeting of the Academy on Nov. 2, 1957), on the setting up of the Siberian Division of the Academy of Sciences. The decision to organize the Siberian Division and to build a town of scientists in the vicinity of Novosibirsk was taken by the Council of Ministers of the U.S.S.R. on May 18, 1957; the West Siberian, East Siberian, Yakut and Far East Branches of the Academy, its Sakhalin Complex Scientific Research Institute, and its Institute of Physics in Krasnoyarsk are to come under the Siberian Division; 12 new scientific research institutes, a library with space for four million volumes, a printing plant with a production capacity of 100,000 pages a year, are to be established in Novosibirsk, and another scientific center of the Siberian Division is to be created at Irkutsk. The functions of the new scientific institute place emphasis on mathematics, physics and technology.

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LAVRENT'EV, MIKHAIL ALEKSEEVICH, 1900– , *see also* Akademiîa nauk SSSR. Sozdanie krupnogo nauchnogo t͡sentra . . . *1957*. No. 49159.

LAVRENT'EV, MIKHAIL ALEKSEEVICH, 1900– , *see also* Chernenko, A. K. Pervoe obshchee sobranie Sibirskogo otdeleniîa Akademii . . . *1958*. No. 50207.

52688. LAVRENT'EVA, M. A. Znachenie leninskogo kooperativnogo plana dlîa osushchestvleniîa nekapitalisticheskogo puti razvitiîa malykh narodov Severa k sot͡sializmu. (Leningrad. Universitet. Vestnik, 1957. god 12, no. 14, p. 20–33.) 32 refs. Text in Russian. Summary in English. ***Title tr.:*** The importance of Lenin's Cooperative Plan for realization of the non-capitalistic development of the small northern peoples toward socialism.

The Cooperative Plan, drafted by Lenin in 1923 as an instrument of socialization and collectivization of the Russian farm economy is summarized; pre-Revolutionary living conditions of northern peoples are characterized and the results of the Soviet system of "integral" (many-sided) cooperation in the North are praised. Mistakes of local party authorities who pressed too hard and too fast to bring the primitive economy of small peoples into the frame of a collective economy are noted (p. 27) as well as the decisions of the central authorities against these errors. The "Simplest Production Associations" (Prosteĭshie proizvodstvennye ob"edineniîa, PPO) for gradual transition from an individual to a collective economy in the North are described (p. 28–32) and data are given to demonstrate success of collectivization in several national districts.

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52689. LAVROV, I. P. Ob izobrazitel'nom iskusstve nivkhov i aĭnov; iz materialov Amuro-Sakhalinskoĭ ėkspedit͡sii. (Akademiîa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniîa, 1949. vyp. 5, p. 32–39, illus.) 7 refs. Text in Russian. ***Title tr.:*** Pictorial art of the Gilyaks and Ainu; from the materials of the Amur-Sakhalin expedition.

Includes the description of Gilyak "bear"-cups (nikhyr) and discusses the folkloristic and/or votive meaning of their sculptured ornamentation. The pictographic Ainu sticks (ikusini) with bear head decorations are compared to engraved Chukchi and Eskimo bone tablets used to record the number of killed game.

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52690. LAVROV, N. Obogashchenie okhotnich'e-promyslovoĭ fauny za 40 let. (Okhota i okhotnich'e khozîaĭstvo, July 1957. no. 7, p. 5–8, illus.) Text in Russian. ***Title tr.:*** Forty years of enriching the hunting industry fauna.

Account of Soviet work on the improvement and extension of commercial fauna in the U.S.S.R. by wildlife conservation, regulation of hunting and by acclimatization of valuable furbearers and game birds. Some 21,000 animals were released in 1953 and in the course of 40 years, some 241,000 in 36 species. The best successes in the North were achieved in acclimatization of muskrat, American mink, beaver and sable.

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52691. LAVROV, V. V. Ėlektroprovodnost' l'da. (Problemy Arktiki, 1958. vyp. 3, p. 79–82, table, graphs, diagr.) 2 refs. Text in Russian. ***Title tr.:*** Electrical conductivity of ice.

Current measured in circuits containing samples of tapwater ice 1.5–1.7 cm. thick at temperatures from 0° to −25° C. ranged from 0.018 to 2.35 ma.

for impressed voltages of 3.8–376 v. A uniform attenuation, which leveled off at 2% of the initial current at three hrs., was caused by the formation of space charges near the electrodes. Repeated testing after 15–16 hr. rest produced only 50% of the initial current in the first tests and the attenuation rate was higher. A delayed (5–10 min.) increase in conductivity of about 25–30% was observed under the influence of light from a standard electric bulb (150 watt). The logarithmic relation between specific conductivity and temperature was linear, varying from 0.6×10^7 ohm/cm. at 0° C. to 21×10^7 at −25° C. Inclusions of 0.05% NaCl resulted in a 100-fold or greater increase in conductivity.—From SIPRE. ***Copy seen:*** DLC.

52692. LAVROV, V. V. Ĭavlenie obrazovaniĭa vnutrivodnogo l'da kak profsess umnozheniĭa kristallicheskikh zarodysheĭ. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 91–97.) 14 refs. Text in Russian. ***Title tr.:*** Formation of submarine ice by growth of crystal nuclei.

Ice-crystal formation and growth in supercooled water is discussed: crystals received from the atmosphere and river banks and the formation of bank ice are responsible for the crystallization of supercooled water rather than spontaneous crystal formation. Slight supercooling (less than 0.2° C.) favors melting of crystal facets to create ice discs; a chain reaction occurs after the appearance of the first crystals.—From SIPRE.

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52693. LAVROV, V. V. K voprosu obrazovaniĭa vnutrivodnogo l'da. (Meteorologiĭa i gidrologiĭa, May 1957, no. 5, p. 43–45.) Text in Russian. ***Title tr.:*** The formation of underwater ice.

The methods suggested by Piotrovich for controlling underwater ice are discussed on the basis of experimental data characterizing the formation of ice crystals in water supercooled to −0.2° C. The appearance of an ice crystal in supercooled water causes the formation of numerous crystals around it, and such formation is not associated with disintegration of an initially formed crystal. Maximum possible force of ice-crystal impact on obstacles cannot exceed 144 gm./sq. cm., i.e., much less than ice strength near the melting point. Artificially increasing the number of crystallization nuclei as recommended by Piotrovich cannot be considered as an effective countermeasure because the intensity of underwater-ice formation depends on heat losses in the stream, not on crystal number.—From SIPRE.

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52694. LAVROV, V. V. Modelirovanie l'da. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 185–91, illus.) 2 refs. Text in Russian. ***Title tr.:*** Ice models.

"The preparation of models similar in structure and strength to natural ice is discussed, and techniques used in the laboratory of the Arctic Institute are described in detail, including methods for reducing crystal dimensions and sample strength to scale. Snow crystals not larger than 0.8 mm. in diam. evenly distributed on the surface of supercooled water (100–110 gm. of snow/sq. m.) produced homogenous ice samples. Similar effects were obtained instantaneously with moving air at −30° to −35° C. NaCl was added to decrease sample strength. Manipulation of water salinity, the number of freezing nuclei, and temperature permitted production of ice with bending strengths ranging from several tenths kg. to 20 kg./sq. cm."—SIPRE. ***Copy seen:*** DLC.

52695. LAVRUSHIN, IU. A. Sledy dvukratnogo prebyvaniĭa l'dov maksimal'nogo oledeneniĭa na vostochnoĭ okraine Zapadno-Sibirskoĭ nizmennosti i nekotorye osobennosti morennykh otlozheniĭ ėtoĭ oblasti. (Akademiĭa nauk SSSR. Komissiĭa po izucheniĭu chetvertichnogo perioda. Biŭlleten', 1957. no. 21, p. 119–25, illus., cross-sections, map.) 4 refs. Text in Russian. ***Title tr.:*** Traces of two stages of ice of maximal glaciation on the eastern limits of West Siberian lowland and some features of morainal deposits of this region.

Report of author's investigation in 1954 on former glaciation in the middle and lower course of the Yenisey River. The area between the tributaries Sarchikha and Bakhta (63°17′ N. 89°33′ E.) was selected. Cross-section from the fourth stream terrace, near the mouth of the Bakhta, is presented and described in detail. Two horizons of morainal deposits are distinguished; the differences characterized and comparison made with other cross-sections in the northern part of this area. Differences of the moraine deposits are attributed to two stages of the same maximal glaciation. ***Copy seen:*** DLC.

LAVRUSHIN, IU. A., *see also* Arkhipov, S. A., *and* IU. A. Lavrushin. K voprosu o stoke r. Eniseĭa . . . *1957*. No. 49374.

LAVRUSHIN, IU. A., *see also* Arkhipov, S. A., *and* IU. A. Lavrushin. Nekotorye osobennosti stroeniĭa bichevnikov . . . *1958*. No. 49375.

52696. LAW, PHILLIP. Australian National Antarctic Research Expedition buildings in Antarctica. (Polar record, Jan. 1957. v. 8, no. 55, p. 329–32, 4 illus.)

The "Mark I" hut, erected in 1950 utilized "Onazote" insulating material panels assembled by bolting to the frame so as to compress separating strips of rubber. The "Mark II", 1952 dispensed with the frame of the "Mark I" and had panels bolted together with brackets. The "Mark III" was modified to include clamping rods tightened with bolts at the ends, perspex "box" windows filled with dried air and sealed, entry hatches in the roof, uninsulated "cold porch", cheerful color scheme and well designed furnishings, exhaust fan ventilation and cokestove heating, aluminum sheathing of outer surfaces. The "Mark IV" hut built in 1955 stressed economy of space and individual comfort of the men; 27 ft. long, 15 ft. wide externally and 9 ft. high internally, it has a flat roof. A description of the hut is given. Erection time of most huts was usually one day.

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52697. LAWRENCE, DONALD BUERMANN, 1911– . Glaciers and vegetation in southeastern Alaska. (American scientist, June 1958. v. 46, no. 2, p. 89–122, illus., diagrs., maps, graph.) 69 refs.

Considers glacier behavior on the basis of recent studies of glaciers, botanical evidence, sedimentary deposits, and sea levels. Glaciers studied in the United States, southwest Norway, and in Southeast Alaska at the Juneau Ice Field and Glacier Bay, showed a maximum advance in the 17th and 18th centuries. This "little ice age" studied in detail may elucidate why glaciation occurs. A period of low sunspot activity coinciding with this period of advance suggests decreased solar energy as a factor in glacier growth. Other hypotheses are mentioned. Vegetation development following ice recession is analyzed, and detailed observations made at Glacier Bay are described.

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52698. LAWRENCE, WILLIAM E. Some ecotypic relations of *Deschampsia caespitosa*. (American journal of botany, June 1945. v. 32, no. 6, p. 298–314, 11 illus.) 26 refs.

Study of 21 individuals representing eight races of *D. caespitosa*, a grass which came from Lapland, Finland, southern Sweden and North America. All races are cytologically uniform, having 2n=26 chromosomes. Five ecotypes are recognized, including a subarctic ecotype from Lapland; all five belong taxonomically to one subspecies, *D.c.* ssp. *genuina*. Three subspecies are recognized in western North America: *genuina*, occurring from central Alaska and Yukon southward to California; *beringensis*, strictly coastal from Kamchatka, the Commander and Pribilof Islands, along Aleutian chain to California and *holciformis* from Oregon to California. All these ecotypes came from climatically different areas and they may be referred to as climatic ecotypes.

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52699. LAWS, R. M. Polarity of whale ovaries. (Nature, *London*, May 18, 1957. v. 179, no. 4568, p. 1011–12, illus.) 7 refs.

Report based on an investigation of several hundred specimens each of fin whales (*Balaenoptera physalus*) and blue whales (*B. musculus*). The corpora albicantia were found grouped towards the anterior pole of the ovary. This condition is more patent in the fin whale; it implies that ovulation generally takes place from the anterior part of the ovary. Similar conditions exist in the mare, which supports the idea of a common origin of whales and ungulates.

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52700. LAWTON, ELVA. A revision of the genus *Lescuraea* in Europe and North America. (Torrey Botanical Club. Bulletin, July–Aug., Sept.–Oct. 1957. v. 84, no. 4, p. 281–307, no. 5, p. 337–55, 118 illus.) 83 refs.

Contains a discussion and description of this moss genus, with keys to subgenera and species. *Lescuraea*, *Pseudoleskea* and *Ptychodium* are united, and eleven species and ten varieties and forms found in Europe and North America are described under the genus *Lescuraea*. Of two new taxa described, *L. iliamniana* is registered at Iliamna Bay, Alaska. Six other species and five varieties native to Alaska, Aleutian Islands, northern Norway and Sweden and northern Canada, are included. ***Copy seen:*** DLC.

52701. LAZAREV, M. S. Raboty po akklimatizat͡sii dal'nevostochnykh lososeĭ v basseĭne Barent͡seva morʹi͡a. (Rybnoe khozi͡aĭstvo, Feb. 1958. god 34, no. 2, p. 20–22, table.) Text in Russian. ***Title tr.:*** Acclimatization of Far Eastern salmons in the Barents Sea basin.

Author discusses the failure to transplant some Far Eastern species of salmon into rivers of the White and Barents Sea basins. The temperature of the hatchery water and poor shipping from the Far East were found to be responsible for the failures. ***Copy seen:*** DLC.

52702. LAZEBNIKOV, A. Komsomol'sk-na-Pechore. (Vokrug sveta, Nov. 1957, no. 11, p. 61, illus.) Text in Russian. ***Title tr.:*** Komsomol'sk-on-Pechora.

In summer 1956, a new town of this name was established in the Troitsko-Pechorsk District of Komi A.S.S.R. at large fuel deposits recently discovered and being developed to supply the Ural industrial regions. Though the town does not yet appear on maps, its population runs to thousands. ***Copy seen:*** DLC.

52703. LAZURKIN, V. M. Geologicheskoe stroenie raĭona nizhnego techeni͡a reki Leny, Lenskai͡a vpadina. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologi͡a Sovetskoĭ Arktiki, 1957. p. 461–83.) Text in Russian. ***Title tr.:*** Geological structure of the lower reaches of the Lena River, Lena depression.

Outlines the relief, stratigraphy and tectonics of this region, which lies between the Siberian platform and the folded Verkhoyansk Range (approx. 66°33′–70°40′ N. 123°–126° E.). The study is based on field investigations and geologic mapping in scale 1:1,000,000. Stratigraphy: Permian formations, Jurassic well represented and Cretaceous systems; other formations, which appear only on the periphery of the Lena depression are described by B. V. Tkachenko (and others) and by V. N. Sokolov, q.q.v. Tectonic development is outlined. Coal occurrences in the Bulun and Zhigansk region are noted; oil prospects are good. ***Copy seen:*** DLC.

52704. LEADMAN, C. M. The tellurometer in Frobisher Bay. (Canadian surveyor, Oct. 1957. v. 13, no. 10, p. 672.)

A 7,600-ft. base line at Frobisher Air Base on Baffin Island was measured in 1957 with invar tape and with tellurometer; the results differed 0.1 ft.; the measurements took, respectively, two days, and one-half hour. Break-down of the tellurometer halted attempts to expand a triangulation net from this line down the Bay. ***Copy seen:*** DGS.

LEAHEY, ALFRED, *see* Day, J. H., *and* A. Leahey. Reconnaissance soil survey . . . *1957*. No. 50470.

LEAHY, R. G., *see* Livingstone, D. A., *and others.* Effects . . . arctic environment . . . origin and development . . . lakes. *1958*. No. 52872.

LEATHERS, H. W., *Jr., see* Beigbeder, P. A., *and others.* Greenland op. 1955–56. *1957*. No. 49611.

52705. LEBEDEV, ALEKSEĬ PETROVICH. K geokhimii ugleroda v Sibirskikh trappakh i nekotorykh drugikh osnovnykh gornykh porodakh SSSR. (Geokhimi͡a, 1957, no. 2, p. 161–65, table.) 4 refs. Text in Russian. Summary in English. ***Title tr.:*** On the geochemistry of carbon in Siberian traps and in some other basic rocks of the U.S.S.R.

Presents the results on distribution of free carbon in various investigated Siberian trap formations in the Nizhnyaya and Podkamennaya Tunguska basins. The Yalping-N'er massif of the Northern Ural and Dzhugdzhur in the Amur region were also partly investigated. Analyses are made and data presented on: olivine diabases, diabase-pegmatites, tufa basalts, hybrid diabases and autometamorphic diabases. "The results obtained indicate an increase of the free carbon content from abyssal to hypabyssal rocks and from basic to acid rocks." ***Copy seen:*** DLC.

52706. LEBEDEV, ALEKSEĬ PETROVICH. O poslenizhneĭurskikh trappovykh intruzi͡akh nizov'ev Podkamennoĭ Tunguski. (Akademi͡a nauk SSSR. Doklady, Oct. 1, 1957. t. 116, no. 4, p. 665–66.) 4 refs. Text in Russian. ***Title tr.:*** On the post-Lower Jurassic trap intrusions of the lower reaches of the Podkamennaya Tunguska River.

Trap intrusions in three different localities near the river mouth were studied. The following fossil microflora was found in Jurassic sandstones and argillites: *Pallenites cycadoformis, P. gingkoformis, P. subrotundus, P. involutus* and pollen of Podocarpaceae, Gingkoceae and Bennetitales. Dike-like traps were encountered in coal-bearing argillites, siltstones and sandstones in some out-

crops on the river banks. They consist of small-grained olivine dolerites, with inclusions of chlorite and chalcedony, and in some places of olivine diabases. The trap intrusion, it is concluded, took place after formation of Middle Jurassic coal deposits in the western marginal Tungusska syncline. ***Copy seen:*** DLC.

52707. LEBEDEV, ALEKSEĬ PETROVICH. O s"ezde mezhdunarodnoĭ assot͡siat͡sii vulkanologii v g. Toronto, Kanada, v sentîabre 1957 g. (Akademiîa nauk. Izvestiîa, ser. geologicheskaîa, Feb. 1958. god 23, no. 2, p. 100–106.) Text in Russian. ***Title tr.:*** On the Congress of the International Association of Volcanology held in September, 1957, in Toronto, Canada.

Notes among other topics dealt with, reports by G. S. Gorshkov on the eruption of Bezymyannyy in Kamchatka on Oct. 22, 1955; S. I. Naboko on exhalation of several Kamchatka-Kuril volcanoes; A. P. Lebedev on paleovolcanic formations in the Tungusska basin; K. G. Shirinîan on kimberlites in Yakutia.

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52708. LEBEDEV, ALEKSEĬ PETROVICH. O tipakh different͡siat͡sii v trappakh Sibirskoĭ platformy. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Feb. 1957. god 22, no. 2, p. 55–74, tables, diagrs., map.) 35 refs. Text in Russian. ***Title tr.:*** Types of differentiation in trap rocks of the Siberian platform.

Describes various types of trap intrusions and their regional distribution, and examines procedures of differentiation mainly in Nizhnyaya and Podkamennaya Tunguska, Angara, Kotuy, and upper Vilyuy River basins. According to location of the occurrences, two main types of differentiation processes, abyssal and local, are distinguished and treated in detail. Physical-chemical factors of differentiation are reviewed and the roles of liquation, assimilation and contamination are outlined.

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52709. LEBEDEV, ALEKSEĬ PETROVICH. The Tunguska paleovolcanic formation. (*In:* International Union of Geodesy and Geophysics. Association of Volcanology. Bulletin volcanologique, *pub.* Naples, 1958. série 2, t. 19, p. 135–41. Eleventh General Assembly, Toronto, 1957.)

Describes briefly and in general, Upper Paleozoic-Lower Mesozoic, volcanic formations of the so-called Tungusska basin in the western part of the Siberian platform. Widespread volcanic activity occurred during the Upper Permian-Lower Triassic period over much of the basin; a second great phase of volcanic activity, the Triassic, was less widespread. Volcanism in this region and period was prolonged, and manifested itself in such different forms as explosions, fissure eruptions, and subvolcanic sill intrusions. Pyroclastic rocks of varied composition, size and shape were erupted; predominantly basaltic eruptions, resembling those of Hawaiian volcanoes, also took place. The close relationship is stressed between the type of volcanism, the composition of the corresponding rocks and the type of tectonic movements in the corresponding period. ***Copy seen:*** DGS.

52710. LEBEDEV, D. V., *and* S. IU. LIPSHITS. Bibliograficheskiĭ spravochnik po zhurnalu "Sovetskaîa botanika", 1933–1947 gg. (Botanicheskiĭ zhurnal, Dec. 1957. t. 42, no. 12, p. 1739–1857.) Text in Russian. ***Title tr.:*** Bibliographical index to the journal *Sovetskaîa botanika*, 1933–1947.

Contains an alphabetical list of the papers published in 15 volumes of this important journal. Reviews (p. 1828–51) and personalia (p. 1852–55) are also indexed, and a list is added (p. 1856–57) of new genera and species described in the journal. Papers dealing with arctic regions of the U.S.S.R. are listed under Gorodkov, Rabotnov, Savich-Liubit͡skaîa, Sochava, Tolmachev, and others.

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52711. LEBEDEV, V. Osobennosti zapuska dvigateleĭ Tu-104 zimoĭ. (Grazhdanskaîa aviat͡siîa, Dec. 1957. god 14, no. 12, p. 18.) Text in Russian. ***Title tr.:*** Winter-starting characteristics of the Tu-104 engines.

Contains practical advice for starting procedures at temperatures to −40° C. A sudden, dangerous rise in gas temperature caused by ignition of surplus fuel accumulated in the ignition chamber and occurring when the turbo-starter is shifted from fuel to kerosene, can be avoided by a rapid, repeated "burn-out" of the starter at 7–15,000 rpm. The most expeditious way to increase oil viscosity is to preheat the oil tank and feed-lines to the pump and starter with the airport heater. ***Copy seen:*** DLC.

52712. LEBEDEV, V. D. Kormovaîa baza ezdovykh laek. (Okhota i okhotnich'e khoziaĭstvo, July 1957, no. 7, p. 34–35.) Text in Russian. ***Title tr.:*** A source of food for draught dogs.

Blackfish (*Dallia pectoralis*) which occurs in Alaska and Chukotka, is widely used, as food for men and dogs. Its biology is sketched, noting its cold resistence; its acclimatization in all tundra regions of U.S.S.R is strongly recommended. ***Copy seen:*** DLC.

52713. LEBEDEV, V. D. Muskusnyĭ ovtsebyk. (Okhota i okhotnich'e khoziaĭstvo, Nov. 1958. god 4, no. 11, p. 27, illus.) Text in Russian. ***Title tr.:*** Musk ox.

Note on the musk ox and its distribution; possibility of acclimatizing this animal in Taymyr Peninsula, northeast Siberia, Northern Ural and on the southern island of Novaya Zemlya is discussed. ***Copy seen:*** DLC.

LEBEDEV, V. I., *see* Gerasimovskiĭ, V. I., *and* V. I. Lebedev. O sootnoshenii stroĭtsiia i kal'tsiia . . . . Lovozerskogo massiva. *1958.* No. 51153.

52714. LEBEDEVA, E. P. Opyt sravnitel'no-morfologicheskogo analiza nazvaniĭ zhivotnykh v man'chzhurskom i ėvenkiĭskom iazykakh. (Akademiia nauk SSSR. Institut iazykoznaniia. Doklady i soobshcheniia, 1958. no. 11, p. 36–45.) 2 refs. Text in Russian. ***Title tr.:*** A tentative comparative-morphological analysis of animal names in the Manchu and Evenki languages.

Animal names formed by means of now extinct suffixes constitute one of the oldest lexic layers of Manchu and therefore aid detection of linguistic affinities between these two most divergent Tungus-Manchurian languages. The use of analogous suffixes in the formation of animal terminology is considered an indication of close genetic kinship between the two languages. ***Copy seen:*** DLC.

LEBEDEVA, N. E., *see* Khitarov, N.I., *and others.* Khimicheskiĭ sostav . . . *1958.* No. 52264.

52715. LEBEDINSKAIA, G. V. Iubileĭ M. M. Gerasimova. (Sovetskaia ėtnografiia, 1958, no. 2, p. 134–35, port.) Text in Russian. ***Title tr.:*** Anniversary celebration of M. M. Gerasimov.

Laudatory review of the work of this Soviet sculptor, anthropologist and archeologist on the occasion of his 50th birthday. His excavation of the upper paleolithic site of Mal'ta is noted. ***Copy seen:*** DLC.

52716. Le BLANC, JACQUES ARTHUR, 1921– . Chlorpromazine hypothermia in rats. (Journal of applied physiology. Sept. 1958. v. 13, no. 2, p. 237–38, illus.) 5 refs.

The small decrease in heat production and insignificant increase in heat loss cannot explain the marked hypothermia produced by this drug. Present experiments indicate that postural changes play an additional role in the process. ***Copy seen:*** DNLM.

52717. Le BLANC, JACQUES ARTHUR, 1921– . Effect of chlorpromazine on swimming time of rats at different temperatures. (Society for Experimental Biology and Medicine. Proceedings, July 1958. v. 98, no. 3, p. 648–50, illus., table.) 2 refs.

Report on experiments in water of 32°, 28°, 19° and 9° C. At 9° the adverse effect of cold on swimming time was so marked that chlorpromazine showed no action. At 19° or 28° C. swimming time was much reduced by this drug due probably to its sedative action. ***Copy seen:*** DLC.

52718. Le BLANC, JACQUES ARTHUR, 1921– , *and* F. J. ROSENBERG. Effect of dibenamine and pyribenzamine on hypothermia of chlorpromazine. (Society for Experimental Biology and Medicine. Proceedings, Jan. 1958. v. 97, no. 1, p. 95–97, illus.) 13 refs.

Account of experiments with white male rats. The two drugs showed only slight hypothermic effect but they potentiated the cooling action of chlorpromazine by 3°–4° C. When given simultaneously dibenamine and pyribenzamine antagonized one another. ***Copy seen:*** DLC.

52719. Le BLANC, JACQUES ARTHUR, 1921– . Effect of environmental temperature on energy expenditure and caloric requirements. (Journal of applied physiology, Mar. 1957. v. 10, no. 2, p. 281–83, tables.) 18 refs.

Caloric requirements of subjects living and participating in simulated military exercises at Fort Churchhill, were found to be 3,900 cal./man/day. No correlation between environmental temperature

and caloric requirements was observed except a stimulating effect an appetite.

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52720. Le BLANC, JACQUES ARTHUR, 1921– , *and* F. J. ROSENBERG. Hypothermic effect of chlorpromazine, histamine and serotonin, and acclimatization to cold. (Society for Experimental Biology and Medicine. Proceedings, Nov. 1957. v. 96, no. 2, p. 482–83, illus.) 3 refs.

Rats exposed to 6° C. for 0 to 28 days were administered the three mentioned substances at 21° C. ambient temperature. Response to chlorpromazine was greatly reduced in animals acclimatized to cold for seven and 28 days. Similarly, animals treated with histamine or serotonin showed a lesser fall in body temperature than untreated controls.

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52721. Le BLANC, JACQUES ARTHUR, 1921– , *and* F. J. ROSENBERG. Local and systemic adaptation to topical cold exposure. (Journal of applied physiology, Nov. 1957. v. 11, no. 3, p. 344–48, illus., table.) 14 refs.

Repeated exposure of the hand to a cold bath (3° C.) produced a gradual disappearance of blood pressure drop observed after the bath. Additional experiments suggest this to be due to a systemic change, and the fall in blood pressure due to a histamine-like substance liberated by the cooled hand.

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52722. Le BLANC, JACQUES ARTHUR, 1921– , *and* F. J. ROSENBERG. Mast cell changes in animals exposed to cold. (Society for Experimental Biology and Medicine. Proceedings, Oct. 1957. v. 96, no. 1, p. 234–37, illus., table.) 11 refs.

Report on investigation on the number of mast cells in the skin (ear, abdomen) and in the peri- and intervascular mesentery of rats exposed to 2° or 6° C. for two or four weeks. The increase in the number of cells in the abdominal skin and the changes in the mesentery are considered to be systemic effects of cold; the decrease in the ear, local effects.

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52723. Le BLANC, JACQUES ARTHUR, 1921– . Prefeeding of high fat diet and resistance of rats to intense cold. (Canadian journal of biochemistry and physiology, Jan. 1957. v. 35, no. 1, p. 25–30, tables.) 12 refs.

Animals fed a diet containing 17% lard or oil, showed a slower and less pronounced drop in body temperature when exposed to cold, than normally fed controls. This higher resistance to cold is claimed to be not due to fat reserves serving as source of energy or as an insulator but to fat-induced changes in the organism permitting higher rates of heat production. ***Copy seen:*** DNLM.

52724. Le BLANC, JACQUES ARTHUR, 1921– . Role of adrenaline and noradrenaline on response of cold-acclimatized animals to chlorpromazine. (Society for Experimental Biology and Medicine. Proceedings, June 1958. v. 98, no. 2, p. 406–407, illus.) 12 refs.

Report on experiments with rats acclimatized for four weeks to cold of 40° F. Acclimatization was found to have an antagonistic effect on CPZ hypothermia and to increase sensitization of tissues to adrenaline and noradrenaline. The latter two substances potentiate the antagonism of acclimatization towards CPZ. Dibenamine abolished this antagonism. ***Copy seen:*** DLC.

Le BLANC, M. FRANCIS, *see* Sullivan, B. J., *and* M. F. Le Blanc. Effect . . . inositol . . . rewarming . . . damage . . . cold injury. *1957.* No. 55222.

52725. Le BLANC, ROBERT G. Scientific activities of the Terrestrial Sciences Laboratory of the Geophysics Research Directorate on Fletcher's Ice Island, T–3. June 6, 1957 to September 25, 1957. (*In:* American Geographical Society. Preliminary reports of the Antarctic and Northern Hemisphere glaciology programs, 1958. p. XIV, 1–3, 2 text maps, 2 diagrs.)

Describes progress of the geophysical program, part of the U.S. National Committee-IGY Project Ice Skate, as carried on by three investigators. Tentative values for location of T–3 are listed; apparent clockwise rotation of 17° was recorded; gravity meter readings were made daily; bathymetric measurements were made; ice temperatures were observed to depths of 30 and 92 ft.; ablation measurements during the thaw period showed a loss of the snow cover and 20 in. of island ice. Surface weather observations were made every six hrs., and upper wind determinations when possible; snow temperature and density were

measured until the snow melted. Several other features were studied, including rock specimens and fauna.

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52726. Le BOURDAIS, ERIC. Developments in Ungava. (Roads and engineering construction, Sept. 1957. v. 95, no. 9, p. 90, 136, illus.)

Notes visit of the German industrialist Alfred Krupp to discuss contract for iron ore supply from Ungava, and, possibly, establishment of Krupp-controlled industries in Canada. Nickel ore deposits discovered in the Ungava Peninsula, some of them rich (preliminary drilling) are mentioned, and comparison is made with the development in the Soviet northland. Ferrying of iron ore from Ungava Bay to a West Greenland port for transshipment abroad is considered feasible; construction of a large airport at Frobisher on Baffin Island is predicted.

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52727. Le BRASSEUR, R. J. Distribution of zooplankton in Dixon Entrance. (Canada. Fisheries Research Board. Pacific Coast Stations. Progress reports, no. 107, Nov. 1956. p. 5–7, maps.)

Account of plankton sampling and temperature-salinity observations made in the summer 1955 in connection with salmon investigations. Plankton was collected to a depth of 100 ft. In its distribution, two areas were discernible, a southern and western quantitatively rich one, and a poorer southern and eastern area. Temperature and salinity showed corresponding differences, further supporting the idea of presence of two distinctive water masses.

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Le BRIE, S. J., *see* Parkins, W. M., *and others*. Induced visceral hypothermia . . . hemorrhagic . . . shock. *1957*. No. 53865.

52728. LECONTE, JOHN LAWRENCE, 1825–1883. Synopsis of Lampyridae of the United States. (American Entomological Society. Transactions, 1882. v. 9, p. 15–72.)

About 150 species are briefly described in the firefly family, some 40 of them as new to science. Three are from Alaska: *Eros hamatus*, *E. simplicipes* and *Podabrus piniphilus*. ***Copy seen:*** DA.

LEDINSKAĬA, N., *see* Polachek, P., *and* N. Ledinskaĭa. Izmeneniĭa perifericheskoĭ nervnoĭ sistemy . . . *1958*. No. 54040.

LEDKOV, VASILIĬ, *see Sibirskie ogni*. Poėty . . . *1957*. No. 54861.

52729. LEDNEV, V. A. Soviet observations in the Norwegian, Greenland and Barents Seas in 1956. (International Council for the Study of the Sea. Annales biologiques, 1956, *pub*. 1958. v. 13, p. 26–27, table.)

Report on investigations carried out by PINRO from several vessels. Temperature and salinity, usually down to 500 m., and other parameters are mentioned, but not given. The value of such investigations for Barents fisheries is stressed.

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52730. LEE, A. J. Hydrographic conditions in the Barents Sea in 1955. (International Council for the Study of the Sea. Annales biologiques 1955, *pub*. 1957. v. 12, p. 13–23, illus., tables, maps.)

A study based on observations of the English R/V *Ernest Holt* during 1955. Seven cruises were made, including the southeastern Barents Sea and sections west and south of Bjørnøya. On each cruise bottom temperatures were taken and continuous thermograph records at 4.5 m. depth. These data are integrated into a general picture and discussed.

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52731. LEE, H. A., *and others*. Keewatin ice divide. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1760–61.) *Other authors:* B. G. Craig *and* J. G. Fyles.

Abstracts paper presented at the Society meeting at Atlantic City, Nov. 1–3, 1957. Describes zone occupied by last glacial remnants extending 400 miles southeast from Hudson Bay at 66° N. to a point 150 miles inland at 61° N. Traces direction of glacial flow and marginal retreat.

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LEE, OWEN S., *see* Weeks, W. F., *and* O. S. Lee. Observations . . . physical properties of sea ice . . . Labrador. *1958*. No. 55964.

52732. LEE, ROY, *and* **W. L. GODSON.** The arctic stratospheric jet stream during the winter of 1955–1956. (Journal of meteorology, Apr. 1957. v. 14, no. 2, p. 126–35, text map, 6 graphs.) 10 refs.

"The existence of an arctic stratospheric jet stream in winter, hitherto largely inferred from mean geostrophic wind sections, is considered on the basis of actual winds for the Canadian arctic

area during the winter of 1955–1956. Temperatures at the 100-millibar level at a number of stations over the Canadian Arctic were examined to throw light on the intensely baroclinic zone below the jet stream. Meridional movements and intensity changes of the jet stream during this winter, as inferred from a statistical study of the 100-mb. temperature field, are in accord with the conventional view that the jet stream is maintained by differential radiational heating and cooling of the ozone layer across the boundary of polar night."—Authors' abstract.

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LEE, ROY, *see also* IUGG. Symposium on polar meteorology. *1958.* No. 51947.

LEE, SIL H., *see* Fedor, E. J., *and others.* Rewarming . . . hypothermia of two to three hours, 1; cardiovascular effects. *1958.* No. 50852.

LEE, SIL H., *see* Fedor, E. J., *and others.* Rewarming . . . prolonged hypothermia. *1957.* No. 50853.

LEE, SIL H., *see* Fisher, B., *and others.* Rewarming . . . hypothermia . . . 2; metabolic effects. *1958.* No. 50901.

LEFTWICH, CHARLES I., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

52733. LE GALLO, C. Lichens des îles Saint-Pierre et Miquelon; première série. (Revue bryologique et lichénologique, 1951. n. sér., v. 21, no. 1–2, p. 144–72, 2 plates.) 91 refs. Text in French. ***Title tr.:*** Lichens of the islands Saint Pierre and Miquelon; first series.

Contains an annotated systematic list of 174 species, varieties and forms, with data on local and total distribution and notes on habitat. At least 70 species are recorded from Labrador, Ungava Bay, Hudson Bay, northern Alaska, Baffin Island and Greenland.

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LEGGET, ROBERT FERGUSON, *see* Crawford, C. B., *and* R. F. Legget. Ground temperature investigations . . . *1957.* No. 50375.

52734. LEHMAN, HENRI. XXXII[e] Congrès international des Américanistes. (Societé des Américanistes. Journal, 1956. n. ser. t. 45, p. 229–34.) Text in French. ***Title tr.:*** The 32nd International Congress of Americanists.

Reviews the activities of the Congress held Aug. 8–14, 1956, in Copenhagen. Nine papers (listed) on arctic ethnology and archeology were presented dealing mainly with Aleuts, Eskimos and Soviet investigations of the Pacific coast area.

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52735. LEHTONEN, H. Om Finlands fjärrkraft-överföring. (Tekniska föreningen i Finland. Förhandlingar, Jan. 1952. årg. 72, nr. 1, p. 11–18, illus., tables, diagr., text map.) Text in Swedish. ***Title tr.:*** Long distance power transmission in Finland.

The greater part of the water power of southern Finland is already utilized; future needs of consumption centers must be supplied increasingly from northern power sources, some 500–700 km. distant. For the transmission, one 480 km., 220 kv. line is completed from Pyhäkoski, Jylhämä, Pälli, and Nuojua power stations on the Ule River, and another 280 km. is under construction. One important general net coordinating privately-owned stations, extends from the Kemi to the Kumo River and includes the Isohaara - Uleåborg - Harjavalta - Helsinki-Kyminlinna lines. A change-over to 380 kv. power transmission for distances over 500 km. is under consideration.

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52736. LEIGHTY, ROBERT D. Proposed relocation of Camp TUTO and access road; an airphoto survey. Wilmette, Ill., Apr. 1958. 19 p. illus., 2 maps incl. 1 fold., tables, diagr. (U.S. Army. Snow Ice and Permafrost Research Establishment, SIPRE technical report 52, *pub.* in U.S. Army. Corps of Engineers. Greenland Ice Cap Research Program. Studies conducted in 1955–56. June 1959. v. 3.)

Reconnaissance report, based on airphotos enlarged to scale 1:2,500, and on some field checking. Geology and physiography of the rectangular survey area, 4 mi. x 1 mi., near Camp TUTO, in northwest Greenland 12 mi. southeast of Thule Air Base, are described; engineering soil conditions are analyzed, especially frost-susceptibility and drainage; proximity to the icecap was the major consideration in choosing a new camp site; expected snowdrift and prevailing winds were the chief factors in locating the access road. Site selected is about ¾ mi. northwest of the present camp. Fold. map shows alignment of access road.

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52737. LEIJONHUFVUD, AXEL CARLSSON, 1898– . Erfarenheter från traktordrift vid ett norrländskt skogsföretag. (Svenska skogsvårdsföreningen. Tidskrift, 1950. årg. 48, nr. 1, p. 86–97, illus.) Text in Swedish. *Also pub. as* Föreningen skogsarbetens och Kungl. domänstyrelsens arbetsstudieavdeling. Meddelande nr. 41, 1950 (with summary in English.) ***Title tr.:*** Experiences with tractors in Norrland forestry.

Discusses the performance of various types of wheeled and tracked tractors. A 5- to 7-ton tracked tractor is best suited to forest work under Norrland conditions: it can be used for year-round transportation, summer road work, and for snow clearing and snow packing in winter. Snow compacted and other tractor roads are considered, also organization of transportation, loading and unloading.

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52738. LEIJONHUFVUD, AXEL E. Skogsbrukets motortransporter kontra gällande författningar. (Föreningen skogsarbetens och Kungl. domänstyrelsens arbetsstudieavdeling. Meddelande nr. 39–42, 1950, p. 25–41, illus., tables.) 12 refs. Text in Swedish. Reprinted from Svenska skogsvårdsföreningen. Tidskrift, 1949. årg. 47, nr. 6, p. 295–311. ***Title tr.:*** Forestry motor vehicles versus regulations in force at present.

Discusses restrictions on axel load on Swedish highways, road policy and technology, organization of transportation, and the use, especially in Norrland forestry, of six-wheelers or various types of trailers according to road quality and regulations. ***Copy seen:*** DA.

52739. LEĬKIN, NIKOLAĬ ALEKSANDROVICH, 1841–1906. Po Sĭ̂veru dikomu; puteshestvie iz Peterburga v Arkhangel'sk i obratno; poĭ̂zdka na vodopad. Kivach. S.-Peterburg, Pechatnĭ̂a S. P. LĬ̂kovleva, 1899. 241 p. Text in Russian. ***Title tr.:*** In the wild North; a journey from Petersburg to Arkhangel'sk and back; a trip to Kivach waterfall.

Includes (p. 1–168) popular account of author's (a journalist) experiences and impressions from a trip in June 1898(?). The inconveniences of slow travel: by Sukhona and Severnaya Dvina river boats, and by train on a recently built road bed over the tundra, the Svernaya Dvina and the landscape of its banks, the stay in Arkhangel'sk, etc. are described. ***Copy seen:*** DLC.

LEINEN, NORBERT J., *see* USQM Food and Container Institute. Low temperature test . . . containers . . . *1954*. No. 55654.

LEIVESTAD, H., *see* Kanwisher, J. W., *and* H. Leivestad. Thermal regulation in whales. *1957*. No. 52168.

LEIVESTAD, H., *see* Nair, N. B., *and* H. Leivestad. Effect of low temperature . . . distribution . . . crustaceans. *1958*. No. 53485.

52740. LEKANDER, BERTIL, *and* **E. RENNERFELT.** Om blånads- och insektsskador på sågtimmer enligt några svenska undersökningar. (Norsk skogbruk, Apr. 1957. årg. 3, nr. 7, p. 188–95, 10 illus., table.) 6 refs. Text in Swedish. ***Title tr.:*** Blue fungus and insect damage on saw timber according to some Swedish investigations.

Recognition of biological damage in northern forests is discussed. Several insect species and their damage to trees are described and illustrated, among them *Ips acuminatus*, common on pine in Norrland province in Sweden, and *Monochamus sutor*, common on conifers over all Scandinavia. ***Copy seen:*** DA.

52741. LEKANDER, BERTIL. Skogsinsekternas uppträdande i Sverige under tiden 1946–1950. (Stockholm. Statens skogsforskningsinstitut. Meddelanden, 1954, bd. 44, nr. 1, 46 p.) 11 refs. Text in Swedish. Summary in German. ***Title tr.:*** Occurrence of forest insects in Sweden during the period 1946–1950.

Over fifty insects, mostly beetles and moths, are listed with notes on their occurrence and damage year by year. Three localities in northern Sweden: Överkalix (p. 10), Nederkalix (p. 16) and Övertorneå (p. 21–22) suffered from the depredations. ***Copy seen:*** DLC.

52742. LELĬ̂UKHINA, N., *and* **V. UDOVENKO.** Ot s"ezda k s"ezdu. (Klub, Nov. 1958, no. 11, p. 4–6, map.) Text in Russian. ***Title tr.:*** From congress to congress.

Describes the industrial achievements of 1955–1957 and shows on map the industrial centers of the U.S.S.R., including gold mines at Magadan and Aldan, natural gas at Vilyuysk and Berezovo, diamonds at Mirnyy, coal at Vorkuta and oil at Ukhta. ***Copy seen:*** DLC.

52743. LELĬ̂UKHINA, N., *and* **V. UDOVENKO.** Segodnĭ̂a i zavtra nasheĭ rodiny.

(Klub, Jan. 1958. god 7, no. 1, p. 19–21, graphs, map.) Text in Russian. ***Title tr.:*** The today and tomorrow of our fatherland.

Describes resource development in the U.S.S.R. including coal and diamonds in Yakutia, oil in Komi A.S.S.R., natural gas at Berezovskoye (lower Ob' region), and the construction of hydro-electric stations on the Angara and Yenisey Rivers. The map shows pre- and post-1931 industrial areas including Kola Peninsula, Komi A.S.S.R., Vorkuta, and lower Ob' and Yenisey River regions.

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52744. Le MÉHAUTÉ, P. J., *and others.* Glimrende resultater ved anvendelse av hermetikk som hovedsakelig ernaering ved Charcot's polarekspedisjon 1932–33. (Tidsskrift for hermetik-industri, Jan. 1935. årg. 21, nr. 1, p. 29–31.) Text in Norwegian. *Other authors:* M. A. Macheboeuf, P. Tcherniakofsky, *and* H. Cheftel. ***Title tr.:*** Splendid results from use of preserved foods as principal nutrition on Charcot's polar expedition 1932–33.

Report is made of the canned foods provided for the French International Polar Year party at Scoresby Sund. Balanced diets were planned for 15 men, three meals daily, for 13 months. Vitamin C content, calory requirements in Greenland climate, and emergency supplies were especially considered. The canned meat in variety, fish, vegetables and fruits and the local meats to be utilized are listed. The only dietary illness resulted from use of raw polar bear meat.

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LE MESSURIER, D. H., *see* Scholander, P. F., *and others.* Cold adaptation . . . aborigines. *1958.* No. 54619.

52745. LEMMON, JOHN GILL. Notes on West-American Coniferae, VIII. (Erythea, Aug. 1898. v. 6, no. 8, p. 77–79.)

Contains descriptions of *Pinus tenuis* in the interior, and of *Tsuga hookeriana* on highest peaks of Alaska and British Columbia. Other parts of this series do not contain arctic material.

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LEMON, R. R. H., *see* Fritz, M. A., *and others.* Stratigraphy . . . Williams Island . . . *1957.* No. 50998.

LEMTIS, HORST, *see* Brück, K., *and others.* Hautdurchblutung und Thermoregulation . . . *1957.* No. 49957.

LEMTIS, HORST, *see* Brück, K., *and others.* Thermoregulatorische Veränderungen . . . *1958.* No. 49958.

LEMTIS, HORST, *see* Brück, K., *and others.* Wärmeleitfähigkeit . . . *1958.* No. 49959.

LÉNÁRD, G., *see* Szekeres, L., *and* G. Lénárd. Über die Reaktion . . . Reizbildungszentren . . . Herzens auf Temperatursenkung. *1958.* No. 55302.

LENG, CHARLES WILLIAM, 1859–1931, *see* Dahl, R. G. The Leng types of Cicindelidae . . . *1941.* No. 50417.

52746. LENINGRAD. ARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Rezul'taty magnitnykh nablûdeniĭ polûarnykh observatoriĭ za 1934–1955 gg. Pod redaktsieĭ A. P. Nikol'skogo. Leningrad, Morskoĭ transport, 1957. 147 p. chiefly tables. (*Its:* Trudy, t. 212.) Text in Russian. ***Title tr.:*** Results of magnetic observations of the polar observatories for 1934–1955. A. P. Nikol'skiĭ, editor.

Contains data on mean diurnal values (p. 5–28), diurnal variations (p. 29–50) and hourly values (p. 51–147) of magnetic activity for various periods between 1934 and 1955, as observed at Bukhta Tikhaya, Franz Joseph Land, 80° .3 N. 52° .8 E.; Matochkin Shar, Novaya Zemlya, 73° .2 N. 56° .4 E. (in 1954, transferred to Mys Vykhodnoy, 73°14′.1 N. 56°43′ .8 E.); Ostrov Diksona, Kara Sea, 73° .5 N. 80° .4 E.: Mys Chelyuskina, Krasnoyarskiy Kray, 77° .7 N. 104° .3 E.: Bukhta Tiksi, Yakut A.S.S.R., 71° .8 N. 129° .0 E.; Mys Shmidta, Chukotskiy Poluostrov, 68°55′ .2 N. 180°31′.7 E.; Uelen, Chukotskiy Poluostrov, 66° .2 N. 190° .2 E. The observational materials were worked up in the Arctic Institute under supervision of R. G. Kokorin and L. D. Rûmina, and are presented in tabular form, with a brief preface by the editor.

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52747. LENINGRAD. ÈRMITAZH. Pervobytnaîa kul'tura, vyp. 1; putevoditeli po vystavkam. Moskva, Gos. izd-vo "Iskusstvo", 1955. 62 p. illus. Text in Russian. ***Title tr.:*** Primitive culture, 1st issue; guides to the collections. M. I. Artamov, editor.

Mentions (p. 11) bone and stone sculptures and ornaments from the paleolithic Mal'ta settlement on the Angara River,

now at the Hermitage Museum. Issue 2 (1956) contains no northern material.

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52748. LENINGRAD. GOSUDARSTVENNYĬ GIDROLOGICHESKIĬ INSTITUT. Raspredelenie gidrokhimicheskikh ėlementov v severo-zapadnoĭ chasti Beringova morîâ i Chukotskom more. (*Its:* Issledovaniîâ moreĭ SSSR, 1937. vyp. 25, p. 136–74, illus., tables, maps.) 32 refs. Text in Russian. Summary in English. ***Title tr.:*** Distribution of hydrochemical elements in the northwestern Bering Sea and in the Chukchi Sea.

Account of determinations of Cl, O_2, P, Si, pH, etc., made on board the *Dal'nevostochnik* and the *Krasnoarmeets* by Lisitsin and by G. A. Beĭss with some complete analyses made in the laboratory. Deviations in local water from the chemistry of the "world ocean" and that of neighboring seas are enumerated and discussed. Analysis of conditions with depth is also presented.

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52749. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Geologiîâ Sovetskoĭ Arktiki. Pod obshcheĭ red. F. G. Markova i D. V. Nalivkina. Moskva, Gosgeoltekhizdat, 1957. 520 p. col. map in 4 sheets. (*Its:* Trudy, t. 81.) Text in Russian. ***Title tr.:*** Geology of the Soviet Arctic. F. G. Markov and D. V. Nalivkin, editors.

Major work, summarizing results of geological investigations over the last 40 years, chiefly by the Institute of Geology of the Arctic, and, prior to 1953, by the Main Administration of the Northern Sea Route. The area reported is not all northern U.S.S.R., but a broad zone from the Polar Ural in the west to the Verkhoyansk region in the east, and north of the Arctic Circle, including islands of the shelf seas. The principal aim is to give unified systematic and coordinated presentation of the geological knowledge of the area. The 15 regional chapters have a common plan: an outline of setting of the region; a statement of its geological investigation to date naming the principal scientists, general characteristics of the relief, stratigraphy of the existing systems, formations and series, volcanic activities and tectonics; finally a short survey of the geological indications of useful mineral resources. No illustrations are included, no sources, published or other, are cited. The volume is accompanied by a four-sheet geological map at scale 1:2,500,000, in color; its scientific editor is D. V. Nalivkin. The chapters, as listed below with titles translated, are described in the Bibliography under their authors' names, viz:

DIBNER, V. D. Geological structure of Franz Joseph Land.

DIBNER, V. D. Geological structure of Viktoriya Island.

DEMOKIDOV, K. K., *and others.* Geological structure of Novaya Zemlya and Vaygach Island.

IVANOVA, A. M., *and others.* Geological structure of the Polar Ural and Pay-Khoy.

DIBNER, V. D. Geological structure of the islands of the central part of the Kara Sea.

SOKOLOV, V. N. Geological structure of the northern part of the west Siberian lowland.

TKACHENKO, B. V., *and others.* Geological structure of the northern part of the central Siberian plateau.

SAKS, V. N., *and* I. S. EGOROVA. Geological structure of the western part of the north Siberian lowland, Taymyr lowland.

SÎAGAEV, N. A. Geological structure of the eastern part of the north Siberian lowland, Lena-Anabar interfluve.

MARKOV, F. G., *and others.* Geological structure of the Taymyr Peninsula.

EGIAZAROV, B. Kh. Geological description of the Severnaya Zemlya archipelago.

ATLASOV, I. P. Geological structure of the northern part of the Verkhoyansk Range.

LAZURKIN, V. M. Geological structure of the lower reaches of the Lena River, Lena depression.

LOBANOV, M. F. Geological structure of the New Siberian Islands.

LOBANOV, M. F. Geological structure of Vrangelya and Geral'da Islands.

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52750. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Georgiĭ Georgievich Moor. (*Its:* Informatsionnyĭ biûlleten', 1958. vyp. 11, p. 80–81.) Text in Russian. ***Title tr.:*** Georgiĭ Georgievich Moor.

Presents obituary of this noted geologist, who died Oct. 2, 1958 in Guli while leader of the Maymecha expedition organized by the Institute. Born June 25, 1907 in Dzhubga village, Krasnoyarsk province,

he was graduated by Leningrad State University in 1930; and he devoted his entire life to exploration of arctic regions. His main work was on Noril'sk copper and nickel ores. He also studied the Nizhnyaya Tunguska region, Anabar crystalline shield, Dikson Island, the Kotuy-Maymecha region and other parts of the Siberian platform. He took an active part in preparing the geological map of Soviet Arctic at scale 1:2,500,000. His 68 published works (listed) concern geology, mineralogy and mineral resources. ***Copy seen:*** DGS.

52751. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Nefte-gazonosnost' severa Sibiri. Pod. red. I. S. Gramberga i M. K. Kalinko. Leningrad, Gostoptekhizdat, 1958. 217 p. tables, diagrs. incl. 1 fold, maps. (*Its:* Trudy, t. 92.) Refs. Text in Russian. ***Title tr.:*** Oil and gas prospects in northern Siberia. I. S. Gramberg and M. K. Kalinko, editors.

Contains 12 papers delivered at the special session of the Scientific Assembly of the Institute of Geology of the Arctic, held Apr. 25–30, 1957, where geologic work and oil and gas prospecting to date in the area from the Ural east to the Verkhoyansk Mts. were evaluated, summarized, and further plans discussed. The papers deal with three major problems: *1*, the stratigraphy of Sinian, Cambrian, Devonian, Permian, Jurassic and Cretaceous deposits in which oil and gas occurrences are indicated; *2*, tectonics and tectonic structures suitable for oil exploration; *3*, reports on geologic, gravity, and seismic surveys and drillings and their results on the presence or absence of oil and gas accumulations. Appended (p. 215–16) are the Assembly's resolutions to continue and speed prospecting in order to supply the Yenisey region industries with oil, and to expand Yakutia diamond production; to lay down general plans for further geologic and geophysical explorations; and to establish special organization for carrying out these tasks. The papers as listed below (title tr.) appear in this Bibliography under their authors' names, viz:

MARKOV, F. G. Stratigraphy of the Lower and Middle Paleozoic deposits in the central zone of the Soviet Arctic.

USTRITSKIĬ, V. I. New data on the stratigraphy of the Upper Paleozoic in the central zone of the Soviet Arctic.

SOROKOV, D. S. Stratigraphy of the Triassic deposits in the central zone of the Soviet Arctic.

SAKS, V. N. Stratigraphy of the Jurassic and Cretaceous deposits in the central zone of the Soviet Arctic.

ATLASOV, I. P. Main phases in development of the geologic structures in the northern part of the Lena-Yenisey province.

SOKOLOV, V. N. The tectonic division of the northern West Siberian lowland.

DEMENITSKAIA, R. M., *and* N. N. MIKHAĬLOV. Main results of the geophysical investigations in north Central Siberia.

SOKOLOV, V. N. The results of prospecting and exploration for oil and gas in the Ust'-Yenisey district.

KABAN'KOV, V. IA. The results of geologic exploration for oil prospecting in the Lena-Olenek province.

KALINKO, M. K. The results of prospecting and exploration for oil and gas in the region of the Anabar-Khatanga interfluve, Nordvik district.

GRAMBERG, I. S. Geochemical investigation as one of the methods for prospecting genetical signs of matrix oil strata; according to examples of arctic regions of the U.S.S.R.

KALINKO, M. K. Prospects of oil and gas in north Central Siberia.

Copy seen: DGS.

52752. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Sbornik statei po geologii Arktiki, vyp. 6. Moskva, Gos. nauchno-tekhnicheskoe izd-vo lit-ry po geologii i okhrane nedr, 1956. 322 p. 4 fold. plates, 2 fold. maps, illus., plates, tables. (*Its:* Trudy, t. 89.) 116 refs. Text in Russian. ***Title tr.:*** A collection of articles on the geology of the Arctic, no. 6.

Contains 21 papers dealing with stratigraphic and structural geology, mineralogy and petrology of different regions of the Soviet Arctic, mainly original studies based on field investigations in recent years. In many of the papers, the author incorporates and correlates recent (unpublished?) work of several other (cited) geologists. The treated areas are shown on maps, and illustrated. The papers, as listed below in translated titles, are described in this Bibliography under their authors' names, viz:

MIROSHNIKOV, L. D. Paleozoic

stratigraphy and tectonics in the central part of the Chelyuskin Peninsula.

DEMOKIDOV, K. K. Basic features of the geological structure of the Lena-Olenek River region.

KABAN'KOV, V. I͡A. On the question of age of the old stratum in the northeastern Siberian platform.

MALANDIN, M. M. New data on the stratigraphy and coal-bearing capacity in the Sangar District of the Lena coal basin.

DIBNER, V. D. New data on the geological structure of Viktoriya Island.

AKIMOVA, K. G. On the question of stratigraphic separation of lavatic series in the Siberian trap formation.

NEKHOROSHEVA, L. V. Bryozoa of the Middle Ordovician in the southern island of Novaya Zemlya.

SHUL'GINA, N. I. Paleoecological characteristics of Jurassic and Lower Cretaceous deposits in the region of the Ust'-Yenisey depression.

ZHIZHINA, M. S. Some Ordovician Tabulata of eastern Taymyr Peninsula.

MIROSHNIKOV, L. D., *and* L. P. PIROZHNIKOV. On the location of fossil insects in the territory of the Soviet Arctic.

RONKINA, Z. Z., *and* V. N. SAKS. Possible origin of dispersal material during the formation of Jurassic and Cretaceous deposits in the Ust'-Yenisey depression.

ZAPOROZHT͡SEVA, A. S. Products of crustal weathering in the foundation of Mesozoic deposits in Ust'-Yenisey district.

ZAPOROZHT͡SEVA, A. S., *and* A. I. KRAVT͡SOVA. Middle Triassic hydrogoethite-leptochloride-kaolinite rocks in the northern part of the Anabar-Khatanga interfluve.

LAPINA, N. N. Changes of rock porosity and gas permeability at sub-zero temperatures.

BUTAKOVA, E. L. Petrology of the ultrabasic and alkali rock complex of the Maymecha-Kotuy River basin.

VORONOV, P. S. General features of the structural plan of north-central Siberia.

VAKAR, V. A. Short history of the development of tectonic movements in north-central Siberia.

KALINKO, M. K. Outline of the tectonics of the Anabar-Khatanga interfluve.

ATLASOV, I. P., *and* N. A. SI͡AGAEV. On the tectonics of the northern Verkhoyansk region and adjacent part of the Siberian platform.

STRELKOV, S. A. New data on the relief and Quaternary deposits of the Lena River valley above the Arctic Circle.

PUMINOV, A. P. On the first finds of pyrope in alluvial deposits of the Siberian platform. ***Copy seen:*** DLC.

52753. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Sbornik statei po geologii Arktiki, vyp. 7, pod red. B. V. Tkachenko. Leningrad, 1958. 224 p. illus., tables (3 fold.), diagrs., (1 fold.), maps (2 fold.). (*Its:* Trudy, t. 67.) 91 refs. Text in Russian. ***Title tr.:*** Collection of articles on the geology of the Arctic, no. 7. B. V. Tkachenko, editor.

Contains 12 papers dealing with stratigraphic and structural geology, paleogeography, and mineralogy of the Soviet Arctic, mainly original studies based on field investigations in recent years. The papers, as listed below in translated titles, are described in this Bibliography under their authors' names, viz:

DEMOKIDOV, K. K. Stratigraphic separation of Cambrian deposits in the north Siberian platform.

EGIAZAROV, B. Kh. Devonian deposits in the western part of the Severnaya Zemlya archipelago.

IVANOV, A. I. New data on the stratigraphy of Permian-Triassic effusive formations of the Taymyr Peninsula.

POPOV, I͡U. N. Paleontological characteristics of Triassic marine deposits in the Lena-Olenek River region.

DIBNER, A. F. The age of Upper Paleozoic deposits of the Nordvik region according to data of pollen analyses.

VAKAR, V. A., *and others.* The regional fractures in north-central Siberia.

VORONOV, P. S. On the link of some relief features of north-central Siberia with neo-tectonic processes.

ZAPOROZHT͡SEVA, A. S. A tufaceous-argillitic stratum in the Ust'-Yenisey region and its origin.

ZAPOROZHT͡SEVA, A. S. On the clayey argillite minerals of the Lower Triassic in the Ust'-Yenisey region.

BARANOVA, I͡U. P., *and others.* Paleogeography of the upper courses of the Olenek and Markha River basins.

LAPINA, N. N. The conditions of gas and water migration in sandstones at negative temperatures.

SPIRO, N. S., *and* M. V. GOGOLEVA. On determination of the mineral composition of argillaceous rocks.

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52754. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Sbornik statei po paleontologii i biostratigrafii, vyp. 6. Leningrad, 1957. 93 p. illus., plates, tables, text map. Refs. Text in Russian. Mimeographed in 150 copies. ***Title tr.:*** A collection of articles on paleontology and biostratigraphy, No. 6.

Contains five papers on the stratigraphy, paleontology and paleobotany of the Taymyr Peninsula, Pay-Khoy, Novaya Zemlya and the Lena basin; based on new materials and prepared by scientists of the Institute of Geology of the Arctic, under editorship of N. A. Shvedov. The papers are abstracted under their authors' names, viz:

SHVEDOV, N. A. On the stratigraphy of the Triassic stratum of Taymyr Peninsula.

ZHIZHINA, M. S., *and* M. A. SMIRNOVA. New Favositidae of the Llandoverian and Wenlockian of eastern Taymyr.

SMIRNOVA, M. A. The first finds of *Roemeripora* Kraiz in the Soviet Arctic.

SOLOMINA, R. V. Some new species from the Lower Permian deposits of Pay-Khoy.

VASILEVSKAIA, N. D. Some new representatives of conifers from Lower Cretaceous deposits of the northern part of Lena coal-bearing basin.

Copy seen: DGS.

LENNOX, C. S., *see* Baugh, C. W., *and others.* Blood volumes of Eskimos and white men . . . *1958.* No. 49581.

52755. LENSINK, CALVIN J., *and others.* Food habits of marten in interior Alaska and their significance. (Journal of wildlife management, July 1955. v. 19, no. 3, p. 364–68, tables.) 12 refs. *Other authors:* R. O. Skoog *and* J. L. Buckley.

A discussion of the food habits of this animal as dependent on environmental factors of season and location. Changes in abundance and availability of food may be strongly reflected in the animal's movements, choice of habitat and productivity. ***Copy seen:*** DI.

LENSINK, CALVIN J., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

LEONARD, ROBERT S., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

52756. LEONOV, A. K. Glavnelshie itogi okeanograficheskikh issledovaniĭ tikhookeanskikh vod SSSR za 40 let. (Leningrad. Universitet. Vestnik, 1958. god 13, no. 6, ser. geologii i geografii, vyp. 1, p. 74–90, tables, maps.) Text in Russian. Summary in English. ***Title tr.:*** Main results of oceanographic investigations in the Pacific waters of the U.S.S.R. during forty years.

General survey of the research in the North Pacific, Japan, Okhotsk and Bering Seas by expeditions of the State Hydrological Institute, Pacific Institute of Fisheries and Oceanography, Arctic Institute, Far East Hydrometeorological Institute, Institute of Oceanology, and other scientific organizations. Research vessels *Gagara, Dal'nevostochnik, Krasnoarmeets, Vitiaz', Smol'nyĭ, Chukcha,* etc., and their main cruises are noted and results of hydrological, bathymetric, oceanographic and climatologic studies are summarized. Tabular data on Bering Sea water balance are given (p. 79); currents of the Okhotsk and Bering Seas (p. 81–85) and problem of various types of water mixing (p. 85–89) are discussed.

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LEONOVICH, V. V., *see* Spangenberg, E. P., *and* V. V. Leonovich. Ékologiia ptits-khishchnikov poluostrova Kanin. *1958.* No. 55086.

LEONOVICH, V. V., *see* Spangenberg, E. P., *and* V. V. Leonovich. Novye svedeniia . . . *1958.* No. 55087.

LEONOVICH, V. V., *see* Spangenberg, E. P., *and* V. V. Leonovich. Vliianie deiatel'nosti cheloveka na ptits . . . *1958.* No. 55088.

52757. LEONT'EV, L. N., *and* **A. A. KADENSKIĬ.** O prirode kimberlitovykh trubok Iakutii. (Akademiia nauk SSSR. Doklady, July 11, 1957. v. 115, no. 2, p. 368–71, illus., table.) 14 refs. Text in Russian. ***Title tr.:*** On the structure of kimberlite pipes from the Yakut A.S.S.R.

Development of the kimberlite pipes is discussed, with conclusion that their age is post-Lower Triassic and pre-Jurassic; it coincides with final stages of trap magmatic formations. The volume of the kimberlite mass in pipes is insignificant in comparison with that of

trap formations; and the content variable, consisting of basalt, limburgite, aluminum oxide, titanium and picrite. Chemical analyses of kimberlite and its derivatives are tabulated. The depth of the pipes' explosive chambers is comparatively small (1–4 km.), and apparently the breccia was formed under a very strong pressure. A hypothetical scheme of the pipes' development, connected with the flexure of enclosing rock formations and initiated by the explosion of earth crust gases, is figured. ***Copy seen:*** DLC.

52758. LEONT'EVA, O. O pesnîâkh i lîûdîâkh Sibirskogo khora. (Sovetskaîâ muzyka, Sept. 1957. god 21, no. 9, p. 26–32, illus.) Text in Russian. ***Title tr.:*** The songs and members of the Siberian Chorus.

The repertoire, mostly folkloristic, includes folk songs of northernmost Siberia such as the reindeer dance and song "Kheĭro;" examples of music and words are given. Organized in 1945 as an all-women ensemble, the chorus added male singers, also a dance group in 1951. It has been headed since 1954 by V. Levashov, a noted composer and participant in numerous folkloristic expeditions. ***Copy seen:*** DLC.

52759. LEOPOLD, ALDO CARL, 1919– , *and* F. S. GUERNSEY. Flower initiation in Alaska pea, I; evidence as to the role of auxin. (American journal of botany, Jan. 1953. v. 40, no. 1, p. 46–50, 5 diagrs., table.) 22 refs. *Pub. also as:* Journal paper no. 619, Purdue Univ., Agricultural Experimental Station.

Reports results of studies using 4-hr. soak treatment of *Pisum sativum* var. *alaska* seedlings. The node of first flower, it was found, can be altered experimentally. Auxin (naphthaleneacetic acid) at 18°–20° C. quantitatively inhibits flowering in the pea. The flowering is strongly modified by the temperature experienced in the first few days after germination; the optimum for early flowering is 18°–22° C. Application of auxin, which inhibits flowering at higher temperature, actually promotes it if followed by a brief exposure to 10° C. Several common metabolites, such as sucrose, malic acid, and arginine, were found to inhibit flowering; this can be reversed by the addition of auxin. ***Copy seen:*** DLC.

52760. LEOPOLD, ALDO CARL, 1919– , *and* F. S. GUERNSEY. Flower initiation in the Alaska pea, II; chemical vernalization. (American journal of botany, Mar. 1954. v. 41, no. 3, p. 181–85, 5 diagr.) 14 refs. *Pub also as:* Journal paper no. 733, Purdue University, Agricultural Experimental Station, Lafayette, Indiana.

Contains an analysis of chemical vernalization, i.e., the promotion of flowering in the Alaska pea with auxin treatment of seeds followed by low temperature. Several materials, including auxins and auxin synergists, were found effective. Varied day lengths applied after vernalization did not alter the response, but high light intensities (800 ft.-c.) can greatly reduce the promotive effects. Chemical vernalization effects were nullified by heat (39° C. for 18–24 hrs.), by nitrogen atmosphere (for 48–96 hrs.) or by CO_2-free air (for 12 hrs.) applied after the cold treatment. Chemical vernalization, it is suggested, should take place in two steps, the first requiring auxin and low temperature, and the second requiring CO_2.

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52761. LEPAGE, ERNEST, 1905– . Another color form of *Epilobium latifolium* L. (Rhodora, Aug. 1953. v. 55, no. 656, p. 268.)

Epilobium latifolium L., forma *munzii.* n.f.: "Alaska: Glenn Highway, Mile 141, July 27, 1947, Dutilly, Lepage & O'Neill, no. 21656". ***Copy seen:*** DA.

52762. LEPAGE, ERNEST, 1905– . En canot, de Senneterre à la baie James. (Revue canadienne de géographie, July–Dec. 1958. v. 12, no. 3–4, p. 151–52, map.) 13 refs. Text in French. Summary in English. ***Title tr.:*** From Senneterre to James Bay, by canoe.

Account of the tenth expedition of A. Dutilly and author, July 27–Aug. 21, 1957, in the James Bay botanical exploration program, 1943– . From Senneterre on the Canadian National Railway, the party descended the Bell and Nottaway Rivers to Rupert House, on James Bay. The first botanical notes on the area are presented: six forest stands are described with locations and species, outstanding plants are listed, several of them uncommon. ***Copy seen:*** DGS.

52763. LEPAGE, ERNEST, 1905– . Études sur quelques Hieracia. (Naturaliste canadien, Apr. 1958. v. 85, no. 4, p. 81–93, 4 illus.) Text in French. ***Title tr.:*** Studies on some Hieracia.

Contains descriptions of two species, and a key to the varieties and forms. *H. canadense* (one new variety and one new form) is described, also two varieties of *H. scabriusculum*, of which one, var. *scabriusculum*, is found in the James Bay region (Quebec) and spreads to Alaska.

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52764. LEPAGE, ERNEST, 1905– . Études sur quelques plantes américaines, V–VI. (Naturaliste canadien, Feb., Mar.–Apr. 1957. v. 84, no. 2, p. 37–62, 5 illus.; no. 3–4, p. 89–103, 3 illus.) 14 refs. Text in French. ***Title tr.:*** Studies on some American plants, V–VI. In continuation of No. 30392–93, 35873 and 46318.

Deals with about 25 vascular plants, mostly new hybrids, several taxa occurring in Alaska, and from Mackenzie River to Labrador in northern Canada.

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52765. LEPAGE, ERNEST, 1905– . Études sur quelques plantes américaines, VII. (Naturaliste canadien, Apr, 1958. v. 85, no. 4, p. 100–104, 2 illus.) 3 refs. Text in French. ***Title tr.:*** Studies on some American plants, VII.

Describes (among others): *Dulichium arundinaceum* var. *boreale* var. nov., with comparison of var. *arundinaceum*, native to northern Quebec; also *Astragalus sealei* nom. nov. from Yukon Territory and Alaska. ***Copy seen:*** DA.

52766. LEPAGE, ERNEST, 1905– . *Hieracium ungavense*, endémique de l' Ungava. (Naturaliste canadien, Jan. 1958. v. 85, no. 1, p. 15–20, 2 illus.) Ref. Text in French. ***Title tr.:*** *Hieracium ungavense* endemic of Ungava region.

Describes this new species of hawkweed from Fort George, 53°43′ N. 77°52′ W., on James Bay. ***Copy seen:*** DA.

52767. LEPAGE, ERNEST, 1905– . Les lichens, les mousses et les hépatiques du Québec et leur rôle dans la formation du sol arable dans la région du bas de Québec, de Lévis à Gaspé. (Naturaliste canadien, *1947:* v. 74, no. 1–2, p. 8–16; no. 3–4, p. 93–101; no. 7–8, p. 225–40; no. 9–10, p. 280–92; *1948:* v. 75, no. 1–2, p. 31–48; no. 3–4, p. 90–96; no. 5–7, p. 174–84; no. 8–10, p. 228–56; *1949:* v. 76, no. 1–2, p. 45–88.) 54 refs. Text in French. ***Title tr.:*** The lichens, mosses and hepatics of Quebec and their role in the formation of arable land in the region below Quebec from Levis to Gaspé.

Contains a catalog of 550 species, 70 varieties and 161 forms of lichens, mosses and liverworts (31 families, 93 genera) with some ecological and distributional notes. Many of the species are native to the Hudson and James Bay region.

Copy seen: DA.

52768. LEPAGE, ERNEST, 1905– . Premier supplément au catalogue des lichens du Québec. (Naturaliste canadien, Aug.–Sept. 1958. v. 85, no. 8–9, p. 169–98.) 15 refs. Text in French. ***Title tr.:*** First supplement to the catalog of the lichens of Quebec.

Some three hundred lichens are listed with new or additional (to No. 52767) distributional data; 46 new entities are included. The lichen flora of Quebec comprises 558 species, 96 varieties and 176 forms. ***Copy seen:*** DA.

52769. LEPAGE, ERNEST, 1905– . Une variété nouvelle de l'*Alnus crispa* (Ait.) Pursh. (Naturaliste canadien, Jan.–Feb. 1950. v. 77, no. 1–2, p. 44–46, illus.) 7 refs. Text in French. ***Title tr.:*** A new variety of *Alnus crispa* (Ait.) Pursh.

Describes: A. c. harricanensis n. var., a new variety of mountain alder collected on the Harricanaw River in the James Bay region. ***Copy seen:*** DA.

LEPAGE, ERNEST, 1905– , *see also* Dutilly, A. A., *and others*. Contribution . . . flore . . . Baie James. *1958*. No. 50664.

52770. LERICHE, RENÉ, 1879– , *and* **J. KUNLIN.** Physiologie pathologique des gelures, maladie d'abord vasomotrice, puis thrombosante. (Académie de Chirurgie, Paris. Mémoires, 1940. t. 66, p. 196–204, illus. tables.) Ref. Text in French. ***Title tr.:*** Pathological physiology of frostbite, at first a vasomotor disorder, then forming thrombi.

Account based on 39 cases, with data on early and late symptoms, circulatory changes, gangrene, arteriographic findings, histological picture, changes in blood chemistry and in the leucocyte picture, therapy (topical, sympathetic infiltration), surgery, sequels.

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52771. LEROY, PIERRE. Croissance de la crête du coq domestique maintenu à l'obscurité. (Annales d'endocrinologie,

Jan.–Feb. 1958. t. 19, no. 1, p. 55–68, illus., tables.) 18 refs. Text in French. ***Title tr.:*** Growth of the comb of cocks kept in darkness.

A study on 3-month- and 12-month-old cocks kept in the darkness for over 3.5 months, with controls kept under normal conditions. The absence of light had a positive role in the somatic and sexual development of the young birds. In the mature ones, certain injurious effects were noted in the gonads and in the physiological condition; in two cases hypertrophy of the comb was noted.

Copy seen: DNLM.

52772. LESHKEVICH, ANDREĬ IVANOVICH. Paketnaîa pogruzka khlystov na podvizhnoĭ sostav. (Mekhanizat͡siîa trudoemkikh i tîazhelykh rabot, June 1958. god 12, no. 6, p. 38–39, illus.) Text in Russian. ***Title tr.:*** Bundle loading of long logs on rolling stock.

Loading method and lifting equipment used in the Karelian, Arkhangel'sk, Krasnoyarsk and other timber-cutting camps are described with illus. and operational data. A number of long logs, with the weight permissible for the truck and trailer platform, are bound by rope into a bundle and stored near the shipping terminal. Loading the truck or platform by the bundle considerably reduces time and cost of this operation.

Copy seen: DLC.

LESSA, A., *see* Bouisset, L., *and others.* Survie des trypanosomes . . . *1958.* No. 49863.

52773. LESSARD, J. C. Transportation in Canada. Nov. 1956. Ottawa, Queen's Printer, 1957. 160, [29] p., tables, schedules. (Canada. Royal Commission on Canada's Economic Prospects.)

Transportation costs, direct and indirect, at present and for the next 25 years, are discussed and statistically analyzed. Air, highway, pipeline, rail and water transport are treated in turn, and on a country-wide basis. In the consideration of future technological developments and new facilities and services (p. 109–133), special assessment is made of costs and potentials in the North. Possible highway and railway routes are named; improvement in transportation down the Mackenzie River to Aklavik is recommended, and a recently co-ordinated water-rail service between Vancouver and the Yukon described. Motor truck registration in the Yukon and Northwest Territories was approx. 2,000 in 1954.

Copy seen: DLC.

52774. LESSIN, A. W., *and* M. W. PARKES. The relation between sedation and body temperature in the mouse. (British journal of pharmacology and chemotherapy, June 1957. v. 12, no. 2, p. 245–50, illus., tables.) 18 refs.

Chlorpromazine and reserpine reduce locomotor activity and prolong pentobarbital anesthesia in mice. At an environmental temperature of 32° C. the two drugs were found to be neither sedative nor hypothermizing. The sedative effect was further found to be dependent on the temperature reducing activity of these preparations.

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LESSIN, A. W., *see also* Davison, A. N., *and others.* The antagonism of reserpine hypothermia by iproniazid. *1957.* No. 50465.

52775. *LETOPIS' SEVERA.* Na dreĭfuûshchikh l'dakh Severnogo Ledovitogo okeana. (Letopis' Severa, 1958, t. 2, p. 7–33, fold. plan.) Text in Russian. ***Title tr.:*** On the drifting ice of the Arctic Basin.

Contains excerpts from the logs of drifting stations North Pole-4 for the period Apr. 8–Aug. 11, 1954 (p. 8–20), and North Pole-3 for Sept. 27, 1954–Jan. 1, 1955 (p. 20–33). The first covers the setting-up of the station and the struggle with meltwater in the summer; the second covers the drift in the vicinity of the North Pole when the station was exposed to dangers of ice cracking and pressure. Plan of the camp of North Pole-3 in summer 1954, drawn by E. Î͡Atsun and G. Kuznet͡sov, is reproduced.

Copy seen: DLC.

LETUNOV, PETR ALEKSEEVICH, *see* Ivanova, E. N., *and others.* Pochevennogeograficheskoe raĭonirovanie. *1958.* No. 52014.

LEUSEN, I., *see* Lacroix, E., *and* I. Leusen. Hypothermie . . . *1958.* No. 52618.

LEUSEN, I., *see* Lacroix, E., *and* I. Leusen. Réchauffement . . . *1958.* No. 52619.

LEVASSORT, CHRISTIANE, *see* Cheymol, J., *and* C. Levassort. Résistance à l'hypoxie et thermorégulation. *1956.* No. 50231.

52776. LEVENSHTEĬN, R. ÎA. Novye i redkie v faune Beringova morfâ glubokovodnye vidy mnogoshchetinkovykh chervei, Polychaeta. (Akademiîa nauk SSSR. Institut okeanologii, Trudy, 1957. t. 23, p. 286–90, illus.) 3 refs. Text in Russian. ***Title tr.:*** New and rare deepwater species of polychaetes from the Bering Sea.

Description of two forms, one of them *Stschapovella tatjanae* gen. et sp. n. representing a new species and genus. About 30 specimens were dredged by the research vessel *Vitiaz'* from a depth of over 3,000 m. from a muddy-clay bottom. ***Copy seen:*** DLC.

52777. LEVENSON, M. M. Life in frigid climate eased with new type of arctic suit. (Revue canadienne de géographie, Jan.–Mar. 1957. v. 11, no. 1, p. 72–73, illus.)

Description of *Polar wear* developed by E & R, Inc., Montreal clothing firm, and found effective in temp. of −70° F. and winds of gale force. Insulation (normally acetate) is between two shells of 100 percent nylon fabric waterproofed with neoprene coating acting as a double vapor barrier. Other innovations include noncorrosive, ice-resistant moulded nylon zippers and toggles, cross-wind helmet with sliding panels. No metal comes in contact with body. Complete suit (jacket, trousers, helmet, gloves) weighs approx. eight pounds. ***Copy seen:*** DGS.

52778. LEVI, HERBERT WALTER, 1921– . The spider genera *Crustulina* and *Steatoda* in North America, Central America, and the West Indies; Araneae, Theridiidae. (Harvard University, Museum of Comparative Zoology. Bulletin, Aug. 1957. v. 117, no. 3, p. 365–424, 156 illus., 19 text maps.)

Contains a critical generic revision of the fam. Theridiidae. Synonyms, keys to species, descriptions, critical remarks, data on habitat, distribution and records of specimens are provided to three species of *Crustulina* and 23 of *Steatoda*. One species is described as new, and eleven new combinations are established. *C sticta* (Alaska), *S. albomaculata*, n. comb. (Northwest Territories) and *S. borealis* (Alaska, Northwest Territories), are included. ***Copy seen:*** DLC.

52779. LEVI, HERBERT WALTER, 1921– . Spiders of the new genus *Arctachaea*; Araneae, Theridiidae. (Psyche, Sept. 1957. v. 64, no. 3, p. 102–106, 13 illus., text map.)

Contains descriptions of *Arctachaea* n. gen., *A. pelyx* n. sp. and *A. nordica*, native to College, Alaska, and Northwest Territories. ***Copy seen:*** DA.

LEVI, VALERIA, *see* Cattaneo, A. D., *and others*. La resistenza cerebrale all'ipossia, 1 . . . ipotermia. *1957*. No. 50153.

52780. LEVIN, D. V., *and* **S. M. KRĬŪKOV.** Predvaritel'nye rezul'taty aėromagnitnoĭ s"emki Tungusskoĭ sineklizy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ bŭlleten', 1957. vyp. 6, p. 36–38.) Text in Russian. ***Title tr.:*** Preliminary results of the aeromagnetic survey of Tungusska syncline.

Reports a survey at scales 1: million, 1:200,000 and 1:100,000 in the area approx. 61°40′–66° N. 87°–96° E. Irregularities and distribution of magnetic anomalies are outlined. Several recognized Mesozoic intrusions are characterized. ***Copy seen:*** DGS.

LEVIN, D. V., *see also* Krŭkov, S. M., *and* D. V. Levin. Ob ispol'zovanii samoletov tipa Il–14 . . . *1958*. No. 52512.

52781. LEVIN, DANIIL MOISEEVICH, *and* **P. F. OGLOBLIN.** Zimnîaîa ėkspluatatsiîa avtomobileĭ. Izd. 2. Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1956. 116 p. illus., diagrs., tables. (Biblioteka shofera.) 14 refs. Text in Russian. ***Title tr.:*** Winter operation of motor vehicles. 2d ed. Similar to the first edition (1951, 117 p.) with minor changes in text.

Basic regulation of the main engine and its mechanisms is described in detail, including starting and servicing under winter conditions. Preliminary inspection of all parts and substitution of winter fuel, oil, grease, cooling liquid, also insulation of the starting battery, radiator and driver's compartment are outlined with reference to expected weather severity. Gasolines of grades A–66 and 70 (of 54–58 octane number) can be used with and without the ethyl ingredient, and they can be replaced by mixtures of single or double concentration of gasoline with benzol or alcohol or both, but gasoline A–74 is used straight only. Diesel fuel of 40 cetane, DA, is used for arctic conditions (below −30° C.), fuel DZ for winter (0° to −30° C.) and fuel

of 45 cetane, DL, for summer. Freezing temperatures of these fuels are given as DA: −60° C., DZ: −45° C. and DL: −10° C. Lubricating oil of various grades, and greases are tabulated (p. 49, 53). The brake fluid contains: castor oil with buthyl alcohol, or glycerine with isoamyl alcohol, suitable for temperatures above −55° C. Anti-freeze "40" contains 53% ethylene glycol +47% water (freezing temperature −40° C.); anti-freeze "65" contains 66% ethylene glycol plus 34% water (freezing temperature −65° C.); an anti-corrosive is added to both mixtures. Various methods of cold engine starting are described: steam or hot water circulation; the use of movable water- and oil-heaters (boilers); charcoal preheater under the engine; special blow-torch arrangement or electric heater for water with outside current supply; auxiliary hand pump injection of high volatile fuel during cranking; portable gas generator connected to the carburetor inlet; cranking of the engine with separate electro-motor starting arrangement (p. 97) on platform with wheels. Diesel engine starting can be done either with auxiliary spark plugs in the cylinders, or a glow plug in the air suction line.

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52782. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Amuro-Sakhalinskaĭa antropologo-ėtnograficheskaĭa ėkspeditsiĭa. (Akademiĭa nauk. Institut ėtnografii. Kratkie soobshcheniĭa, 1949. vyp. 5, p. 19–24, map.) Ref. Text in Russian. ***Title tr.:*** The Amur-Sakhalin anthropological-ethnographic expedition.

Describes the route and investigation fields of the 1947 Amur-Sakhalin party of the Northeastern complex expedition of 1945–1948 headed by G. F. Debets (No. 21378). The material culture and collectivization, social organization and religious traditions (bear cult), etc., of the native population including the Gilyaks and Oroki (Tungus) are discussed. The work of individual expedition members is noted.

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52783. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Anthropological types of the north-eastern Paleoasiatics and problems of their ethnogenesis. (International Congress of Americanists, 32nd. *Copenhagen*, 1956. Proceedings, 1958, p. 607–616.) 9 refs.

Reviews current anthropological theories and analyzes the physical characteristics of present-day Asiatic Eskimos, Coast and Reindeer Chukchis, Coast and Reindeer Koryaks, and Itel'mens (Kamchadals). Despite some Baykal-type admixture among the north Kamchatka tribes, their physical similarity to the Bering Sea (Eskimo) type is cited against the "Eskimo wedge" theory. Writer supports A. M. Zolotarev in criticism of the "Eskimo wedge" and in favoring Asiatic origin of Eskimos, but not an Eskimo-origin of the Chukchis and Koryaks. The area of primary formation of the northeastern Paleoasiatics is placed along the northern Okhotsk coast region of Kamchatka and the cultural dissimilarities between the Okhotsk and Bering Sea cultures are demonstrated in regard to the toggle-harpoon, pottery ornamentation, tool types. The continental culture of tundra and forest tundra hunters and fishers recently discovered on the Yakitikiveyem River, central Chukotka, and dated into the late second-early first millennium B.C., is probably of Yukaghir (A. P. Okladnikov's opinion) rather than Chukchi (I. S. Vdovin's) origin. Baykal-type characteristics among the Reindeer Chukchis and Koryaks are explained by intermarriage with Yukaghirs who occupied interior Chukotka until the 17th century; linguistic data support this theory. The reindeer breeding of the Reindeer Chukchis (Chauchu) and Reindeer Koryaks (Chauchuvan) is traced to the Chavan (or Chuvan) Yukaghirs (Chuvantsy). Kamchadals and Koryaks have an anthropological similarity and probably a common area of origin, rather than two areas (according to S. I. Rudenko) in northern Kamchatka.

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52784. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Antropologicheskie issledovaniĭa na Amure i Sakhaline; predvaritel'noe soobshchenie. (Akademiĭa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniĭa, 1949. vyp. 5, p. 25–31, tables.) Text in Russian. ***Title tr.:*** Anthropological investigations on the Amur and Sakhalin; a preliminary report.

Discusses and tabulates the physical anthropological data on the Gilyaks, Golds, Oroki, Negidals, Ul'chi and Ainu collected by the Amur-Sakhalin anthropological-ethnographic expedition in 1947. The three main types: Ainu, Gilyak and Orok-Negidal (Tungus) are described, the last considered a variant of the

Baykal or Paleo-Siberian group. Levin's results are presented in English by C. S. Chard, q.v. ***Copy seen:*** DLC.

52785. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Ėtnicheskai͡a antropologii͡a i problemy ėtnogeneza narodov Dal'nego Vostoka; trudy Severovostochnoĭ ėkspedit͡sii II. Moskva, Izd-vo Akademii nauk SSSR, 1958. 359 p. illus., diagrs., graphs, tables, maps. (Akademii͡a nauk SSSR. Institut ėtnografii. Trudy, nov. ser., t. 36.) Approx. 530 refs. Text in Russian. *See also* No. 31080, 31084 on this expedition. Pt. I of the investigation: No. 21378. ***Title tr.:*** Ethnic anthropology and ethnogenetic problems of the peoples of the far East; investigations of the Northeastern Expedition, pt. 2.

An exhaustive study discussing and summarizing 19th and 20th century anthropological, ethnographic, etc. literature (almost half of the cited publications are in English, German or French), using also the results of author's own fieldwork and unpublished materials of Soviet scientists. A general review of Russian and non-Russian anthropological classification theories is followed by a detailed ethnogenetic analysis based also on archeological, linguistic and folkloristic studies and investigations of the social structure and material culture of the peoples under discussion. Their anthropological characteristics are dealt with, and their ethnic distribution mapped. The Amur-Sakhalin region is considered the key area for the study of paleo-Asiatic (Paleosiberian) and Tungus-Manchurian racial types. The hypotheses of autochthonous Siberian (Baykal area) versus a southern origin of the Tungus and the related problem of the racial attribution of the neolithic Lake Baykal population are discussed. Author takes issue with Okladnikov's opinion (cf. No. 36586) that the Evenki (Tungus) are direct descendants of the neolithic cis-Baykal population and suggests the latter's cognation with a pre-Tungus, Paleosiberian (Yukaghir?) race. An area (not specified) in close proximity to the formative center of the Turkic- and Mongolian-speaking peoples is considered as the most likely Tungus place-of-origin. The problems of the "Eskimo wedge" and Eskimo origin are discussed at length (p. 206–248, 300–302). The similarities of artifacts and decoration patterns among the Old Bering Sea, Punuk, Ipiutak, Dorset and Sakhalin neolithic cultures point to an undisputable racial closeness. Levin disagrees, however, with the theory of a southern (Sakhalin) origin of the Eskimos and considers the Bering Sea area as their original homeland. A new classification of the Siberian and Far Eastern aboriginals into four racial groups is suggested: North-Asiatic, Arctic, Uralian and South-Siberian. Their anthropological characteristics are specified; the problem of the occurrence of an Americanoid type in the population of Siberia and the Far East is touched upon; Korean and Japanese anthropological types are considered in appendix. The insufficiency of anthropological data for conclusive ethnogenetic pronouncements is continuously stressed and the necessity for correlated studies of Asiatic and American aboriginals noted. ***Copy seen:*** DLC.

52786. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Ėtnograficheskie paralleli k neoliticheskim figuram ryb. (Sovetskai͡a ėtnografii͡a. Sbornik statei, 1939. no. 2, p. 171–74, illus.) 2 refs. Text in Russian. ***Title tr.:*** Ethnographic parallels to neolithic fish sculptures.

Describes the use (in 1927) of wooden or bone fish-like lures in the winter fishing of the Evenki (Tungus) of the Shamagir, Kindygir and Chel'chegir clans living in the northern cis-Baykal region. Similar stone fishes have been discovered by A. P. Okladnikov (cf. No. 53732) in neolithic sites of the Baykal area, a fact which may support the theory of a local autochthonous development of Evenki culture. However, as these fish-lures are also found among the Orochis, their use may simply reflect a primitive form of fishing. ***Copy seen:*** DLC.

52787. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Gruppy krovi u chukcheĭ i ėskimosov. (Sovetskai͡a ėtnografii͡a, 1958, no. 5, p. 113–16, tables.) 7 refs. Text in Russian. ***Title tr.:*** Blood groups of Chukchis and Eskimos.

A study of ABO and MN groups among 250 Chukchis from four localities and 65 Eskimos from a single settlement. There was a considerable variation in both blood groups among the Chukchis from different territories. Chukchis and Eskimos showed considerable similarity; however, the Chukchis showed a higher percentage of B and a lower of A than the Eskimos. Conditions are compared with the American Eskimos and Indians.

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52788. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . K voprosu o drevneĭshem zaselenii Sibiri. (Sovetskaîa ėtnografiîa, 1950, no. 3, p. 157–60.) 16 refs. Text in Russian. ***Title tr.:*** The problem of the first peopling of Siberia.

Recapitulates the findings of recent archeological expeditions and known facts on the distribution of early man along the upper reaches of the Ob' and Yenisey Rivers and in the Baykal region (Angara, upper Lena, etc.). The affinities between the Mal'ta and Buret' upper paleolithic and European late-Solutrian finds are noted. Okladnikov's theory (cf. No. 36584) on the settlement of Siberia by European tribes and their progressive mongolization, is disputed: west Siberian sites belong to a later period than those in the east; studies of the Baykal burials show its neolithic population to have been Mongoloid. As a cultural continuity between the paleolithic and neolithic eras has been established by Okladnikov, there should be no reason to attribute them to different racial stocks. The similarity of artifacts found in paleolithic sites of eastern Siberia and Europe is to be explained by identical climatic conditions, flora, and fauna, resulting in a correspondence of economic and cultural development; it does not imply identity of race. An original Mongolian population of northern Asia is therefore suggested.

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52789. LEVIN, MAKSIM GRIGOR'EVICH, 1904– , *and* N. N. CHEBOKSAROV. Khozîaĭstvenno-kul'turnye tipy i istoriko-ėtnograficheskie oblasti. (Sovetskaîa ėtnografiîa, 1955, no. 4, p. 3–17.) Refs. Text in Russian. German translation by J. Heidrich was *pub. in:* Sowjetwissenschaft. Gesellschaftswissenschaftliche Beiträge, 1956, Heft 4, p. 469–87; also in Ethnographisch-archäologische Forschungen, 1958, Heft 4, p. 131–51; a condensed version, in Russian, was pub. in: Ėtnograficheskoe soveshchanie, 1956, p. 43–47. (Copy in DLC.) ***Title tr.:*** Economic-cultural types and historical-ethnographic regions.

Discusses the problem of economic similarities between racially unrelated groups and cultural dissimilarity of linguistically akin peoples, stressing that economic and cultural development is not conditioned by geographic, historic or ethnic ties. Five types of economy are distinguished among north Siberian aboriginals and their material culture described (p. 4–7): the taiga hunters and fishers (Yukaghirs, Udegeians-Tungus, Orochis), arctic sea-mammal hunters (Eskimos, coastal Chukchis, Koryaks), river fishermen (the Amur Gilyaks, Ob Ostyaks and Voguls, Kamchadals) reindeer herders and hunters of the taiga (Evenki-Tungus, Eveny-Lamuts), and reindeer herders of the tundra (Chukchis, Koryaks, Nenets-Samoyeds.)

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52790. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Polevye issledovaniîa Instituta ėtnografii v 1946 g. (Sovetskaîa ėtnografiîa, 1947, no. 2, p. 207–212.) Text in Russian. ***Title tr.:*** Field work of the Institute of Ethnography in 1946.

Summarizes the activities of the Institute's expeditions including (p. 209–211), the Severo-vostochnaîa ėkspediţsiîa headed by G. F. Debeţs who concluded his anthropological research among Chukchis, Eskimos and Lamuts of Chukotka and was currently studying the Koryaks and Kamchadals; its archeological section under A. P. Okladnikov and V. D. Zaporozhskaîa who investigated ancient Koryak settlements in the Magadan region, Koni Peninsula and lower Kolyma River and excavated three neolithic Eskimo-type dwellings on Bol'shoy Baranov Mys. The ethnographic research of S. V. Ivanov and O. V. Ionova in the field of 18th–20th century Yakut plastic art and the termination of work of the Kompleksnaîa ėkspediţsiîa v Komi ASSR under N. N. Cheboksarov are noted.

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52791. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Polevye issledovaniîa Instituta ėtnografii v 1947 g. (Sovetskaîa ėtnografiîa, 1948, no. 3, p. 135–39.) 3 refs. Text in Russian. ***Title tr.:*** Field work of the Institute of Ethnography in 1947.

Describes the expeditions, exploration fields, routes, etc.; lists personnel, and gives a synopsis of the investigation results including (p. 138–39): G. S. Maslova's 1947 reconnaissance trip to the Kargopol' district for the Severnovelikorusskaîa ekspediţsiîa of 1948 to the Onega River region; the Nov. 1946–June 1947 anthropological investigations on Chukotka and Kamchatka of the Severo-vostochnaîa kompleksnaîa ėkspediţsiîa headed by G. F. Debeţs; the Amur-Sakhalin anthropological-ethnographic expedition under M. G. Levin;

and the Evenkiĭskaĭa ėkspedit͡siiâ under G. M. Vasilevich which did ethnographic and linguistic research, Apr. 1947–Jan. 1948, among the Evenki (Tungus) of Dzhugdyr Range foothills, south of the Aldan River. ***Copy seen:*** DLC.

52792. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Polevye issledovaniâ Instituta ėtnografii v 1948 godu. (Sovetskaĭa ėtnografiâ, 1949, no. 2, p. 156–58.) Text in Russian. ***Title tr.:*** Field work of the Institute of Ethnography in 1948.

Includes the Severnovelikorusskaĭa ėkspediţsiiâ headed by G. S. Maslova, investigating the ethnic history, material culture, art and folklore of the population in the lower and middle Onega River basin and Kenozero region, Arkhangel'skaya Oblast'; the Severo-vostochnaĭa ėkspediţsiiâ under G. F. Debeţs, engaged in an anthropological survey of the Evenki (Tungus) in the Podkamennaya Tunguska River area, with comparative ethnographic studies of the coastal and reindeer-herding Chukchis being conducted by V. G. Kuznet͡sova; the Taĭmyrskaĭa ėtnograficheskaĭa ėkspediţsiiâ led by B. O. Dolgikh doing research among the population of the lower Yenisey, Taymyr and adjacent regions, i.e., the Nganasans, Entsy, Nentsy, Sel'kups and Keti. ***Copy seen:*** DLC.

52793. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Polevye issledovaniâ Instituta ėtnografii v 1949 g. (Sovetskaĭa ėtnografiâ, 1950, no. 2, p. 185–87.) Text in Russian. ***Title tr.:*** Field work of the Institute of Ethnography in 1949.

Includes a preliminary report on the investigations on material culture and folklore in the Arkhangel'skaya Oblast' by the Severnovelikorusskaĭa ėkspediţsiiâ headed by G. S. Maslova and the ethnographic research among the reindeer-herding Chukchis of the Amguema River basin by V. G. Kuznet͡sova, member of the Severo-vostochnaĭa ėkspediţsiiâ.

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52794. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Polevye issledovaniâ instituta ėtnografii v 1950 g. (Sovetskaĭa ėtnografiâ, 1951, no. 2, p. 219–21.) Text in Russian. ***Title tr.:*** Field work of the Institute of Ethnography in 1950.

Includes a note on the ethnographic expedition to Komi A.S.S.R. under V.N. Beliţser, continuing work of 1945 and 1946. The 1950 research centered in the Pechora and Izhma basins. The collected material deals mainly with "Ethnogenesis of the Komi people according to ethnographic data" and "Present economy and ways of life of kolkhoz peasants in conditions of the far North."

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52795. LEVIN, MAKSIM GRIGOR'EVICH, 1904– . Raboty na Chukotke v 1957 godu. (Sovetskaĭa ėtnografiâ, 1958, no. 6, p. 128–34, illus.) Ref. Text in Russian. ***Title tr.:*** Field work on Chukotka in 1957.

Sketches the journey and work of the Northern expedition's Chukotka team headed by author and R. V. Chubarova: blood type tests of Eskimos and Chukchis at Nunyamo (Chukchi kolkhoz center), Naukan and Uelen (No. 52787); and excavations of burials and an ancient habitation site at Uelen. The burial inventory included bone, ivory and stone (no metal) implements, snow-goggles, zoo- and anthropomorphic figurines, etc. Some "winged" objects and ornamented points and harpoon heads are characteristic for the Old Bering Sea culture, other harpoon heads show analogies to Okvik, Birnirk and Punuk. The cranial material was badly crushed but 20 skulls could be restored. All are dolichocephalic and show marked Eskimoid traits. Exploratory diggings at the habitation site, investigated by S. I. Rudenko in 1945 (No. 14977, 31726), disclosed remains of a dwelling to be explored at a later date. ***Copy seen:*** DLC.

52796. LEVIN, MAKSIM GRIGOR'EVICH, 1904– , *and* ÎA. ÎA. ROGINSKIĬ. Sovetskaĭa antropologiâ k 40-letiû velikoĭ oktâbr'skoĭ sot͡sialisticheskoĭ revolûţsii. (Sovetskaĭa ėtnografiâ, 1957, no. 5, p. 56–71.) Refs. Text in Russian. ***Title tr.:*** Soviet anthropology to the 40th anniversary of the great October socialist Revolution.

Includes a reference to the still unpublished research by M. V. Vitov on over 50 territorial groups in northern Russia and Karelia (p. 63). The anthropological work of the Severo-vostochnaĭa expedition on the Chukchis, Koryaks, Eskimos, Kamchadals, and Lamuts of Chukotka and Kamchatka, etc., is noted (p. 64).

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LEVIN, MAKSIM GRIGOR'EVICH, 1904– , *see also* Gant͡skaĭa, O. A., *and* N. ÎA. Merpert. Issledovaniâ sovetskikh arkheologov . . . *1958.* No. 51079.

LEVIN, MAKSIM GRIGOR'EVICH, 1904– , *see also* Gantskaĭa, O. A. Sessii . . . issledovaniĭ 1957 g. *1958* No. 51080.

LEVIN, MAKSIM GRIGOR'EVICH, 1904– , *see also* Okladnikov, A. P. Ancient cultures . . . *1958*. No. 53725.

52797. LEVINA, F. M. Palinologicheskaĭa kharakteristika chetvertichnykh otlozheniĭ tsentral'nogo sektora Sovetskoĭ Arktiki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1958. vyp. 10, p. 45–78, diagrs.) 19 refs. Text in Russian. ***Title tr.:*** Palynological characteristics of Quaternary deposits in the central part of the Soviet Arctic.

Reviews studies at the Institute of Geology of the Arctic. According to the stratigraphic division worked out for the Quaternary deposits for the regions between Ural Mts. on the west and the Verkhoyansk Ridge on the east, the genera and species of fossil plants for each horizon are identified and their correlation is discussed. Sedimentary environments during various periods are interpreted and paleobotanical and paleoclimatic conditions considered.

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LEVINE, NORMAN DION, 1912– , *see* Hanson, H. C., *and others*. Coccidia . . . geese and swans. *1957*. No. 51574.

LEVINE, NORMAN DION, 1912– , *see* Hanson, H. C., *and others*. Filariae . . . wintering . . . Canada geese. *1956*. No. 51575.

LEVORSEN, A. I., *see* Howell, J. V., *and* A. I. Levorsen. Directory of geological material . . . *1957*. No. 51830.

LEVY, H. M., *see* Jasper, R. L., *and* H. M. Levy. Hormonal control . . . cold-exposed rats. *1957*. No. 52051.

LEVY, L. M., *see* Welch, B. E., *and others*. Energy requirements . . . subarctic bivouac. *1957*. No. 55983.

LEWIS, D., *see* Freinkel, N., *and* D. Lewis. The effect of lowered environmental temperature . . . metabolism . . . thyroxine . . . *1957*. No. 50979.

LEWIS, FLOYD, 1916– , *see* Niazi, S. A., *and* F. Lewis. Profound hypothermia . . . man . . . case. *1958*. No. 53557.

LEWIS, FLOYD, 1916– , *see* Niazi, S A., *and* F. Lewis. Profound hypothermia . . . monkey . . . recovery . . . *1957*. No. 53558.

LEWIS, FLOYD, 1916– , *see* Reeves, M. M., *and* F. Lewis. Total body cooling . . . febrile patients. *1958*. No. 54269.

52798. LEWIS, HAROLD E., 1921– , *and* **P. F. TAYLOR.** The British North Greenland Expedition. (Photographic journal, London, Sept. 1957. v. 97, p. 145–48, 4 illus.) 5 refs.

Summary of the photographic experience of this expedition of 1952–1954, in northeast Greenland and on the inland ice, approx. 77°–78° N. Information is given on cameras, film, filters, exposure meters, and on the systematic recording and printing of photographs. Indoor lighting, arctic night, changing light of spring and autumn, summer and snow lighting effects are discussed. Temperature and humidity changes, maintenance of cameras, differences in focal plane shutter and film composition, and the development of film under local conditions are briefly considered

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52799. LEWIS, HAROLD E., 1921– , *and others*. Changes in body weight and subcutaneous fat thickness in man on a polar expedition. (International Physiological Congress. 20th, 1956. Abstracts of communications, v. 2, p. 565–66.) 3 refs. in text. *Other authors:* J. P. Masterton *and* S. Rosenbaum.

Contains information and data on height, weight and weight-increase of 29 men; seasonal fluctuations in weight, subcutaneous fat condition, and its relation to body weight.

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52800. LEWIS, HAROLD E., 1921– , *and others*. The food value of biltong, South African dried meat, and its use on expeditions. (British journal of nutrition, 1957 v. 11, no. 1, p. 5–12, plate, tables.) 17 refs. *Other authors:* J. P. Masterton *and* P. G. Ward.

A study of a traditional South African game (antelope) meat preparation, salted and dried in the sun. A cwt. of biltong was presented to the British North Greenland Expedition in 1952, whose members, almost all, enjoyed it without further preparation, during sledging, etc. Its history, preparation, composition,

nutritive and culinary value are discussed. It was found to be almost fat-free and to contain about 65% protein, 12.5% ash, a total calorific value of 416 Cal./100g. and a physiological calorific value of 312 Cal./100 g. ***Copy seen:*** DLC.

52801. LEWIS, HAROLD E., 1921– , *and* J. P. MASTERTON. A modern sledging ration. (Geographical journal, Mar. 1958. v. 124, no. 1, p. 85–88, 4 tables.) 3 refs.

This ration yields 4,800 Cal./man/day. The food and packaging are superior to the British North Greenland Expedition's ration with which it is compared. To lighten weight, disposable polythene and aluminum foil is used for packages; experimental containers of fiber-glass, vulcanized fiber, plywood banded with aluminum and plastic are being tried. Prototypes of the new ration are being tested in the Antaretic.

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52802. LEWIS, HAROLD E., 1921– , *and others.* Science on display: a modern sledging ration. (World science review, Aug. 1958, p. 21–22.) *Other authors:* J. P. Masterton *and* T. C. Gallant.

Describes ration boxes prepared for the British North Greenland Expedition of 1952–54. Standard daily ration of 4,200 Cal. was found insufficient; intake of 4,800 Cal. was required, due to work of travel and the cold environment. Improved and increased rations were provided; they were packaged in disposable units packs devised by the Metal Box Co. of London. Foil, polythene and other flexible wraps were used for individual items. Contents of a day's ration box for two men are listed.

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52803. LEWIS, HAROLD E., 1921– , *and others.* Selection of representative sites for measuring changes in human subcutaneous tissue thickness. (Clinical science, 1958. v. 17, no. 3, p. 369–76, illus., tables.) 7 refs. *Other authors:* J. P. Masterton *and* H. M. Ferres.

Description of a method for measuring changes in subcutaneous fat at six representative sites of the human body. The six sites were chosen from 36, after monthly measurements of 24 subjects during the British North Greenland Expedition, 1952–1954. These six sites are "best by criteria of practicability, sensitivity . . . and reproducibility."

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52804. LEWIS, HAROLD E., 1921– , *and* J. P. MASTERTON. Sleep and wakefulness in the Arctic (Lancet, June 1957. v. 272, no. 6982, p. 1262–66, illus.) 11 refs.

Account of observations on the 29 men of the British North Greenland Expedition, 1952–54. Time of going to sleep and getting up varied greatly especially during the periods of continuous day and night when more time was used for sleep. Winter months were characterized by many interruptions of sleep and by taking of naps. Though no limits on sleep were imposed, the mean duration of sleep was 7.9 hours, approximately what is taken in temperate climate.

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52805. LEWIS, HAROLD E., 1921– , *and* J. P. MASTERTON. Sleep and wakefulness patterns in men on a polar expedition. (Advancement of science, June 1957. v. 13, no. 53, p. 412–13.)

Information is presented on the seasonal variations in light and darkness at the British North Greenland Expedition's camp (ca. 78° N.), the way of life there, effect of continuous dark or light on sleeping pattern and on total amount of diurnal sleep, effect of naps.

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LEWIS, HAROLD E., 1921– , *see also* Edholm, O. G., *and others.* Cold injury. *1957.* No. 50688.

LEWIS, HAROLD E., 1921– , *see also* Masterton, J. P., *and others.* Food intakes, energy . . . faecal excretions . . . *1957.* No. 53178.

LEWIS, HAROLD E., 1921– , *see also* Masterton, J. P., *and others.* Nutrition and energy expenditure . . . *1957.* No. 53179.

LEWIS, HAROLD E., 1921– , *see also* Simpson, C. J. W., *and others.* North ice . . . *1957.* No. 54901.

52806. LEWIS, P. R., *and* M. C. LOBBAN. Dissociation of diurnal rhythms in human subjects living on abnormal time routines. (Quarterly journal of experimental physiology, Oct. 1957. v. 42, no. 4, p. 371–86, illus., tables.) 15 refs.

Twelve subjects living on two abnormal time rhythms on Spitsbergen (cf. No. 52807) were also studied as to their body temperature rhythm. The latter adapted almost immediately to the abnormal time routines in 11 out of 12 subjects, in

marked contrast to the excretory rhythms. Dissociation between the two thus appears to be common. Small-time differences in the function of the secretory components, also sometimes occur during the abnormal time schedule.

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52807. LEWIS, P. R., *and* **M. C. LOBBAN.** The effects of prolonged periods of life on abnormal time routines upon excretory rhythms in human subjects. (Quarterly journal of experimental physiology, Oct. 1957. v. 42, no. 4, p. 356–71, illus. tables.) 6 refs.

A study of two groups of subjects living for seven weeks in Spitsbergen, one on a 21-hr. day, the other on a 27-hr. day. Data on excretion of water, potassium and chloride are presented and analyzed. No significant difference in response to the two abnormal time scales was detected and both groups showed persistence of an intrinsic 24-hr. excretory rhythm. The work was carried out during the Cambridge Spitsbergen Physiological Expedition headed by Dr. Lobban, summer 1953. ***Copy seen:*** DNLM.

LEWIS, W. R., *see* Drummond, J. C., *and others.* The examination . . . tinned foods . . . *1938*. No. 50637.

52808. LEZGINTSEV, G. V kraĭu almazov. (Ogonëk, Nov. 1958. god 36, no. 47, p. 7, illus.) Text in Russian. ***Title tr.:*** In the country of diamonds.

Notes by director of the Institute "TSvetmetproekt" on his flight via Mukhtuya to Mirnyy: center of the diamond industry, beginning of mining in 1958; problems posed by permafrost; construction of flotation plants and of a dam; shortage of timber, etc.

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52809. LI, CHOH-LUH, *and* **P. GOURAS.** Effect of cooling on neuromuscular transmission in the frog. (American journal of physiology, Mar. 1958. v. 192, no. 3, p. 464–70, illus.) 15 refs.

Report of experiments on impulse transmission across the neuromuscular junction of winter-type frogs. A critical temperature for neuromuscular transmission, 5° C., was found, below which impairment of impulse transmission began. It was also observed that during cooling, impulse-blockage at one neuromuscular junction and transmission at the other, in a single muscle fiber, could occur. ***Copy seen:*** DNLM.

52810. LI, CHOH-LUH. Effect of cooling on neuromuscular transmission in the rat. (American journal of physiology, July 1958. v. 194, no. 1, p. 200–206, illus.) 18 refs.

"The performance of neuromuscular transmission was most efficient at body temperature above 15° C. and was impeded at 15° C. and blocked at 5° C. At 4° C. the nerve ceased to conduct . . ." Cooling to −2° C. for two hrs. extinguished muscle resting potentials, miniature endplate potentials and the response to direct or indirect stimulation of muscle.

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LI, KÓ-CHIN, *see* Dao, C., *and others.* Electrocardiographic changes . . . hypothermia. *1958*. No. 50443.

LI, P. F., *see* Aleskerova, Z. T., *and others.* Stratigrafiia . . . *1957*. No. 49247.

52811. LIAKHOVICH, V. V. O raspredelenii mikroèlementov v Sibirskikh trappakh. (Akademiia nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh èlementov. Trudy, 1957, vyp. 1, p. 93–120, tables, plates) 75 refs. Text in Russian. ***Title tr.:*** Distribution of micro-elements in the Siberian traps.

Outlines data on multiphases and on tuffic and intrusive facies and distribution of micro-elements in the trap formation area of the Siberian platform, extending from the Yenisey to the Lena and from Sayan north to the coast. The data are based primarily on spectroscopic investigation. Explosive, effusive and intrusive phases of trap volcanism are outlined. Geologic, petrographic and chemical peculiarities of intrusive rocks are treated. According to their age, the facies of traps are distinguished as: gabbro-diabases, porphyrites and the specially treated amygdoloidal gabbro-diabases. Each group is treated in turn and chemical analyses are presented. Distribution of accessory minerals and micro-elements (Cr, V, Ni, Co, Be, Rb, Pb, Sr, Ba, La and others) are described. Comparison is made between the composition of micro-elements of Siberian trap and similar formations of Lapland, Caucasus, Kamchatka, and other regions.

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52812. LIAMIN, K. A. Issledovaniia biologicheskogo tsikla letne-nerestuiushcheĭ sel'di Islandii. (Murmansk. Polîarnyĭ nauchno-issledovatel'skiĭ institut

morskogo rybnogo khozîaĭstva i okeanografii. Trudy, 1956. vyp. 9, p. 146–75, illus. tables, maps.) 21 refs. Text in Russian. English translation *issued as* U.S. Hydrographic Office. Translation no. 527. 25 p. ***Title tr.:*** Investigations into the biological cycle of summer-spawning herring of Iceland.

Based on Soviet fishing activities since 1948 in south and west Iceland waters, which are briefly described. Dates and conditions of multiplication and distribution of small and large larvae are discussed, as well as their age and growth rate, times of sexual maturity and fertility, relation between size, age and fertility. Size of ovaries in spring and autumn spawners, weight and fatness, the immature fish, the grown-up summer spawners and their distribution are dealt with. ***Copy seen:*** DI.

52813. LÎASHENKO, G. P. Novye roda devonskikh tentakulitov. (Akademiîa nauk SSSR. Doklady, Sept. 1, 1957. t. 116, no. 1, p. 141–44, illus., plate.) 12 refs. Text in Russian. ***Title tr.:*** New genera of Devonian Tentaculitida.

Contains descriptions of five new fossil genera of this molluscan order, among them *Homoctenus* n. gen. and *H. krestovnikovi* n. sp. abundant in Devonian deposits of eastern section of Russian platform, Timan Ridge and northern Ural Mts. ***Copy seen:*** DLC.

52814. LIBBY, DOROTHY. Girls' puberty observances among northern Athabascans. (Kroeber Anthropological Society. Papers. Fall 1958. no. 19, p. 103)

Abstract of a 229 l. Ph. D. dissertation submitted at the University of California in 1952. It deals with puberty customs and tribal restrictions imposed on girls after their first menses. No differences have been observed between northern Athapaskans and other American Indians. ***Copy seen:*** DLC.

52815. LIBBY, WILBUR L. Observations on beaver movements in Alaska. (Journal of mammalogy, May 1957. v. 38, no. 2, p. 269.)

Notes on 122 returns of tagged beavers with only one noted to have moved over six and possibly up to 200 miles in two years. Eighty-seven were recaptured in the same area. ***Copy seen:*** DI.

52816. LIBBY, WILBUR L. Records of the pika in the Tanana Hills, Alaska. (Journal of mammalogy, Aug. 1958 v. 39, no. 3, p. 448–49.) refs in text.

Contains a series of new locations for *Ochotona collaris*. It extends the previously known limits of geographic distribution of this form (also called cony, rock rabbit) by some 150 miles to the west and north. ***Copy seen:*** DLC.

LIBBY, WILBUR L., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

LIBERTY, B. A., *see* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957*. No. 50087.

52817. LICHTE, HEINRICH. Geodätische Messungen auf dem grönlandischen Inlandeis. (Zeitschrift für Vermessungswesen, Feb., Mar., 1957. Jahrg. 82, Heft 2, 3, p. 46–50, 65–73, diagrs.) 25 refs. Text in German. ***Title tr.:*** Geodetic measurements on the Greenland Inland Ice.

French version of this paper and No. 52818 was also issued: Expédition Internationale Glaciologique au Groenland, 1958–1959, Mésures de géodésie sur l'Inlandsis Groenlandais. Paris, Expéditions Polaires Françaises (19 p.), Copy at DN–HO.

Reviews experiences from previous geodetic investigations on the icecap and suggests procedures for the International Glaciological Expedition of 1957–60. The use of electronic equipment and other modern surveying methods are evaluated; problems of poor visibility and weather conditions are stated and measures to counteract them are suggested. Surveying procedures are evaluated, advantages of triangulation over trigonometric and polygonometric measurements in position establishment are pointed out. The refraction problem in trigonometric height-determinations is discussed in some detail, and means to reduce errors in measurements and computations are suggested. An arrangement for height-determination through automatic levelling is described and illustrated. The surveying of crevassed areas is stressed; employment of air photogrammetry on the west coast should be considered.

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52818. LICHTE, HEINRICH. Internationale glaziologische Grönlandexpedition 1958/59. (Zeitschrift für Vermessungswesen, Jan. 1957. Jahrg. 82, Heft 1, p. 3–8, map, diagr.) 20 refs. Text in

German. ***Title tr.:*** International Glaciological Expedition to Greenland, 1958–59.

Outlines features of the Greenland inland ice and achievements of major expeditions 1888–1954 (with map of icecap traverses). Main task of the 1958–59 expedition is to make meteorological measurements, especially of the lower 300 m. of the atmosphere, seismic measurements for determination of ice thickness and cartography of the ground beneath the ice, gravimetric and pendulum measurements for estimation of Greenland's isostatic orientation, and observations of surface ablation and growth of the ice. Research will be concentrated in a central zone, approx. 68°–73° N. with main axis along a 900 km. west-east profile from Disko Bugt to Røhss Fjord. ***Copy seen:*** DLC.

LICHTMAN, J. Z., *see* Hanok, M., *and others.* A comparison of instruments . . . part I: hardness. *1957.* No. 51554.

LICHTMAN, J. Z., *see* Hanok, M., *and others.* A comparison of instruments . . . stress decay. *1957.* No. 51555.

LID, DAGNY TANDE, *see* Porsild, A. E. Illustrated flora . . . Canadian arctic archipelago . . . *1957.* No. 54100.

52819. LID, JOHANNES, 1886– . Norsk flora; med teikningar av Dagny Tande Lid. Andre utgåva. Oslo, Norske Samlaget, 1952. 771 p., 390 illus., Text in Norwegian. ***Title tr.:*** Norwegian flora, with illustrations by Dagny Tande Lid. Second ed.

A taxonomic treatment with keys to families, genera and species and a systematic list of all known flowering plants and vascular cryptogams. Brief descriptions and illustrations are provided. Plants native to northern provinces of Norway, i.e., Nordland, Troms and Finnmark, are included. A list of Norwegian localities, a glossary of botanical terms, authors' names (with dates), and indices of Latin and Norwegian names, are added. First ed. of this flora was pub. in 1944. ***Copy seen:*** DA.

52820. LIDEGAARD, MADS. Danske grønlandsekspeditioner i det 17. århundrede. (Atuagagdliutit: Grønlandsposten, Jan. 30, 1958. Ukiut 98-iat, nr. 2, p. 19–20.) Text in Danish. ***Title tr.:*** Danish Greenland expeditions in the 17th century.

Contains details on seven expeditions sent to establish the Danish claim to Greenland. Contact was established with the natives and some trading was done; but the efforts to break Dutch control were unsuccessful.

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52821. LIDEGAARD, MADS. Gamle rejsebeskrivelser fra Grønland. (Atuagagdliutit: Grønlandsposten, Oct. 24, 1957. Ukiut 97-iat, nr. 22, p. 4–5.) Text in Danish and Eskimo. ***Title tr.:*** Old accounts of travel in Greenland.

Sketches and quotes early narratives of voyages to Greenland and encounters with Greenlanders. Written about 1000–1400, they are the earliest such records, apart from the Norse sagas.

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52822. LIDEGAARD, MADS. Kultur og udvikling. (Grønland, Sept. 1958, nr. 9, p. 345–52.) Text in Danish. ***Title tr.:*** Culture and development.

Discusses the relationship between cultural and material development in Greenland. Certain aspects of Greenland culture should be adapted to the rapid change in other spheres.

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52823. LIDMAN, HANS. Bland Skoltlappar i Suenjel-sit. (Jorden runt, June 1957. årg. 29, nr. 6, p. 273–86, illus.) Text in Swedish. ***Title tr.:*** Among Skolt Lapps in Suenjel-sit.

Recounts recent visit to several communities of these Lapps in their resettlement area approx. 69°35′ N. 28°37′ E., north Finland. They are former inhabitants of Suonikylä (now Suonikyulya, 68°46′ N. 29°14′ E.), who migrated when the Petsamo region was ceded to the U.S.S.R. after World War II, abandoning their homes and most of their reindeer stock. Their relocation at Sevettiijärvi and nearby Suenjel-sit is described. ***Copy seen:*** DLC.

52824. LIE, OLE. Fra en studiereise i Finnland. (Norsk myrselskap. Meddelelser, Apr. 1952. årg. 50, nr. 2, p. 66–76, illus.) 12 refs. Text in Norwegian. ***Title tr.:*** From a study trip in Finland.

Discusses his inspection of bog clearance, drainage, and use as agricultural land. Techniques of mechanized clearance and ditch digging are described. Investigations are being made of soil nutrient content and structure, classification of potential improvement, and bog types. On Teuravuoma bog, 100 km. north of the Arctic Circle, where 250 acres were cleared, the work preceding mechanized hay production is described.

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52825. LIED, F. Quantitative measurements of absorption in the auroral zone. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 2, *pub.* 1957, p. 135–46, illus., diagrs.) 11 refs.

Observational techniques for measuring ionospheric absorption and results of measurements in the United States, Canada, Alaska, and Norway are discussed. Absorption on both quiet and disturbed days is considered. Application of different techniques with overlapping sensitivity is required in order to study both "normal" auroral absorption and the disturbances. Considerably more is known about the time and space distribution of catastrophic blackouts than the nature and cause of the absorption near the auroral zone.

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LIED, F., *see also* Landmark, B., *and others.* Ionospheric h'f-observations . . . *1956.* No. 52640.

52826. LIGHTBODY, HOWARD DAVID, 1891– . Cold weather feeding, a review. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago, Activities report, 1952 (n.s.) v. 4, no. 3, p. 169–80, illus., tables.) 10 refs.

Information is presented on the frigid zone and on rations and feeding applied; clothing and activities and their relation to cold weather feeding; physiology, psychology and morale; effect of nutrition on stress; caloric intake and adjustment; packaging, etc. ***Copy seen:*** DNLM.

52827. LIIMOLA, MATTI E. Ugrische Etymologien. Helsinki, 1956. 15 p. (Suomalais-ugrilainen seura. Aikakauskirja, v. 58, no. 6.) Refs. in text. Text in German. ***Title tr.:*** Ugric etymology.

Compares Hungarian and Vogul words, noting changes in meaning and morphology. Ostyak and several Vogul dialects are also considered.

Copy seen: DLC.

52828. LIIMOLA, MATTI E. Zur wogulischen Formenlehre. Helsinki, 1956. 65 p. (Suomalais-ugrilainen seura. Aikakauskirja, v. 58, no. 3.) Refs. in text. Text in German. ***Title tr.:*** Vogul morphology.

Analyzes the use of noun- , verb- , and adverb suffixes in Vogul and draws parallels to other Finno-Ugric languages.

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LIIMOLA, MATTI E., *see also* Kannisto, A. Materialien . . . Mythologie . . . Wogulen . . . *1958.* No. 52164.

LIIMOLA, MATTI E., *see also* Kannisto, A. Wogulische Volksdichtung . . . 3 . . . 4 . . . *1956–58.* No. 52165.

52829. LILGE, EWALD OSCAR, 1906– , *and* G. H. FINLAND. Proposed development of Northwest Canada. (Western miner and oil review, Jan. 1958. v. 31, no. 1, p. 40–41.)

Contains brief on mineral resource development, submitted to the Northwest Development Commission of Alberta by the Alberta and Northwest Chamber of Mines and Resources. Present and potential production of mines in the Northwest Territories, Saskatchewan, and the Yukon are outlined, and need for improved transportation and communications is stressed. Immediate investigation of communication facilities, completion of the Mackenzie Highway from Grimshaw to Yellowknife, and determination of the best route for a railway to Pine Point are urged.

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LILIENFIELD, LAWRENCE SPENCER, 1927– , *see* Rose, J. C., *and others.* Cardiovascular function in hypothermic anesthetized man. *1957.* No. 54385.

LILJEGREN, B., *see* Sandford, F., *and* B. Liljegren. Frostbeständigheten . . . *1956.* No. 54542.

52830. LILJEQUIST, GÖSTA H. Isvintern 1946–47. Stockholm, 1947. 18 p. maps, tables. (Sweden. Meteorologiska och hydrologiska institutet. Meddelanden, ser. B, nr. 5.) Text in Swedish. Summary in English. ***Title tr.:*** The ice winter 1946–47.

A month-by-month summary is given of ice and temperature conditions for Sweden during the 1946–47 winter. The winter as a whole was cold, but not extreme: northern Sweden rather mild during the first part but the entire country extremely cold during the latter part. Ice conditions off the west and south coasts were very severe; they are summarized for the Skagerrak, Kattegat, the Sound, the Baltic Sea, and the Gulf of Bothnia. Ice conditions are mapped for Feb. 18 and Mar. 10–11, 1947.

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52831. LILJEQUIST, GÖSTA H. Longwave radiation and turbulent heat trans-

fer in the antarctic winter and the development of surface inversions. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 167–81, illus., diagrs.) 7 refs.

The micro- and macrometeorological effects of extensive snowfields are discussed on the basis of observations made during the Norwegian-British-Swedish Antarctic Expedition, 1949–1952, and with reference to Sverdrup's and Wexler's work in the Arctic. Particular emphasis is placed on the establishment and destruction of surface inversions. Examples of wind and temperature profiles are given. Results of the Maudheim studies are being published by the Norsk Polarinstitutt. ***Copy seen:*** DLC.

52832. LILJEQUIST, GÖSTA H. Den svensk-finsk-schweiziska expeditionen till Nordostlandet 1957–58; en allmän översikt fram till oktober 1957. (Ymer, 1957. årg. 77, häfte 4, p. 260–79, illus., map, tables.) Text in Swedish. ***Title tr.:*** The Swedish-Finnish-Swiss expedition to Nordaustlandet 1957–58; general survey to October 1957.

The expedition, headed by the writer, is based at Kinnvika (80°03′ N. 18°18′ E.) on the north side of Murchisonfjorden. The Finnish members are responsible for aerological work and tide observations, the Swiss for investigations in atmospheric electricity and the Swedes for cosmic physics and general meteorology, also the general equipment. Personnel, transport, equipment and construction of the station, and the start of observations are reported in detail. Most members and some equipment arrived on July 15th by the Finnish R/V *Aranda*, and the bulk of the equipment on the Swedish minelayer *Älvsnabben* July 27th. A related glaciological expedition under Valter Schytt, and four members' preparatory work in summer 1957 are mentioned (cf. No. 51478). The station's position is described in relation to local conditions and some preliminary data given for July 19th–Sept. 1957 on temperature, precipitation, wind conditions, cloud cover.

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52833. LILLEY, BARBARA. Climbs and expeditions, St. Elias Range, Yukon Territory. (American alpine journal, 1958. v. 11, no. 1, p. 95–96.)

Brief account of a month's climbing, Aug. 3–31, 1957, by party of six led by W. Davis. Supplies and equipment were airlifted from Burwash Landing, and party flown to a small lake near Klutlan Glacier; several peaks were climbed; attempt on Mt. Wood failed.

Copy seen: DGS.

LILLY, GRAY S., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

52834. LIN, PAVEL. Severnyĭ gambit. (Fizkul'tura i sport, 1957. god 27, no. 10, p. 39–40, illus.) Text in Russian. ***Title tr.:*** Northern gambit.

Story about a Samoyed from Vaygach Island who used the chess gambit tactic by giving his life to save his platoon during a World War II reconnaissance mission on the Murmansk front.

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LIN, TEH PING, *see* Sherman, J. K., *and* T. P. Lin. Effect of glycerol and low temperature on survival . . . mouse eggs. *1958.* No. 54770.

LIN, TEH PING, *see* Sherman, J. K., *and* T. P. Lin. Survival . . . mouse eggs . . . freezing and thawing. *1958.* No. 54772.

52835. LINCOLN, FREDERICK CHARLES, 1892– . Saving North America's endangered species; the progress report of the U.S. Fish and Wildlife Service. (Oryx, Dec. 1958. v. 4, no. 6, p. 365–72.)

Includes Pacific walrus, *Odobenus divergens*, and the polar bear, *Thalarctos maritimus.* ***Copy seen:*** DA.

LIND, A. R., *see* Clarke, R. S. J., *and others.* Cold vasodilatation . . . forearm. *1957.* No. 50285.

LIND, A. R., *see* Clarke, R. S. J., *and others.* The duration of sustained contractions . . . different muscle temperatures. *1958.* No. 50286.

LIND, A. R., *see* Clarke, R. S. J., *and others.* Hyperaemia . . . contraction at different temperatures. *1957.* No. 50287.

LIND, A. R., *see* Clarke, R. S. J., *and others.* Vascular reactions . . . forearm to cold. *1958.* No. 50288.

52836. LINDBERG, HÅKAN, 1898– . Hemiptera heteroptera from Newfoundland collected by the Swedish-Finnish Expedition of 1949 and 1951. Helsinki, 1958. 25 p. map. (Acta zoologica fennica 96.).

Reports on true bugs collected in the summer of 1949, by C. Lindróth, E.

Palmén and H. Krogerus, and by C. Lindroth in 1951, in 76 Newfoundland localities. Of 75 species listed four are from Labrador. They comprise nearctic (23 with general, 26 with northern distribution), holarctic (15), and nine introduced European species. Synonymy and data on ecology and distribution are given. ***Copy seen:*** DLC.

52837. LINDBERG, HÅKAN, 1898– . Verzeichnis der ostfennoskandischen Homoptera Cicadina. Helsingforsiae, 1947. 81 p. text map. (*In:* Societas pro fauna et flora fennica. Fauna fennica, I.) Text in German. ***Title tr.:*** A list of the Homoptera Cicadina of eastern Fennoscandia.

Contains a systematic annotated list of 274 species and many forms, with synonyms and data on habitat and distribution, followed by a check list of species with provincial distribution. An index of genera is appended.

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52838. LINDBERG, HARALD. Växter kända från Norden i Linnés herbarium. Helsinki, 1958. 133 p. illus. (Acta botanica fennica 60.) Text in Swedish. ***Title tr.:*** Plants known from Fenno-Scandinavia in Linné's herbarium.

Lists the plants, many of them collected in Siberia and various European countries outside Fenno-Scandinavia. Linné and others' annotations are quoted, and a short description of each specimen is given. The herbarium (13,832 sheets) was studied by the author at the Linnean Society in London in 1935. About 500 genera are represented. Appended is a list of the scientists cited with brief biographical information.

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52839. LINDE, PREBEN. Den grønlandske landskasses virksomhed. (Grønland, Mar., May 1957. nr. 3, 5, p. 115–20, 190–96, illus.) Text in Danish. ***Title tr.:*** The work of the Greenland provincial treasury.

The present organization with one provincial and 16 district treasuries was established by a law of 1950. The provincial revenue comes from tariffs on spirits, tobacco, sugar, chocolate, etc. Expenditure is largely through the district treasuries; main items in the district budgets are welfare (42%) and construction work (32%).

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LINDEBERG, BRITA, *d.* 1955, *see* Nannfeldt, J. A., *and* B. Lindeberg. Taxonomic . . . *Cintractia* on Swedish Caricoideae . . . *1957.* No. 53492.

LINDGREN, HANS, *see* Nordström, H. F., *and others.* Model tests . . . icebreakers. *1952.* No. 53632.

52840. LINDHOLM, G. F., *and others.* Geologic and engineering properties of silts near Big Delta and Fairbanks, Alaska. Ames, Iowa, Dec. 1, 1957. iv, 113 p. illus., 10 maps, 12 diagrs., 10 tables. (Iowa State College. Engineering Experiment Station, Final report I. Project 320–S. Contract NONR–530(04) Geography Branch, Office of Naval Research.) 37 refs. *Other authors:* L. A. Thomas, D. T. Davidson, R. L. Handy, *and* C. J. Roy.

Contains results of detailed field work in the Fort Greely (formerly Big Delta) area, and a reconnaissance study in the Fairbanks area, made in summer, 1955, following a preliminary study in 1954 (No. 41312). Geologic properties are summarized for samples taken; a number of chemical and engineering tests were made. In the Fort Greely area the most prominent geomorphic features are of glacial origin. Mineral composition of the silts bears a direct relationship to the bedrock in the area. Most samples have a textural classification of silty loam, a non-plastic or moderately plastic silty soil; are fair to very poor for use as subgrade material. In nearby areas underlain by permafrost, soils are poorly drained and are commonly in a soggy or saturated condition, and have little bearing capacity when wet. The Fairbanks silts differ from those at Fort Greely; they contain less mica, are finer textured, and generally more uniform in color, texture, and overall appearance. Permafrost is prevalent in much of the Fairbanks area. For engineering purposes, silts of the two areas generally similar, form fair to very poor subgrade material. Gravels are locally scarce, may provide aggregate for construction purposes.

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52841. LINDLEY, W. B. Noctilucent clouds in Alaska, July 27–28, 1957. (U.S. Weather Bureau. Monthly weather review, Aug. 1957. v. 85, no. 8, p. 272, 281, illus.)

Brief note on observations made, using theodolite, at Anchorage and Gulkana, recording the bearing, colors, elevation

and extent of these clouds. Height was estimated at 53 to 97 km. Observations were limited because personnel on duty had never seen noctilucent clouds before. Note also by S. Teweles, q.v.

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52842. LINDQVIST, EITEL. Neue paläarktische Pteronidea-Arten, Hym., Tenthredinoidea. (Notulae entomologica, 1957. v. 37, no. 3, p. 92–96; no. 4, p. 97–117, 48 illus.) Text in German. ***Title tr.:*** New palaearctic Pteronidea species, Hym., Tenthredinoidea.

Describes 26 species of the sawfly family Pteronidea, including 12 new from Swedish and Finnish Lapland and from the Petsamo area. ***Copy seen:*** DA.

52843. LINDQVIST, EITEL. Zur Kenntnis der paläarktischen *Nematinus*-Arten, Hym. Tenthredinoidea. (Notulae entomologicae, 1957. v. 37, no. 1, p. 12–16, 11 illus.) 4 refs. Text in German. ***Title tr.:*** Contributions to the knowledge of palaearctic species of the genus *Nematinus*, Hym. Tenthredinoidea.

Contains critical notes on seven palaearctic species of this sawfly genus, including *N. acuminatus*, native to Utsjoki in Finnish Lapland. *N. nigrosternatus*, recorded as a synonym of *N. caledonicus* from Kamchatka, and *N. kamchaticus* held as a synonym of *N. acuminatus* by Malaise, are recognized as extant species. ***Copy seen:*** DA.

52844. LINDROTH, CARL HILDEBRAND, 1905– , *and* T. PALM. Bidrag till kännedomen om coleopterfaunan i övre Norrlands kustland; faunistiska, ekologiska och djurgeografiska studier. Göteborg, Elanders boktr., 1934. 127 p. illus., map. (Göteborgs k. vetenskaps- och vitterhets-samhälle. Handlingar, 5. följden, ser. B, bd. 4, no. 3.) Text in Swedish. ***Title tr.:*** Contribution to the knowledge of the coleopteral fauna in the coastal region of upper Norrland, Sweden; faunistic, ecologic, and biogeographic studies.

Of the 3,600 species of beetles known in Sweden, 957 were found in a three weeks' study of the Norrland lowland. These are listed, with identification of forms not previously known from that latitude (63°–66°30′ N.) in Finland and Norway. Some are new to Swedish fauna. Influence of topography and climate on distribution, and migration are considered. All are post-glacial migrants to Sweden and origin is determined on the basis of species distribution: across Finland from the unglaciated regions of Siberia, across Sweden from central Europe, and across Norway from the ice-free localities of the west coast; the last least productive of species. Some species are biocentric. The role of rivers as routes of migration from northern to southern Sweden, and the obstructing effect of the border mountains are stressed. ***Copy seen:*** DLC.

52845. LINDROTH, CARL HILDEBRAND, 1905– . The faunal connection between Europe and North America. Stockholm, Almqvist & Wiksell, 1957. 344 p. 61 illus. incl. 46 text maps, 11 diagrs. 487 refs.

Contains a list (p. 15–134) of about nine hundred land and fresh-water animals (mammals, birds, fishes, insects, molluscs, etc.) common to Eurasia, and North America. A calculation made on the basis that these groups make up 17.3% of the entire terrestrial and limnic Swedish fauna, leads to a conjecture that the actual number of Eur-American non-marine faunal species amounts to more than 5,000. A large part of the species in common are regarded as introduced by man into either continent, or both, this element amounting to 41–46% (375–417 species). Species introduced from Europe into North America are about ten times as numerous as those transplanted in the opposite direction. Among groups treated, over 500 animal species are undoubtedly indigenous in both continents. Most of them possess a more or less continuous circumpolar distribution. Part of the Greenland and Iceland fauna immigrated across a Pleistocene land-bridge from the European mainland. The detailed comparative study of the Alaskan and northeast Siberian faunas is considered essential since the Bering land-bridge was the most important link toward evolution of the circumpolar fauna. ***Copy seen:*** DLC.

52846. LINDSTRÖM, MAURITS. A tectonic study of Mt. Nuolja, Swedish Lapland. Lund, 1955. (Geologiska föreningen, Stockholm. Förhandlingar, 1955, häfte 4, p. 557–66, text map, 10 diagrs.) 5 refs. *Also issued as:* Lund. Universitet. Mineralogisk och paleontologisk geologiska institutionerna. Skrifter, nr. 30.

Discusses axial elements of the fabric of an area of the overthrust Caledonian

metamorphics along the south shore of the lake, Torneträsk. Hard schists, mica schists, and marble are the principal rocks. Dips of s-surfaces, and directions of lineations were measured. The results at Mt. Nuolja are compared to those northeast of Pålnoviken, at the northwest end of the lake, which were reported earlier (No. 46373). ***Copy seen:*** DGS.

52847. LINDSTRÖM, MAURITS. Tectonic transports in three small areas in the Caledonides of Swedish Lapland. Lund, 1958. 85 p. diagrs., sketch maps, plates. (Lund. Universitet. Årsskrift, n.f. avd. 2, bd. 54, nr. 3) 36 refs. *Also issued as:* K. fysiografiska sällskapet, Handlingar, n.f. bd. 69, nr. 63.

Study of tectonic transport of overthrust Caledonian metamorphics is continued in three areas in Swedish Lapland, southwest of three areas previously studied (No. 46373, *infra*). A mean distance of ca. 17 km. separates centers of the six areas, along a line NNE–SSW. Three deformation phases are clearly discerned and described. In distinguishing between local and regional transport directions, the author states: "B′=a of the different phases dominate the fabrics. The symmetry of B′=a in highly plastic material is essentially axial, although the single case in a small enough subarea mostly deviates from this condition. A few local structures with Caledonoid (=b) trend seem to have been formed in anomalous stress field taken to be due to rotation of stresses in tectonic lea. *Boudinage*, in the original sense of the word, is caused by tension on a competent bed jacketed in between incompetent beds that are extended in the same direction and with the same velocity on both sides. Special conditions are indicated where this may occur." For each area the sections examined are geographically located and described. ***Copy seen:*** DLC.

52848. LINDSTRÖM, MAURITS. Tectonics of the area between Mt. Keron and Lake Allesjaure in the Caledonides of Swedish Lapland. Lund, 1957. 33 p. 2 plates, 32 diagrs., text map. (Lund. Universitet. Mineralogisk och paleontologisk geologiska institutionerna. Skrifter, nr. 37.) 22 refs. *Also issued as:* Lund Universitet, Årksskrift, 1957. n.f. avd. 2. bd. 53, nr. 11.

The geology of the area between Mt. Keron and Lake Allesjaure, southwest of Abisko in northern Sweden, is described. The rocks belong to the metamorphic nappe complex of the Caledonides. Axial fabrics and tectonic history are recognized in four main phases of deformation. The tectonic history differs from that suggested for the Pålnoviken and Mt. Nuolja areas (No. 46373 and 52846) for which revisions in interpretation are suggested. ***Copy seen:*** DGS.

52849. LINDSTRÖM, MAURITS. Toward a further hypothesis on the Scandinavian Caledonides. (Geologiska föreningen i Stockholm. Förhandlingar, no. 495, Nov.–Dec. 1958. bd. 80, häfte 4, p. 363–80, diagrs.) 85 refs.

The author's investigations of directions of lineations and s-surfaces in arctic Sweden (supra) and others' elsewhere reveal three main phases of deformation in the Scandinavian Caledonides. The first phase, with transport ESE, is believed to have affected the whole mountain chain; it is best preserved and dominates in the central part of the chain. The second, toward SSE, was effective mainly in the north and southwest. The last phase, S (and E), dominates locally in different parts of the chain. The method of investigation is explained in detail, and correlations are suggested between age of affected rocks and time of the different deformation periods. ***Copy seen:*** DGS.

52850. LINELL, KENNETH A., *and others.* Approach roads, Greenland 1954 program. Boston, Mass., May 1956. 36 p. illus., graphs, diagrs., tables. (U.S. Army. Engineer Arctic Construction and Frost Effects Laboratory. Technical report no. 64. *In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954. v. 2, *pub.* 1957.) *Other authors:* C. W. Fulwider, H. W. Stevens *and* A. T. Carozza.

Summarizes results of field work June 10–Sept. 10, 1954, by a party of four, near Thule. Two projects were carried on, developing effective methods and techniques for road construction and maintenance on bouldery, permafrost terrain, and on ice surfaces of the glacial type, as at TUTO Site; test land and road construction are described; soil properties, temperatures, thawing, are reported. ***Copy seen:*** CaMAI.

LINELL, KENNETH A., *see also* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958.* No. 50694.

52851. LINKE, KARL. Die Österreichische Nordpolfahrt von Payer und

Weyprecht in den Jahren 1872 bis 1874; aus den Originalberichten ausgewählt. Wien, Verlag für Jugend und Volk [1946]. 123 p. illus., fold. map. Text in German. ***Title tr.:*** The Austrian North Pole Expedition by Payer and Weyprecht in 1872–1874; selected from original accounts.

Popular account of the expedition on the *Tegetthoff* and discovery of Franz Joseph Land, based chiefly on Julius Payer's narrative (No. 13204) and M. W. Meyer's work, q.v. ***Copy seen:*** DLC.

52852. LIN'KOV, E. M. Izuchenie uprugikh svoĭstv ledi̯anogo pokrova v Arktike. (Leningrad. Universitet. Vestnik, 1958, god 13, no. 4, ser. fiziki i khimii, vyp. 1, p. 17–22, diagrs., table.) 3 refs. Text in Russian. Summary in English. ***Title tr.:*** A study of the elasticity of the ice cover in the Arctic.

Reports results of an investigation of the elastic properties of sea ice, carried out by an Expedition of the Arctic Institute (Low Temperature Laboratory) in the Cape Shmidta area in May–June 1957. Year-old ice 1.9–2.1 m. thick, over coastal waters of 7–8 m. depth, was studied by means of seismic waves, originated by explosions or mechanically, and recorded by means of an eight-channel electronic oscillograph and the seismic station. Average values of Young's modulus and Poisson coefficient of elasticity at various temperatures were determined. Data are summarized in table and illus. in diagrams.

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LINNÉ, CARL von, 1707–1778, *see* Lindberg, H. Växter . . . herbarium. *1958*. No. 52838.

52853. LINNÉ, SIGVALD, 1899– . From Bering Strait to Tierra del Fuego. (Ethnos, 1957. v. 22, no. 3–4, p. 162–80, illus.)

Describes the Stockholm Ethnographic Museum's American collection exhibit in Aug. 1956; includes (p. 162–65) artifacts collected by the *Vega*, Nordenskiöld, Rasmussen and Retzius expeditions among the Greenlandic and Alaskan Eskimos, the Aleuts and on the Northwest Coast: hunting and fishing gear, weapons, bone carvings, kayaks, masks, totem poles, etc. ***Copy seen:*** DSI.

LINSLEY, RAY KEYES, Jr., 1917– , *see* American Geophysical Union. Annotated bibliography on hydrology . . . and sedimentation . . . *1956*. No. 49278.

LINTON, DAVID LESLIE, 1906– , *see* Allan, D. A., *and* D. L. Linton. R. N. R. Brown. *1957*. No. 49252.

LINTON, DAVID LESLIE, 1906– , *see* Scholander, S. Cold fish problem . . . *1957*. No. 54624.

LIPMAN, R. KH. *see* Balakhmatova, V. T., *and others*. Kharakternye foraminifery . . . *1958*. No. 49495.

LIPOVSKIĬ, V. E., *see* Lisit͡syna, N. K. Arkheologicheskie . . . RSFSR 1955g. *1958*. No. 52859.

52854. LIPP, I͡AN STEPANOVICH. V te gody. (Grazhdanskai͡a aviat͡siI͡a, Oct. 1957. god 14, no. 10, p. 22–23.) Text in Russian. ***Title tr.:*** In those years.

Reminiscences of the beginning of air transport in the far North: air service in Igarka and forest survey in the lower Yenisey basin in 1931; the Krasnoyarsk-Dudinka-Dikson Island air route in 1932; regular winter flights in the Arctic.

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LIPPINCOTT, S. W., *see* Griffith, P. C., *and others*. The combined effects of ionizing radiation and low temperature . . . *1957*. No. 51371.

52855. LIPS, EVA. Bemerkungen zu einigen Stücken von der nordamerikanischen Nordwestküste. (Leipzig. Museum für Völkerkunde. Jahrbuch, 1955. Bd. 14, *pub.* 1956, p. 10–30, illus.) 30 refs. Text in German. ***Title tr.:*** Comments on several items from the North American Northwest Coast.

Describes several Indian pieces from the Museum's collection, including Haida wooden masks, mortar and fish-oil ladle with killer whale carving; the significance of the killer whale in Haida mythology is discussed. ***Copy seen:*** DSI.

52856. LIPS, EVA. Über die Erzwingbarkeit des Rechts bei Völkern mit aneignender Wirtschaftsform. (Ethnographisch-archäologische Forschungen, 1958. Heft 4, Teil 1–2, p. 152–62, illus.) Refs. Text in German. ***Title tr.:*** The possibility of enforcing legal order among peoples with an acquisitional form of economy.

Discusses the concept and enforcement of law among primitive peoples including (p. 156–58) the Eskimos. Cases involving

crimes against the community, like killing of forbidden animals, violation of taboos, practice of black magic, concealment of miscarriages, etc., are judged by elders, council of hunters or the shaman, heeded not for their personal power but because of their prestige and economic importance. Crimes affecting individual members of the community like manslaughter, adultery, robbery, etc., are avenged by personal blood feud (slaying from ambush) or publicly held single combats (wrestling, fist fight). Among the most ancient forms of single combat practised by Eskimos is the singing contest where the two litigants insult each other in hour-long songs, the winner being often determined by public vote. Only in a few areas (chiefly in West Greenland) does this "spiritual" combat deteriorate into a scuffle.

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52857. LIPSHITS, B. A. A. F. Kashevarov kak issledovatel' Alâski. (Sovetskaâ ėtnografiâ, 1952, no. 1, p. 175–78.) 8 refs. Text in Russian. ***Title tr.:*** A. F. Kashevarov as explorer of Alaska.

Biographical sketch of this Russian navigator (1809–1866) born on Kodiak Island of Russian-Aleut parentage. In Russian-American Co. employ, he headed the 1838 expedition surveying the northern North American and the Chukchi Sea coasts. The importance of his contributions on the Eskimos and the topography of North Alaska is stressed. He mapped the distribution of the Tykagmiut, Silalingmiut and Kakligmiut Eskimos living between Point Hope (68°20′ N. 166°40′ W.) and Point Tangent (71°10′ N. 155° W.), subdivided the language of the Alaskan Eskimos into four basic dialects which he called: Kad'âk, Aglegmût, Aziagmût and Maglegmût; he suggested that North American Eskimos originated from the Siberian Chukchis. His publications (ten) are discussed and listed.

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LIPSHITS, SERGEĬ ÎUL'EVICH, 1905– . *see* Lebedev, D. V., *and* S. ÎU. Lipshits. Bibliograficheskiĭ spravochnik . . . "Sovetskaâ botanika" . . . *1957*. No. 52710.

52858. LISITSYN, A. P. Protsessy sovremennogo osadkoobrazovaniâ v Beringovom more. (Akademiâ nauk SSSR. Okeanograficheskaâ komissiâ. Trudy, 1958. t. 3, p. 45–51.) Text in Russian. ***Title tr.:*** Processes of present sediment formation in the Bering Sea.

Earlier oceanographic studies of this sea are reviewed. Methods of the present investigation are outlined and its practeal importance stressed. Unusual features of the Bering Sea and characteristics of its main regions are described. Its terrigenous sediments, biogenous sediments, and such of volcanic origin are treated in turn. ***Copy seen:*** DLC.

LISITSYN, A. P., *see also* Bezrukov, P. L., *and* A. P. Lisitsyn. Osadkoobrazovanie . . . *1957*. No. 49710.

52859. LISITSYNA, N. K. Arkheologicheskie issledovaniâ v RSFSR v 1955 g. (Akademiâ nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniâ, 1958. vyp. 72, p. 124–36.) Text in Russian. ***Title tr.:*** Archeological investigations in R.S.F.S.R. in 1955.

Includes (p. 125 and 135) notes on: M. P. Griâznov's survey of the Yenisey valley in the Krasnoyarsk hydroelectric station area; two upper paleolithic and several neolithic and bronze age sites were discovered. A. P. Okladnikov continued work in the Angara Valley; neolithic, bronze and iron age sites were studied near Bratsk and on the Angara islands (especially petroglyphs). P. P. Khoroshikh explored the paleolithic and neolithic sites near Monastyrskaya Gora (Bratsk area). G. A. Pytlâkov investigated the upper Indigirka River and Okhotsk Sea shore east of Magadan; the latter yielded 14 neolithic sites, each of 10–20 semi-pithouses; four burials were found. All the monuments belong to ancient Koryak tribes driven out in the 15th–16th centuries by the Orochi (Tungus.) A Koryak nomad camp with stone, bone, iron and pottery artifacts was discovered in the same area by V. E. Lipovskiĭ. ***Copy seen:*** DLC.

52860. LISITSYNA, N. K. Polevye arkheologicheskie issledovaniâ IIMK AN SSSR v 1956 g. (Sovetskaâ arkheologiâ, 1957. no. 2, p. 312–19.) Text in Russian. ***Title tr.:*** Archeological field work of the Institute of the History of Material Culture of the Academy of Sciences U.S.S.R. in 1956.

Mentions the Angara expedition headed by A. P. Okladnikov who excavated 15 neolithic burials near Bratsk and a multilayer settlement at Monastyrskiy Kamen' with traces of neolithic, bronze and early iron age occupation; the west Siberian expedition under V. N. Chernetsov

surveyed the banks of the Kazym River from Yuil'skiy Gorodok to its confluence with the Ob'. ***Copy seen:*** DLC.

52861. LISITZIN, EUGENIE. On the reducing influence of sea ice on the piling-up of water due to wind stress. Helsinki, 1957. 12 p. tables, diagrs. (Finska vetenskaps-societeten. Commentationes physico-matematicae, t. 20, nr. 7.)

Presents a formula for the rise of sea level as a function of wind velocity, mean depth, and a coefficient α. Forty cases in the northern part (Bothman Bay) of the Gulf of Bothnia 1928–1942, with wind of average velocity at least 14 m./sec. and directions south-southwest, were studied. Data on the difference in sea level between Kemi and Vasa, the value of the coefficient α, and ice conditions are tabulated; α has a considerably higher value during the ice-free period than in winter months and decreases with increasing ice quantity. Comparative graphs show the average piling-up of the water surface for wind velocities 0–23 m./sec. (stipulated for 0–14 m./sec.) over a 100 km. distance for the ice-free season and for Feb./March, time of maximum ice coverage. The curves indicate a considerable reducing effect of the ice. ***Copy seen:*** DLC.

52862. LISTER, H., *and* P. J. WYLLIE. The geomorphology of Dronning Louise Land. København, C. A. Reitzel, 1957. 73 p. map, geol. sketch maps, diagrs., cross sections, illus. (Meddelelser om Grønland, bd. 158, nr. 1.) 37 refs.

"The solid geology and morphology of the landscape is described and an hypothesis of the process of advance and recession of the ice is postulated. Stages of glacial recession are constructed in north Dronning Louise Land and approximate dates given to these stages." The ice over Dronning Louise Land has been receding for the past two or three thousand years although five halt stages have been traced. Re-advance was of small importance though there is a suggestion of re-advance in the 18th century. Valley glaciers seem to be a powerful erosive agent, but the extensive ice sheet leaves far less evidence of great erosion. ***Copy seen:*** DGS.

52863. LITKE, FEDOR PETROVICH, *Graf*, 1797–1882. Izvĉstie o dvukh ėkspeditsiiakh na Novuû Zemlû v 1821 i 1822 godakh. (Sĉevernyĭ arkhiv, 1823. pt. 6, p. 205–216, 278–94.) Text in Russian. ***Title tr.:*** Report on two expeditions to Novaya Zemlya in 1821 and 1822.

Preliminary account of the voyages chronicled in No. 10212.

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LITKE, FEDOR PETROVICH, *Graf*, 1797–1882, *see also Sûvernyĭ arkhiv.* Izvĉstie o tret'eĭ Ėkspeditsii . . . Litke . . . *1823.* No.54880.

52864. LITSAREV, M. A. Datolit iz arkheĭskikh kal'tsifirov srednego techeniîa r. Kuranakh vûzhnoĭ Îakutii. (Akademiîa nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Trudy, 1957. vyp. 10, p. 5–11, illus., tables.) 14 refs. Text in Russian. ***Title tr.:*** Datolite from Archeozoic calciphyres in the middle course of Kuranakh River in southern Yakutia.

Preliminary report on the characteristics and chemical and optical properties of this mineral recently found by the author, and for the first time in this area, on the bank of the Kuranakh, 10 km. east of the city of Aldan. All his finds of datolite were made in the contact zone between biotite porphyros and Archeozoic metamorphic rocks. Diopside and phlogopite-diopside calciphyres, with which datolite is bound, are described in detail. Results of the chemical and optical analyses are presented and explained. Comparison is made between the Aldan region datolites and those of the Tetyukhe River of Primorskiy Kray.

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52865. LITTLE, C. GORDON. High latitude ionospheric observations using extra-terrestrial radio waves. (Institute of Radio Engineers. Proceedings, Nov. 1954. v. 42, no. 11, p. 1700–1701, graphs.) 4 refs.

Describes some preliminary investigations of the absorption of the diffuse background of extra-terrestrial radio waves and the scintillation of the intense localized radio sources in Cassiopeia and Cygnus. The observations were carried out at College, Alaska, over a two-month period in 1954, using a directional antenna coupled to a high-gain receiver, the output of which was recorded continuously by a pen-recording instrument. The ionospheric absorption on 65 mc. was strongly correlated with polar blackouts and variability in the earth's magnetic field; scintillations were observed

whenever polar blackouts or marked 65 mc. absorption occurred. The advantages of using extra-terrestrial waves for ionospheric studies, over the conventional echo-sounding techniques is pointed out. ***Copy seen:*** DLC.

LITTLE, C. GORDON, *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

LITTLE, C. GORDON, *see also* Chapman, S., *and* C. G. Little. The nondeviative absorption of high-frequency radio waves . . . *1957*. No. 50167.

LITTLE, C. GORDON, *see also* Owren, L., *and* C. G. Little. Arctic radio wave propagation . . . C–W data . . . *1958*. No. 53821.

LITVINA, L. A., *see* Zhirov, K. K., *and others*. Opredeleniia absoliutnogo geologicheskogo vozrasta . . . *1958*. No. 56198.

52866. LITVINOV, ALEKSANDR ARKAD'EVICH. V kraiu ognedyshashchikh gor; zapiski kinorezhissera. (Ural, 1957, no. 2 (35), p. 108–158.) Text in Russian. ***Title tr.:*** In the land of fire-spitting mountains; diary notes of a cameraman.

Narrative of a moving-picture expedition to Kamchatka in 1929; it was headed by the author and arranged with aid of V. D. Arsen'ev, the explorer. The party left Moscow in Dec. 1928, and after a four-month stay in Vladivostok, reached Petropavlovsk on Apr. 28, then sailed to the Commander Islands, returned to Petropavlovsk, sailed north along the coast to Ust'-Kamchatsk and traveled up the Kamchatka River to Klyuchi, visited the Klyuchevskiy Volcano, and the towns of Kozyrevsk, Sedanka, Tigil', Ust'-Tigil', Kamenskoye; on Oct. 20 the return journey began. Means of transportation, landscape, explorers and scientists encountered, sailors, Kamchadals, Koryaks, and the party's filming activities are described. ***Copy seen:*** DLC.

52867. LIUBARSKII, M. Kratkoe izvestie o Kamchatskom zemledelii. (Severnyi arkhiv, 1823. pt. 6, p. 109–135.) Refs. in text. Text in Russian. ***Title tr.:*** Short note on the agriculture of Kamchatka.

Describes the introduction of agriculture in the 18th century, its high yields under the governorship of G. Bem and its deterioration under subsequent administrations. Climate, soil, crops (mainly barley and hemp), etc. are dealt with, and some statistics on sown and harvested crops are given. ***Copy seen:*** DLC.

52868. LIUBASHENKO, S. IA., *and* **A. F. TIUL'PANOVA.** Bolezn' Aueski sredi norok, pestsov i serebristo-chernykh lisits. (Karakulevodstvo i zverovodstvo, Nov.–Dec. 1957. god 10, no. 6, p. 52–54.) Text in Russian. ***Title tr.:*** False rabies among mink, polar and silver foxes.

Contains information on an epizootic among these fur animals in three farms, during 1956 and 1957. Clinical aspects of the disease, symptoms, pathological anatomy, etiology, therapy and prophylaxis are presented in turn.

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LIUBASHENKO, S. IA., *see also* Pankov, V. A., *and others*. Chuma pestsov. *1957*. No. 53852.

52869. LIUBTSOV, V. V. O novykh nakhodkakh i stratigraficheskom polozhenii *Tolmachovia concentrica* Kobayashi, klass Crustacea, iz ordovikskikh otlozhenii Vostochnoi Sibiri. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Apr. 1958. god 23, no. 4, p. 88–89, illus.) 2 refs. Text in Russian. ***Title tr.:*** On new finds and the stratigraphic position of *Tolmachovia concentrica* Kobayashi, class Crustacea from Ordovician deposits of Eastern Siberia.

Reports on several collections of fossils assembled during 1952–1956 by various scientists in the Moyero, Khantayka, Alakit, Kulyumbe, Morkoka and Markha River valleys in northwestern Yakutia, and describes *Tolmachovia concentrica* identified by I. P. Tolmachev and considered as index fossil for Middle Ordovician deposits. ***Copy seen:*** DLC.

52870. LIUSIN, S. Internat v Neksikane. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyi nomer, p. 28–29, illus.) Text in Russian. ***Title tr.:*** Boarding school in Neksikan.

The town of Neksikan (approx. 60°40′ N. 174°45′ E.) in the upper Kolyma basin, is now one of the centers of geological exploration of the area. Life and work in its boarding school, including study of English, are sketched with photos by IA. Riumkin. The diverse national origin of the children (Chukchi, Tungus, Ukrainian, White Ruthenian, etc.) is stressed. ***Copy seen:*** DLC.

52871. LIVEROVSKII, IU. A. Ispol'zovanie aérometodov v pochvovedenii.

(Pochvovedenie, June 1957. no. 6, p. 1–10, plate.) 14 refs. Text in Russian. Summary in English. ***Title tr.:*** Application of aeromethods in soil science.

Air-photographic survey and photo-interpretation methods used in study and mapping of soils in the U.S.S.R. and abroad are discussed. The Soil Institute of the Academy of Sciences has carried out systematic experimental work with these methods in various natural zones. The results are reported, including those from the tundra zone (p. 5–6) with photograph (fig. 1) of Yamal Peninsula tundra. ***Copy seen:*** DLC.

52872. LIVINGSTONE, D. A., *and others.* Effects of an arctic environment on the origin and development of freshwater lakes. (Limnology and oceanography, Apr. 1958. v. 3, no. 2, p. 192–214, illus., tables, maps.) 46 refs. *Other authors:* K. Bryan, Jr., *and* R. G. Leahy.

Account of investigations carried out during two summers in the Brooks Range and the Arctic Coastal Plain of northern Alaska. Climate, geology and vegetation of the area are sketched. The lakes visited (glacial, thaw, etc.) are described. Their origin and morphometry, physical conditions (temperature, heat balance, color, transparency, permafrost, etc.) chemical conditions and biology are dealt with in turn. Past conditions are reconstructed from analysis of sediments. The extended cold, seasonal distribution of insolation, and low precipitation have little direct effect on the life in far northern lakes, but the environment is a major factor in physical processes affecting origin, sedimentation and drainage. ***Copy seen:*** DLC.

52873. LIVINGSTONE, D. A. Pollen analysis of a valley fill near Umiat, Alaska. (American journal of science, Apr. 1957. v. 255, p. 254–60, diagr.) 6 refs.

Extends a three-zone pollen stratigraphy already established for the central Brooks Range (No. 41090) to the unglaciated foothills northward. In 35-ft. cores taken three mi. north of Umiat at 69°29′35″ N. 152°06′15″ W., no primary fossils or organic matter appeared in the bottom ten; in the upper 25 ft., an herbaceous, a birch, and an alder pollen zone were established. The boundary between the lower two zones has a radiocarbon age of 7,500–8,000 yrs., that between the birch and alder zones, approx. 6,000 yrs. Correlation with the central Brooks Range indicates that the postglacial thermal maximum occurred at about the same time in arctic Alaska as in the rest of the world. ***Copy seen:*** DGS.

LIVINGSTONE, ROBERT, JR., *see* International Commission NW Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

LIVSHITS, R. S., *see* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . Îakutskoĭ ASSR. *1958.* No. 49171.

52874. LLIBOUTRY, LOUIS. La mécanique des glaciers en particulier au voisinage de leur front. (Annales de géophysique, 1956. t. 12, fasc. 4, p. 245–76, diagrs., graphs, errata: t. 14, fasc. 2, p. 239, 1958.) 25 refs. Text in French. Summary in English. ***Title tr.:*** Glacier mechanics, in particular near the front.

Contains a mathematical analysis of glacier mechanics, and explanation of phenomena which seem inconsistent with Nye's theory (No. 36524) such as the gentle surface slope in the center of the northern Greenland icecap and the finite gradient at the front. The gentle slope in the center is attributed to the stagnant ice there, suggesting a new theory of a reservoir glacier. A more accurate differential equation for the equilibrium profile is developed; successive approximations lead to a universal value of 29°36′ for the slope at the glacier front; this value agrees with observed values at the Thule ramp. Other phenomena are explained; criticism is made of the streamline hypothesis in the light of calculations of velocities near the glacier front made by the perfect plasticity theory.—From SIPRE. Nye's comments, with some criticism of Lliboutry's formulas, methods, etc., were pub. in *Journal of glaciology,* Oct. 1957, v. 3, no. 22, p. 91–93. ***Copy seen:*** DGS.

LLIBOUTRY, LOUIS, *see also* Nye, J. F. Glacier mechanics . . . *1957.* No. 53680.

52875. LLOYD, TREVOR, 1906– . Notes on some polar research institutes, prepared for a conference at Dartmouth College, Dec. 18–19, 1958. Hanover, N.H., Nov. 1958. 22, 2 p.

Summary of organization and activities of eight institutes: Archiv für Polarforschung, Kiel; Arctic Institute of North America; Arkticheskiĭ institut, Leningrad; Arktisk Institut, København; Ex-

péditions Polaires Françaises, Paris; Instituto Antartico Argentino; Norsk Polarinstitutt; Scott Polar Research Institute, Cambridge, Eng. Administration, program, publications, facilities, finances, staff, etc., are stated as relevant. The diversity of organization and function among these institutes is stressed. Five other polar research organizations are mentioned, one of them, Centre d'Études Arctiques, Paris, with data in supplement. ***Copy seen:*** CaMAI.

52876. LLOYD, TREVOR, 1906– . The political geography of the Arctic. (*In:* East & Moodie: The changing world, 1956. p. 960–81, maps.) 12 refs.

Considers the Arctic's location on intercontinental air routes between world centers of population. The resultant problems of territorial sovereignty and boundary claims, exploitation of resources, are outlined; transportation routes, their nascent focal points, and military defenses are discussed. Speculates on the role of the Arctic in any future war. ***Copy seen:*** DLC.

LLOYD, TREVOR, 1906– , *see also* International Geographical Congress, 1952. Proceedings. *1957.* No. 51939.

52877. LOBANOV, M. F. Geologicheskoe stroenie Novosibirskikh ostrovov. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiia Sovetskoĭ Arktiki, 1957, p. 484–503.) Text in Russian. ***Title tr.:*** Geological structure of the New Siberian Islands.

Outlines the relief, stratigraphy, volcanism, tectonics and geological premises of mineral resources. The 360,000 sq. km. area of the archipelago is divided into three groups of islands: northern, De-Long, consisting of Bennet, Genriyetty, Zhannetty, Zhokhova and Vil'kitskogo islands; the central islands: Anzhu, Kotel'nyy, Novaya Sibir', Fadeyevskiy, Bel'kovskiy, Figurina; and the southern group comprises Bol'shoy and Malyy Lyakhovskiy and Stolbovoy. This outline is based on the work of É. V. Toll', and later investigations of M. M. Ermolaev, T. N. Spizharskiĭ, E. S. Korotkevich, N. Iŭ. Zagorskaia. Deposits of the Cambrian, Ordovician, Silurian, Devonian, Carboniferous, Triassic, Jurassic-Cretaceous, Tertiary and Quaternary systems are summarized. Acid and alkaline intrusive and effusive magmatic rocks are characterized; tectonic developments are reviewed. Prospects for coal and other mineral resources are mentioned. ***Copy seen:*** DLC.

52878. LOBANOV, M. F. Geologicheskoe stroenie ostrovov Vrangelia i Geral'da. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiia Sovetskoĭ Arktiki, 1957, p. 504–520.) Text in Russian. ***Title tr.:*** Geological structure of Vrangelya and Geral'da Islands.

Outlines the main features of relief and stratigraphy, volcanism and tectonics on the basis of the geological investigations carried out for Glavsevmorput' by L. V. Gromov, M. T. Kirĭushina (1935–36, 1939–40), V. M. Basov (1950–51), and A. A. Gorbunov (1952), mostly on Vrangelya Island. Stratigraphy of a cross-section of the sediments is briefly characterized. Intrusive and effusive rocks on both islands are reviewed. Tectonics of these islands are treated and their similarity with Chukotka folded zone is noted. Construction materials of practical importance may be found, and signs of metal ores are noted; hydrothermal development of ores is discussed. ***Copy seen:*** DLC.

52879. LOBANOV, M. F. Rudnye i nerudnye poleznye iskopaemye Sovetskoĭ Arktiki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biŭlleten', 1957. vyp. 5, p. 11–21.) Text in Russian. ***Title tr.:*** Ore and non-ore mineral resources of the Soviet Arctic.

Reviews in general the mineral discoveries of the last forty years. Leading in importance are the copper and nickel of the Noril'sk region; and the tin, gold and wolframite under development in northeastern Asiatic U.S.S.R. General distribution of these minerals is given. Other minerals, of practical value as yet undetermined, are summarized. The Taymyr folded zone should be considered among the most promising regions, with its three ore-bearing sections: lead and zinc, arsenic-mercury, and wolframite-molybdenum. The Koryak Ridge is rich in ores with manganese, chromium, copper, mercury and tin prospects. Iron ore of Nizhnyaya Tunguska River region; magnetites of the Anabar plateau, titanium of the Kotuy, copper, lead and zinc of the Ural-Novozemel'skaya folded zone, lead and zinc of Novaya Zemlya and Vaygach island are mentioned. Non-ore minerals are diamonds, Iceland

spar, phlogopite, and coal. The locations are indicated and some information given.
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LOBANOV, NIKOLAĬ RODIONOVICH, *see* Bobrov, N. S. Aviatsionnye lyzhi . . . *1957*. No. 49786.

52880. LOBANOVA, O. V. Verkhnepaleozoĭskie peletsipody iz bazal'nykh konglomeratov iūry raĭona srednego techeniĭa reki Kolymy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statei, po paleontologii i biostratigrafii, 1958. vyp. 9, p. 54–65, tables, plates.) 20 refs. Text in Russian. ***Title tr.:*** Upper Paleozoic pelecypods from Jurassic basal conglomerates in the region of the middle course of the Kolyma River.

Describes pelecypod species: *Macrodon naliwkini* Jakowlew, *Parallelodon* ex gr. *tenuistriatus* Meek and Worthen, *Schizodus wheeleri* (Swallow), *Astartella* sp. indet. and *Pterinea papillaria* sp. nov. from B. V. Pelīaev's collection, later given to E. M. Lūtkevich for further study. These fossil pelecypods were found in large size pebbles of black crystalline organic limestone mixed with basal conglomerates of Jurassic deposits unconformably lying on lower Carboniferous. Occurrence of this fauna and material is discussed.
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52881. LOBBAN, MARY C. Studies on physiological diurnal rhythms in polar regions. (Advancement of science, June 1957. v. 13, p. 413–14.)

Brief report on investigations of the two Cambridge Spitsbergen expeditions in summers 1953 and 1955, with emphasis on excretion and on body temperature. 21- , 22- , and 27-hour-day rhythms were applied on different groups. The persistence of an intrinsic 24-hr. rhythm of kidney function was noted in most subjects but temperature adapted rapidly to the 21- and 27-hour-day routine.
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LOBBAN, MARY C., *see* Lewis, P. R., *and* M. C. Lobban. Dissociation of diurnal rhythms . . . *1957*. No. 52806.

LOBBAN, MARY C., *see* Lewis, P. R., *and* M. C. Lobban. The effects . . . abnormal time routines . . . excretory rhythms . . . *1957*. No. 52807.

LOCKETT, MARY F., *see* Ganju, S. N., *and* M. F. Lockett. The effect . . . thyroid hormone . . . resistance to cold . . . mice. *1957*. No. 51078.

52882. LOEBLICH, HELEN NINA (TAPPAN), 1917– . New Cretaceous index Foraminifera from northern Alaska. (U.S. National Museum. Bulletin no. 215, 1957. p. 201–222, illus.) 8 refs.

A description of 34 new species and three new genera from rocks of the Naval Petroleum Reserve No. 4, northern Alaska. The rocks range in age from the Neocomian to the Campanian. In addition to descriptions, notes are furnished on frequency of occurrence, differential diagnosis, geographic distribution, types, etc. ***Copy seen:*** DGS.

52883. LÖFSTRÖM, BERTIL, *and* **B. ZEDERFELDT.** Effects of induced hypothermia on wound healing; an experimental study in the rabbit. (Acta chirurgica scandinavica, 1957. v. 112, fasc. 2, p. 152–59, illus.) 18 refs.

A study of tensile strength of healing, standardized wounds inflicted with and without preceding hypothermia below 28° C. The tensile strength of the wounds of the chilled animals showed a statistically proven reduction on their fifth day. The possible causes of this reduction are discussed.
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52884. LÖFSTRÖM, BERTIL, *and* **B. ZEDERFELDT.** Wound healing after induced hypothermia, 2; an experimental investigation of the importance of intravascular aggregation of blood cells. (Acta chirurgica scandinavica, 1957. v. 113, fasc. 4, p. 272–81, illus., table.) 21 refs.

Continuation of study of rabbits made hypothermic to 20° C. When intravascular aggregation of erythrocytes was prevented and good circulation maintained after hypothermia, no retardation in wound healing occurred. This and additional observations confirm an earlier assumption that slowdown in wound healing after hypothermia is due to intravascular aggregation of red blood cells.
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LÖHR, BERTHOLD, *see* Gillmann, H., *and others*. Über die Wirkung der tiefen künstlichen Hypothermie . . . *1957*. No. 51193.

52885. LÖNNEBORG, G. Gödslingsfrågor i Lappmarken. (Beten, vallar,

mossar, May 1953. årg. 5, nr. 4, p. 71–72, illus.) Text in Swedish. ***Title tr.:*** Fertilization problems in Lapland.

In Swedish Lapland, grains are not commonly grown; grass seed harvest is uncertain; clover and timothy fields are too infrequently rotated; and potatoes grow markedly better in selected locations. Natural and commercial fertilizer use is discussed. Stable manures are commonly but selectively applied. Most local soils are phosphate poor, superphosphate is not recommended, however, because it decreases soil pH values. Potassium is lacking especially in peat soils. Nitrogen is generally applied in calcium-nitrate, but ammonium-sulphate is best for potatoes. Highly concentrated fertilizers are preferred because of shipping costs. ***Copy seen:*** DLC.

52886. LÖNNROTH, ARVO JOHANNES, 1881– . Vägarnas vinterunderhåll. (Nordisk vejteknisk forbund. Forhandlinger, 1948. no. 3, p. 65–76, illus., graphs.) Text in Swedish. ***Title tr.:*** Winter maintenance of roads.

Winter highway conditions and maintenance in Finland and their social and economic effects are discussed. The chief problems are prevention of snow accumulation on roads, mechanical removal of both loose and solid snow mass. Several types of snow plows and blowers are described and appraised. Attention is called to corn (porous pellet) snow accumulation and freezing on highways in the arctic coastal region. ***Copy seen:*** DLC.

52887. LØPPENTHIN, BERNT, 1904– . Nogle fuglebestande med begraenset udbredelse og deres oprindelse. (Naturens verden, 1955. årg. 39, hefte 7–8, p. 205–215.) Refs. Text in Danish. ***Title tr.:*** Some bird populations with limited spread and their origins.

Birds with a limiting habitat factor, such as woodland or water at nesting time, often become relict species because of cultural landscape changes. Other apparently relict species are accidental, as is *Turdus pilaris* in southwest Greenland. It is known to have been blown from Norway to Greenland, Jan. 19–20, 1937. *Buchephala islandica*, cited in literature a century ago as nesting in Greenland, seems not native there, as eggs or young have not been reported since.

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52888. LÖVE, ÅSKELL, 1916– . Agamospermy in *Acetosa*. (Hereditas, 1949. bd. 35, häfte 3, p. 390–93.) 15 refs.

Reports observations of agamospermous seed formation of *A. arifolia*, *A. pratensis* and *A. thyrsiflora* from northern Scandinavia and Iceland. It is clearly facultative and occurs only in a low percentage of the ovules, highest in the northern material of *A. arifolia*, lowest in *A. thyrsiflora* from southern Sweden. Agamospermy met with in *A.* is genically determined, it is suggested, and the obligate agamospermy is the result of an unusual accumulation of genes for this abnormal type of seed formation.

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52889. LÖVE, ÅSKELL, 1916– , *and* P. SARKAR. Chromosomes and relationship of *Koenigia islandica*. (Canadian journal of botany, July 1957. v. 35, no. 4, p. 507–514) 59 refs.

The area of distribution of this hardy annual, restricted to the Arctic (Greenland, Iceland, Faeroes), is practically circumpolar. It is characterized by the tetraploid chromosome number 2n=28. Some species, often included in *Polygonum* s. lat. really belong to *Koenigia* in a somewhat wider sense. They are characterized by the basic chromosome number x=7, which is rare in the family and absent in the Polygoneae s. str. The subdivision of the Polygonaceae should be changed and the subfamily Polygonoideae should be "divided into two large subfamilies at the same time as *Koenigia* and its closest relatives be treated as a separate taxon at a very high level." ***Copy seen:*** DLC.

52890. LÖVE, ÅSKELL, 1916– . Cytogenetic studies on *Rumex* subgenus *Acetosella*. (Hereditas, 1944. bd. 30, häfte 1–2, p. 1–136, 213 illus., 19 tables.) 189 refs.

Four species which form an autopolyploid series with the basic number x=7, were studied, viz: *R. angiocarpus* (2n=14), *R. tenuifolius* (2n=28) from Murmansk on Kola Peninsula, *R. acetosella* s. str. (2n=42) northern Scandinavia and Iceland, and *R. graminifolius* (2n=56) Arkhangel'sk province. In *R. tenuifolius*, univalents are found at meiosis in almost all plants; and irregularities are met with in almost all individuals of *R. acetosella* s. str.; pollen fertility is good in all the species. Cross experiments between the different species yield no results, except when the hexaploid is pollinated with pollen from the tetraploid. The four

species are found to differ in minor morphological characteristics. The growth rate of the polyploid series becomes slower with an increase in the chromosome number. Differences between the sexes are observed in the content of ash, ascorbic acid, and chlorophyll. The three subgenera of *Rumex* are regarded as three parallel but different lines of evolution. The polyploid species of sg. *Acetosella* are very old species which have originated from the diploid by autopolyploidy. ***Copy seen:*** DLC.

52891. LÖVE, ÁSKELL, 1916– , *and others.* Cytotaxonomy of *Carex* section *Capillares.* (Canadian journal of botany, Sept. 1957. v. 35, no. 5, p. 715–61, 15 illus.) 412 refs. *Other authors:* D. Löve *and* M. Raymond.

This small section, *Capillares,* studied from the taxonomic and cytological point of view, comprises nine distinct species, one of which (*C. boecheriana*) is raised to specific status in this paper. Three of the species include two distinct subspecies each; and for two others, two varieties and three formae are accepted. "The chromosome numbers of the taxa involved are 2n=18, 36, 38, 40, 54, 56, and 58 . . . On the basis of karyotypic analysis of this section and other groups of the genus, it is concluded that primary basic number for the genus *Carex* in particular and the family Cyperaceae in general must have been X=5."—Authors' abstract. Of the material studied, at least seven species are native to Lapland, northern U.S.S.R., Greenland, Alaska, northern Canada and Baffin Island. The conspectus of species (p. 744–49) includes one new species, *C. boecheriana* endemic to Greenland, and *C. capillaris* with ssp. *capillaris* occurring in arctic Europe, Asia, and America, also ssp. *chlorostachys* in the Chukotsk Peninsula and Alaska.

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52892. LÖVE, DORIS. Cytotaxonomical remarks on the Gentianaceae. (Hereditas, 1953. bd. 39, häfte 1–2, p. 225–35, table.) 51 refs.

Contains data on chromosome number and size of 56 species of this herb family and cytological remarks on seven Icelandic species. Among them *Gentiana detonsa* (2n=44) is known also from northern Scandinavia, Greenland and arctic Russia, and *Lomatogonium rotatum* occurs in Kola Peninsula and northern Siberia. The evolution of Gentianaceae at the generic level has been based on alloploidy; at the species level, on abrupt as well as gradual formation of sterility barriers. ***Copy seen:*** DLC.

52893. LÖVE, DORIS, *and others.* A plant collection from interior Quebec. (Naturaliste canadien, Feb.–Mar. 1958. v. 85, no. 2–3, p. 25–69, 4 illus.) 54 refs. *Other authors:* J. Kucyniak *and* G. Johnston.

Contains an annotated list of about a hundred lichens, mosses, hepatics and vascular plants, collected mostly by G. Johnston along the Labrador Peninsula divide. Climate, geography, geology and vegetation of the region are outlined; plant distribution and ecology are included. A few of the species spread to northern Quebec. ***Copy seen:*** DA.

LÖVE, DORIS, *see also* Löve, Å., *and others.* Cytotaxonomy of *Carex* section *Capillares. 1957.* No. 52891.

52894. LÖVKVIST, BÖRJE. Experimental studies in *Cardamine amara.* (Botaniska notiser, Dec 1957. v. 110, no. 4, p. 423–41, illus., 10 tables.) 8 refs. Summary in Swedish.

"Determinations of chromosome numbers, cultivation experiments, induced polyploidy and artificial crossings have been carried out with *C. amara. C. amara* is diploid, 2n=16, all over its distribution area; at high altitude in the Alps, however, tetraploids, 2n=32, occur. Cultivation experiments show that some characteristics are easily modified. By colchicine treatment it was possible to study the same individual at diploid, tetraploid and octoploid level. Crossing experiments were carried out between *C. amara* and a number of other species. One hybrid only developed. However, it was found that in crossing between different species co-pollination was to be preferred."—Author's summary. The study was based partially on some clones from Jukkasjärvi, Tornehamn, in Swedish Lapland. ***Copy seen:*** DLC.

52895. LÖVKVIST, BÖRJE. De skandinaviska arterne i *Cardamine pratensis* komplexet. (Botaniska notiser, 1957. v. 110, no. 2, p. 237–50, 3 illus.) 20 refs. Text in Swedish. Summary in English. *Pub. also as:* Meddelanden från Lunds Botaniska Museum, nr. 117. ***Title tr.:*** Scandinavian species in the *Cardamine pratensis* complex.

Contains taxonomic, ecological and cytological data on three species, *C.*

pratensis, *C. palustris* and *C. nymani*, occurring in Scandinavia. The first species is represented only by tetraploids (2n = 30) while octoploid, decaploid, and dodecaploid populations of *C. palustris* occur. In the mountain region of Scandinavia (north to 68° N.), *C. nymani* occurs with a widespread octoploid form (2n=64) with orbiculate leaflets of the rosette leaves. *C. palustris* and *C. pratensis* often grow in the same locality. The higher the water content, the higher is the chromosome number of these plants.

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52896. LOEWE, FRITZ PHILIPP, 1895– . Remarques concernant des mesures de température et d'accumulation sur l'Inlandsis groenlandais. (Annales de géophysique, Apr.–June 1957. t. 13, fasc. 2, p. 158–59.) 7 refs. Text in French. ***Title tr.:*** Remarks on measurements of temperature and of accumulation on the Greenland Inland Ice.

Calculates possible fluctuations of temperature and accumulation of the névé based on observations at Eismitte I. (No. 16545); at Eismitte II (No. 40355) at Northice (No. 45412); and subsequent calculations. Discusses changes of the past 20 years, comparing time and depth fluctuations. ***Copy seen:*** DLC.

52897. LOEWE, FRITZ PHILIPP, 1895– . Some early observations of the free atmosphere in high latitudes. (Meteorological magazine, Sept. 1957. v. 86, no. 1023, p. 276–78.) 32 refs.

Parry and Fisher probably made the earliest instrumental observation in the far North on Jan. 26, 1822, at Winter Island, 66°11′ N. 83°10′ W. (No. 13142). Also noted are the observations of: Back, Dec. 12, 1836, on the *Terror* off Southampton Island, 65°12′ N. 83°40′ W.; Bravais, Lottin and Martins during winter 1838 at Bossekop in Norway, 69°57′ N. 23°14′ E.; Andrée during balloon flight of 1897 in the Svalbard area; Wegener at Danmarkshavn in northeast Greenland, 76°46′ N. 18°45′ W., during Mylius Ericksen's expedition of 1906–1908; Hergesell, 1906 and 1910, at 79° N. and 76°30′ N. off west Vestspitsbergen. Observations in 1907 at Kiruna in Sweden, 67°51′ N. 20°13′ E., and those of Molchanov and Weickmann during the arctic cruise of the *Graf Zeppelin* in July 1931, are cited.

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52898. LOEWE, FRITZ PHILIPP, 1895– . Subglacial stoping or block caving. (Journal of glaciology, Oct. 1957. v. 3, no. 22, p. 152.) 2 refs.

Conditions similar to those reported by Paige (No. 47228) were observed on Kome Glacier, Nugssuaq Peninsula in West Greenland on the Wegener Expedition, 1929–31: lowering and rapid recession of the central part, caving with crescent-shaped crevasses, huge ice tunnel, and vigorous meandering meltwater stream cutting through the ice, etc.

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LOEWE, FRITZ PHILIPP, 1895– , *see also* Court, A., *and others*. The classification of glaciers. *1957*. No. 50358.

52899. LOEWENSTEIN, JOHN, *Prince*. The 'Eskimo *ulu*' in the Malayan neolithic. (Man, Mar. 1958. v. 58, p. 37–41, illus.) Refs.

Suggests that the Malayan stone blades and the Eskimo ulu or woman's knife have a common origin in the early Lake Baykal neolithic. The similarity of their semilunar shape, holes for handle attachment, use for scraping of hides or bark, and diffusion among the Mongoloid peoples, Chukchis, Asiatic and American Eskimos, and Algonkian and Tlingit Indians are discussed. The theories on prehistoric Eskimo migration are reviewed. ***Copy seen:*** DLC.

52900. LOEWENSTEIN, JOHN, *Prince*. Neolithic stone gouges from the Malay Archipelago and their northern prototypes. (Anthropos, 1957. v. 52, fasc. 5–6, p. 842–49, illus., map.) Refs.

Compares Malayan neolithic bone and polished stone gouges to similar chisels with concave cutting-edge occurring in neolithic sites in the Amur region, on the Angara and Yenisey Rivers, in the Western Urals, Finland and northern Norway. A north Eurasian origin of this timber-working tool is suggested.

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LØYNING, Y., *see* Scholander, P. F., *and others*. Metabolic acclimation to cold in man. *1957*. No. 54621.

LØYNING, Y., *see* Scholander, P. F., *and others*. Metabolic acclimation to cold in man. *1958*. No. 54622.

LOFTUS, T. A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

52901. LOHR, E. W. Chemical character of public water supplies of the larger cities of Alaska, Hawaii, and Puerto Rico, 1954. Washington, D.C., Govt. Print. Off., 1957. iv, 39 p., fold. map, 3 tables. (U.S. Geological Survey. Water-supply paper 1460–A.)

Alaskan cities (13) are dealt with in p. 1–14, table 1, and part of fold. map. Surface water and ground water used in Alaska are mainly calcium bicarbonate in type. Concentration of dissolved solids ranges from about 16 to 450 ppm, and the hardness from about 6 to 300 ppm; these are summarized in table. Most supplies receive only chlorination. The 13 systems described serve some 53,000 people, approx. two-fifths of Alaska's population. Data include 1950 population records, population served, ownership, source and treatment of supplies, capacity of treatment plants, storage facilities, and chemical analyses of the water. ***Copy seen:*** DGS.

52902. LOĬKO, VALENTINA MIKHAĬLOVNA. Bor'ba za khleb. (Sibirskie ogni, July–Aug. 1957. god 36, no. 4, p. 173–78.) Ref. Text in Russian. ***Title tr.:*** The struggle for bread.

Describes the 1920 organization of food supply depots in western Siberia, including Omskaya Oblast', for relief of the starving population. Some selected statistics, mainly on grain and cereals, are given, the sub-quota grain harvest, and agricultural production of 1920 are compared with the present high yields. ***Copy seen:*** DLC.

52903. LOKKEN, ROY N. Stock companies at the placer mines. The Alaska Golden Gate Mining Company. (Pacific Northwest quarterly, July 1958. v. 49, no. 3, p. 89–98, 3 illus.) 53 refs.

Account of this gold rush company, formed in July, 1906, to mine properties near Nome. The stock was oversubscribed but the organizers' (three) lack of knowledge of Alaskan conditions, and the fact that little gold was found drove the company into receivership in 1913. ***Copy seen:*** DGS.

52904. LOLLI, DANIELE. Sul pneumogramma di ratte perfrigerate precedentemente sottoposte ad intenso e protratto trattamento follicolinico. (Quaderni di clinica ostetrica e ginecologica, Sept. 1957. v. 12, no. 9, p. 512–24, illus. tables.) 14 refs. Text in Italian. ***Title tr.:*** The pneumogram of chilled rats, first submitted to intense and long treatment with folliculin.

Report on experiments with rats treated for ten days with intraperitoneal injections of estradiol and then submitted, each with a control, to cold and pneumographic recording. The results indicate a hypothermizing effect of the follicular hormone; it also produced regular respiratory dynamics. ***Copy seen:*** DNLM.

52905. LOMAKINA, NATAL'ÎA BORISOVNA. Kumovye raki, Cumacea, moreĭ SSSR. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1958. 302 p. illus. tables. (Akademiîa nauk SSSR. Zoologicheskiĭ institut. Opredelitel' po faune SSSR, no. 66.) About 200 refs. Text in Russian. ***Title tr.:*** Cumacean crustaceans of the Soviet seas.

Monograph in two parts, the first (p. 3–79) offers a short description of the group and account of the morphology, anatomy and biology, the latter including movement, food and respiration, multiplication and growth. Geographic distribution and ecology inclusive of arctic regions (p. 44–58) are discussed, as well as general classification and phylogeny, methods of collection, preservation and study. Pt. 2, the taxonomic part, presents identification tables, synonymy, descriptions of sexual dimorphism and geographic distribution. Some 150–200 forms are treated in turn. An index (scientific names) is appended, and a taxonomic guide to the species precedes the study proper. ***Copy seen:*** DLC.

52906. LOMBARDO, THOMAS A., *and others.* Myocardial failure in experimental hypothermia. (Circulation research, Jan. 1957. v. 5, no. 1, p. 22–26, illus., table.) 4 refs. *Other authors:* L. R. Radigan *and* A. G. Morrow.

Account of experiments with dogs made hypothermic to about 25° C. and subjected to venous inflow occlusion and ventriculotomy. Survival in such animals was increased by administration of a rapidly acting digitalis preparation before inflow occlusion; the frequency of ventricular fibrillation also diminished. Myocardial failure is attributed to anoxia. ***Copy seen:*** DNLM.

LOMER, T. R., *see* Brodie, H. R., *and others.* Heat production . . . infants . . . *1957.* No. 49934.

LOMONOSOV, G. G., *see* Zver'kov, S. N., *and* G. G. Lomonosov. Kakie vzryvchatye veshchestva nuzhny . . . *1958*. No. 56273.

52907. LOMONOSOV, MIKHAIL VASIL'EVICH, 1711–1765. Proėkt Lomonosova i ėkspeditsiia Chichagova. S. -Peterburg, Izd. Gidrograficheskogo departamenta, 1854. c, 150 p. Refs. Text in Russian. ***Title tr.:*** Lomonosov's project and Chichagov's expedition.

Contains Lomonosov's *Kratkoe opisanie raznykh puteshestvii po severnym moriam*, etc., 1763 (Short description of various voyages in northern seas, etc. 150 p., cf. No. 23985), preface by the editor, A. Sokolov (p. i-vi), and 12 documents and notes referring to Chichagov's expedition of 1765–55 (p. vii–c). This expedition with three ships, made two trips from Kola to Spitsbergen, thence northwestward with the purpose of discovering the northwest passage; the first voyage May 9–Aug. 20, 1765, reached 80°26′ N. the second, May 19–10 Sept. 1766, 80°30′ N., but heavy ice prevented further navigation both times. A brief description of the expedition (p. xviii–xxii) and Chichagov's memorandum explaining the failures (p. lxxiv–lxxxvii) are included. Descriptions of Chichagov's voyages by G. F. Müller, *Herrn von Tschitschagow Reise nach dem Eismeer*, published in German in 1793, and by I. F. Kruzenshtern (unpublished) are critically discussed (p. lxxxviii–c) by the editor. ***Copy seen:*** DLC.

LONEY, R. A., *see* Lathram, E. H., *and others*. Progress . . . geologic mapping . . . *1958*. No. 52673.

LONGACRE, ARTHUR M., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

52908. LONGLEY, RICHMOND WILBERFORCE, 1907– . Temperature variations at Resolute, Northwest Territories. Ottawa, Nov. 1, 1957. 7 p., table, diagr. Mimeo. (Canada. Meteorological Branch. Circular 2980, Tec-257.) Ref. *Also pub.* in Royal Meteorological Society. Quarterly journal, Oct. 1958, v. 84, no. 362, p. 459–63.

Study of an 8- to 9-year record, 1947–1957, at Resolute, Cornwallis Island, indicates that the time of minimum temperature occurs in late Feb. or early Mar.; time of maximum temperature occurs in July. Special study was made of 6-hour temperature changes; results are tabulated. Seven-day running mean maximum and minimum temperatures are drawn for each month, based on eight years' data. ***Copy seen:*** DWB.

LOOMER, E. I., *see* Whitham, K., *and* E. I. Loomer. Characteristics of magnetic disturbance . . . *1957*. No. 56018.

LOOMER, E. I., *see* Whitham, K., *and* E. I. Loomer. Irregular magnetic activity . . . *1957*. No. 56019.

52909. LOOSANOFF, V. L. Some aspects of behavior of oysters at different temperatures. (Biological bulletin, Feb 1958. v. 114, no. 1, p. 57–70, illus., table.) 26 refs.

A study of *Crassostrea virginica* kept at temperatures of 0° to 38° C. Some oysters were able to pump water at a temperature as low as 1° C. About 15% of those exposed to temperatures of 2° to 3° C. and 50% of those kept at 3° or 4° C. formed pseudofeces. Rate of pumping remained low under 8° C., but increased steadily up to 16° C. Direct transfer from cold to warm environment was followed by quick adaptation in the rate of pumping. ***Copy seen:*** DNLM.

LOPATIN, INNOKENTIĬ ALEKSANDROVICH, 1838–1909, *see* Iskŭl', N. V. Korally . . . *1957*. No. 51973.

52910. LOPATIN, IVAN ALEXIS, 1888– . The Tungus languages. (Anthropos, 1958. v. 53, fasc. 3–4, p. 427–40.) Approx. 55 refs.

Reviews and supplements J. Benzing's paper (q.v.). The geographic distribution and linguistic classification of the Tungus speaking peoples, including Golds and Lamuts, are given. The individual languages and dialects are characterized, a phonetic key supplied, the Evenki and Manchu languages compared and their close relationship noted. Some 40 works on Tungus linguistics published since 1930 are listed in text.

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52911. LORAIN, S. H., *and others*. Lode-tin mining at Lost River, Seward Peninsula, Alaska. Washington, D.C., 1958. 76 p. illus., maps and diagrs. incl. fold. (U.S. Bureau of Mines. Information circular 7871.) *Other authors:* R. R. Wells, M. Mihelich, J. J. Mulligan, R. L. Thorne *and* J. A. Herdlick.

Presents results of detailed studies of mining and milling methods and costs

at the Lost River mine (65°31′ N. 167°9′ W.) during 1952–1955. General conditions for tin production on western Seward Peninsula are outlined. Problems of labor supply, wages, transportation and housing are described. Climatic conditions and permafrost as encountered in mining operations in the area are discussed. ***Copy seen:*** DGS.

52912. LORANT, MICHAEL. "The majority of ice in the Arctic is not more than two years old." (Nautical magazine, Mar. 1957. v. 177, no. 3, p. 167–68.)

Reviews hypothesis of G. E. MacGinitie (No. 41191) that the sea surface as a whole probably never freezes to a depth of more than six feet. Most of this ice would melt during the summer, or become storm-piled in wind-rows of several times six ft. thickness. Movement of the ice pack influences animal distribution, and peculiarities of ice formation affect life of invertebrates. A brief description of the formation of fresh- and salt-water ice is given.

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52913. LORD, CLIFFORD SYMINGTON, 1908– . The Geological Survey of Canada: field activities 1956, 64,000 square miles mapped during the year. (Canadian mining journal, Feb. 1957. v. 78, no. 2, p. 143–47, map.)

Field work was completed on 36 of 72 projects undertaken with a combined area of 64,000 sq. mi. excluding airborne geophysical surveys, geochemical surveys, and various special projects. In the Arctic Islands, field work was restricted to two exploratory parties, one working from Eureka weather station which did additional work on western Ellesmere and Axel Heiberg Islands. The geological mapping of the Kluane map-area in southwest Yukon was completed. Field work was also completed in the Glenlyon map-area. A map is included showing the approximate location of all field parties during 1956.

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52914. LORD, CLIFFORD SYMINGTON, 1908– . The Geological Survey of Canada, field activities 1957. (Canadian mining journal. Feb. 1958. v. 79, no. 2, p. 155–59, text map.)

Reviews 69 field projects undertaken in 1957, 37 completed; their combined area was about 144,000 sq. mi.; excluding airborne geophysical or geochemical surveys, etc.; role of helicopters, particularly on Operation Mackenzie, is stressed. Four parties worked in the Ellesmere-Baffin Island areas; in Mackenzie District, two; Yukon, two; northern Manitoba, two, and four in northern Quebec.

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LORD, CLIFFORD SYMINGTON, 1908– , *see also* Canada, Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

52915. LORENTZ, HANS ERIC. Oljeviskositet och smörjning av bilmotorer. (Teknisk tidskrift, Sept. 20, 1955. årg. 85, häfte 34, p. 753–58, illus., tables, graphs.) 9 refs. Text in Swedish. ***Title tr.:*** Oil viscosity and lubrication of car engines.

Compares the effects of high and low viscosity, conventional and multigrade lubricants on cylinder wear, oil/gas consumption and starting abilities at normal and low temperatures (−25° C. winter temperature is not uncommon in northern Sweden.) Oils with a high viscosity index reduce gas consumption, facilitate cold-starts and reach all parts of the engine quickly, but cause cylinder wear as temperature rises. ***Copy seen:*** DLC.

LORENTZEN, F. VOGT, *see* Scholander, P. F., *and others.* Critical temperature in Lapps. *1957.* No. 54620.

LOSCALZO, B., *see* Preziosi, P., *and others.* Sulla . . . modificazioni corticosurrenali . . . freddo. *1957.* No. 54137.

52916. LOSEV, BORIS IVANOVICH. Tverdyĭ benzin. (Sovetskiĭ soĭuz, 1958, no. 7, (101), p. 32–33, illus.) Text in Russian. ***Title tr.:*** Solid benzine.

The practicability of solid benzine has been tested in Antarctic and other remote places (deserts). Its structure is described (by its originator) as plastic emulsion with numerous fine cells, like honeycomb, filled by a special process with a liquid (benzine, kerosene, solar and mineral oils, butane, medicines, etc.). This emulsion is solidified and can be cut into bricks. Solid benzine contains about 95% pure benzine, burns slowly at the surface and is easily extinguished. A safe fuel, it can be transported on an open platform and stored anywhere, e.g. under water, snow or sand. Compression of the bricks yields fuel for engines or furnaces. ***Copy seen:*** DLC.

52917. LOSHCHILOV, V. S. Metod podvodnoĭ stereofotos"emki v okeano-

graficheskikh issledovaniĭakh. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 205–218, illus., table, graph, diagrs.) 9 refs. Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** Submarine stereophotography in oceanographic research.

"Underwater photographic study of ice covers is discussed, and the physics of the technique is mathematically analyzed with special reference to differences in the optical properties of sea water and ice. Stereophotographic methods and equipment used by a high-latitude expedition in 1956 are described in detail. Photographs of ice cover 130 cm. thick covered with snow 6–10 cm. deep made under natural illumination from distances of 45–50 m. were sufficiently clear for stereoscopic measurements. Systematic investigations of processes associated with ice-cover formation and modification should use flash techniques because variations in snow-cover depth and fissures in the ice cover change the intensity of under-ice illumination."—SIPRE. ***Copy seen:*** DLC.

52918. LOSKUTOV, A. V. Donbassit s Novoĭ Zemli. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958. vyp. 7, p. 29–34, tables, diagr.) 7 refs. Text in Russian. ***Title tr.:*** Donbassite from Novaya Zemlya.

Presents the main characteristics of donbassite found by the author in quartzitic calcium veins in an unidentified locality on Novaya Zemlya. Its appearance, flaky texture and radial leaf-like form, is noted; chemical and X-ray analyses are given; specific gravity, fractures, reactions to heat, optical and other properties are outlined. Donbassite was named by E. K. Lazarenko who identified it in the Donets basin. ***Copy seen:*** DGS.

52919. LOSKUTOV, A. V. Razrusheniĭa kristallov gornogo khrustaliĭa pri vyvetrivanii v klimaticheskikh usloviĭakh Novoĭ Zemli. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958. vyp. 7, p. 52–55, illus.) 4 refs. Text in Russian. ***Title tr.:*** Disintegration of the crystals of rock crystal by weathering under the climatic conditions of Novaya Zemlya.

Rock and other quartz crystals, collected in 1951–55 by the Institute of Geology of the Arctic in various parts of Novaya Zemlya were examined as raw materials for piezochemistry. Their behavior under hard climatic conditions is discussed. Effects of temperature and moisture are treated. Plastic deformation and actual breaking of rock-crystal crystals are noted. Interferometry of the crystals is outlined. ***Copy seen:*** DGS.

52920. LOSKUTOV, A. V., *and* **B. S. ROMANOVICH.** Rezul'taty polevykh issledovaniĭ Eniseĭskoĭ ėkspediti͡sii v 1957 g. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1957. vyp. 5, p. 54–57.) Text in Russian. ***Title tr.:*** The results of field investigations by the Yenisey expedition in 1957.

Reports geologic mapping, prospecting and magnetometric work in the Igarka and Bakhta River regions carried out by the Institute of Geology of the Arctic. Altogether 13,070 km.^{2} was geologically mapped. Prospecting trips were mapped at scale 1:50,000. Cambrian, Ordovician, Upper Silurian, Devonian, Carboniferous, Permian and Quaternary deposits are briefly reviewed; widespread intrusive formations are characterized. Copper, nickel and coal are indicated in many places. Occurrence of some other ores and minerals are mentioned.

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LOTZ, J. R., *see* Canada. Defence Research Board. Op. Hazen 1957. *1958.* No. 50061.

52921. LOUGEE, RICHARD JEWETT, 1905–1960. A chronology of postglacial time in eastern North America. (Scientific monthly, May 1953. v. 76, no. 5, p. 259–76, illus., 12 text maps, 3 diagrs. table.) 38 refs. Based on a paper presented at the International Geographical Congress, Washington, D. C., 1952 (q.v.).

Summary of surveys made by author since 1928, while investigating chronology of the ice age for the American Geographical Society. "Presents outline of postglacial history in eastern North America furnished by records of upwarping. In the region of former glacial Lake Agassiz, the glacial Great Lakes, New England, Labrador, and arctic Canada, where there are raised marine or raised lacustrine shorelines, or both, the shorelines rise progressively higher in directions converging on the former ice cap center in Hudson Bay, indicating that crustal upwarp has been associated with removal of

ice weight." Profile and map of postglacial upwarp between southern New England and Hudson Bay, and a chronological table of postglacial time in eastern North America, based on successive regional uplifts and stabilities, are included. ***Copy seen:*** DGS.

52922. LOUIS, HERBERT. Albrecht Penck und sein Einfluss auf Geographie und Eiszeitforschung. (Erde, 1958. Jahrg. 89, Heft 3–4, p. 161–82, port.) 67 refs. Text in German. ***Title tr.:*** Albrecht Penck and his influence on geographic and glacial research.

Reviews Penck's scientific career and works in connection with the centennial of his birth on Sept. 25, 1858. Importance of his theory on fourfold glaciation and its classification is emphasized. His work on geomorphology, classification of climate, Quaternary climate, glacial crustal movements, paleoclimatology, causes of glaciation, etc., is covered as a contribution toward a bibliography of his publications. ***Copy seen:*** DLC.

52923. LOVE, CUTHBERT M. Physical and chemical data, Gulf of Alaska; spring and summer 1956 and spring 1957. Seattle, 1957. iii, 90 l. maps incl. fold, tables. (Washington, *State*, University. Dept. of Oceanography. Technical report no. 56.) 7 refs.

Contains observed and interpolated tabulations on ocean temperature, salinity, density, dissolved oxygen, and dissolved inorganic phosphate, collected over a range of selected depths during three cruises of the research vessel *Brown Bear* 1956–57. Sampling stations (charted) are contained within the approx. area 47°30′–60° N. 125°–155° W.

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52924. LOVE, CUTHBERT M. Sources of oceanographic data for a portion of the North Pacific Ocean. Seattle, Wash., Nov. 1956. 2, 21 p. Mimeo. (Washington, *State*. University. Dept. of Oceanography. Special report no. 25.)

Lists references to available oceanographic data, including five publications and 12 ship reports on Gulf of Alaska or Aleutian waters. ***Copy seen:*** DN–HO.

LOVE, CUTHBERT M., *see also* Favorite, F., *and* C. M. Love. Northeast Pacific . . . physical and chemical data . . . 1955. *1957*. No. 50848.

52925. LOVE, R. M., *and* **S. B. HARALDSSON.** Thaw rigor and cell rupture. (Nature, *London*, May 10, 1958. v. 181, no. 4619, p. 1334, illus.) 3 refs.

Pre-rigor muscle frozen and thawed in the same way as post-rigor muscle showed considerably less freezing damage. Histological sections revealed that ice-crystals in pre-rigor materials are smaller than in post-rigor muscle, which explains the difference in frost injury.

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LOVE, S. K., *see* Wells, J. V. B., *and* S. K. Love. Compilation . . . surface waters of Alaska . . . 1950. *1957*. No. 55986.

LOVE, S. K., *see* Wells, J. V. B., *and* S. K. Love. Quantity . . . surface waters of Alaska . . . 1950 . . . *1958*. No. 55987.

LOVE, S. K., *see* Wells, J. V. B., *and* S. K. Love. Quantity . . . surface waters of Alaska . . . 1953 . . . 1956. *1958*. No. 55988.

52926. LOVELOCK, J. E. The denaturation of lipid-protein complexes as a cause of damage by freezing. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 427–33, illus.) 14 refs.

A study of freezing damage to molecular constituents of the living cell, specifically the proteolipid of the red-cell membrane, the lipovitellin of egg yolk and the beta-lipoprotein of human plasma. The progressive removal of water during freezing was found to be harmful in all three cases studied. The protective action of glycerol is discussed within this concept.

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52927. LOVELOCK, J. E. Diathermy apparatus for the rapid rewarming of whole animals from 0° C. and below. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 545, illus.) ref.

Contains description of an apparatus designed by the author, and the principles of its operation. It is successfully used for rewarming larger mammals, e.g., rabbits. ***Copy seen:*** DNLM.

52928. LOVELOCK, J. E. The mechanism of the protective action of glycerol against haemolysis by freezing and thawing. (Biochimica et biophysica acta, 1953. v. 11, no. 1, p. 28–36, illus., tables.) 11 refs.

Account of investigations on human

erythrocytes frozen for brief periods to temperatures as low as −50° C. Addition of glycerol greatly reduced the concentration of electrolytes taking place in the cell during freezing. This concentration is largely responsible for the cold injury observed, and its reduction explains the protective action of glycerol.
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52929. LOVERING, T. S. Halogen-acid alteration of ash at fumarole no. 1, Valley of Ten Thousand Smokes, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, part 1, p. 1585–1603, text map, 12 diagrs., 4 tables.) 17 refs.

Contains results of analysis of a series of specimens of ash and pumice, collected in 1952 by Wilcox outward from the throat of fumarole no. 1 of Zies (cf. No. 292). Appreciable quantities of lead, zinc, copper, arsenic, chlorine, fluorine, and sulfates were added to the innermost zone (1 in.), and nickel, cobalt, boron, and scandium were concentrated in the intermediate zone about 2 ft. from the throat. No carbonate is present in any zone. Magnetite, hematite, goethite, hydromica, opal, montmorillonite, and kaolinite are the chief alteration minerals. The alteration is similar to that produced by strong sulfur acids elsewhere; but differs from the latter chiefly in the greater loss of silka relative to alumina. Results of analyses are summarized in diagrams and tables. ***Copy seen:*** DGS.

52930. LOVING, HUGH B. Twin photography for mapping Alaska's Brooks Range. (Surveying and mapping, July–Sept. 1957. v. 17, no. 3, p. 263–69, illus., map.)

The planning and execution of precision aerial photography of this area are described. Planning began in Dec. 1954 and final agreement on the overall project was reached in May 1955. The required map specifications, the adverse weather conditions, and the necessity to keep field control to a minimum led to the choice of transverse twin low-oblique photography for the compilation. The procedures used in this mapping technique are explained in detail. Despite poor weather conditions over the area and low temperatures aloft (down to −85° F.) complete photographic coverage was obtained in two short seasons. The maps are to be published at scale 1:250,000 with a contour interval of 200 ft. The flight plan called for 22 east-west transverse twin low-oblique compilation flights at 30,000 ft. above mean ground, spaced 14 mi. apart.
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52931. LOWIE, ROBERT HARRY, 1883– . Social organization. New York, Rinehart & Co., 1948. 465 p. Refs.

Deals with the principles and evolution of social organization in primitive and western cultures, with scattered references to Eskimos, Chukchis, Lapps and other arctic peoples. The social reorientation necessitated by a change from a sea-mammal hunting to a reindeer-breeding economy bringing with it concepts of individual ownership in contrast to the original communal economy are discussed (p. 26–30). ***Copy seen:*** DLC.

52932. LOWRY, ROBERT JAMES, 1912– . Chromosome numbers and relationships in the genus *Atrichum* in North America. (American journal of botany, May 1954. v. 41, no. 5, p. 410–14, 15 illus., table.) 10 refs.

The chromosome numbers of four species of the moss genus *Atrichum*, including *A. undulatum* occurring in Alaska, were determined. The basic chromosome number of the genus is seven. *A. undulatum* was found to be diploid (n=14); however, a dioicous, haploid collection of this species was discovered. Evolutionary processes other than polyploidy and gross structural changes in the chromosomes have played the greatest role in the development of the species. Only *A. undulatum* seems to have originated by apospory. Hybridization is also a factor in the evolution of the genus.
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52933. LOWRY, ROBERT JAMES, 1912– . A cytotaxonomic study of the genus *Mnium*. Brattleboro, Vt., E. L. Hildreth & Co., 1948. 42 p. 167 illus. (Torrey Botanical Club. Memoirs, v. 20, no. 2.) 76 refs.

Contains descriptions of 15 species of this moss and a correlation of their morphology with that of their chromosomes. The basic chromosome number for the genus is 6. It is suggested that *M. menziesii* be excluded from the genus *Mnium* and retained in the genus *Leucolepis*, on the basis of its 5 chromosomes, coupled with morphological differences. Three aneuploid species were found, *M. stellare*, n=7, *M. spinulosum*, n=8, and *M. punctatum*, n=7. At least eight

of the species are native to Alaska, northern Canada and Greenland.

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LOWTHER, GORDON, *see* MacNeish, R. S. Archaeological investigations . . . 1957. *1957.* No. 53030.

52934. LOZINA-LOZINSKIĬ, LEV KONSTANTINOVICH. Pantopoda vostochnykh moreĭ SSSR. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia moreĭ SSSR, 1933. vyp. 17, p. 43–80, illus., tables.) 22 refs. Text in Russian. Summary in German. ***Title tr.:*** Pantopoda from the eastern seas of the U.S.S.R.

Description of these crustaceans collected during a period of seven years, in the Okhotsk, Bering and other Far Eastern seas. A new genus and species *Pycnosoma strongylocentroti* gen. nov., sp. nov., four new species and several subspecies are described in detail, information including morphometry and anatomy, size, sexual differences, location of find, etc. The zoogeography of the group is also discussed.

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52935. LOZINA-LOZINSKIĬ, LEV KONSTANTINOVICH, *and* **E. P. TURPAEVA.** Rod *Colossendeis*, Pantopoda, v severnoĭ chasti Tikhogo Okeana. (Moskovskoe obshchestvo ispytateleĭ prirody. Otd. biol. Biûlleten', Jan.–Feb. 1958. t. 63, no. 1, p. 23–33, 4 illus., 5 tables.) 6 refs. Text in Russian. Summary in English. ***Title tr.:*** The genus *Colossendeis*, Pantopoda, in northern part of the Pacific Ocean.

Presents a key to species of this crustacean genus of the group *articulata*; descriptions of *C. brevitarsis* n. sp., *C. bicornis* n. sp., *C. orientalis* n. sp., also an emended description of *C. chitinosa*. The three new species were found in the Okhotsk Sea, *C. bicornis* in the North Pacific also, and *C. chitinosa* in the Bering Sea. Tables show comparative variation of the species.

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52936. LUBINSKY, G. Ophryoscolecidae, Ciliata: Entodiniomorphida, of reindeer, *Rangifer tarandus* L., from the Canadian Arctic, 1; Entodiniinae. (Canadian journal of zoology, Oct. 1958. v. 36, no. 5, p. 819–35, illus., tables.) 16 refs.

Redescription of ten species of these protozoans found in the rumen of animals (stock originally introduced from Siberia) from Reindeer Depot, Aklavik, Dec. 1955 and 1956. Morphometry (with tables), incidence, food of the parasites, etc. are described. Keys to the families of the Ophryoscolecidae and to the species of *Entodinium* parasitizing reindeer, are included. ***Copy seen:*** DLC.

52937. LUBINSKY, G. Ophryoscolecidae, Ciliata: Entodiniomorphida, of the reindeer, *Rangifer tarandus* L. from the Canadian Arctic, 2; Diplodiniinae. (Canadian journal of zoology, Dec. 1958. v. 36, no. 6, p. 937–59, illus. tables.) 11 refs.

Description of a new species of these protozoans *Polyplastron arcticum*, n. sp. and redescription of eight other species from reindeer in Aklavik. A key is included. ***Copy seen:*** DLC.

52938. LUBINSKY, L. Studies on *Mytilus edulis* L. of the "Calanus" expeditions to Hudson Bay and Ungava Bay; Calanus series no. 16. (Canadian journal of zoology, Dec. 1958. v. 36, no. 6, p. 869–81, illus., tables.) 66 refs.

Study of mussels from the intertidal zone of these areas and of Hudson Strait connecting them. Distribution, types of shells and their growth are dealt with. Comparisons with material from other areas indicate that northward of the Canadian Maritime Provinces the growth of this mollusc diminishes; it also does so towards the Hudson Bay. Dependence of its distribution on types of water masses, and its relation to the northern limits of the subarctic zone in the Eastern Arctic are discussed. ***Copy seen:*** DLC.

LUCAS, C. E., *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

LUCAS, E. S., *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

LUCHKO, A., *see Avtomobil'nyĭ transport.* Kombinirovannyĭ paropodogrev . . . *1957.* No. 49453.

52939. LUCIER, CHARLES. Noatagmiut Eskimo myths. (Alaska. University. Anthropological papers, May 1958. v. 6, no. 2, p. 89–117.)

A collection of 25 legends related to the author in 1952 at the Noatak River Eskimos' summer fishing camp in Sisnalik, Kotzebue Sound. Some biographical data on the two informants and a sketch of the two Eskimo groups (Noatag-

miut and Napagtomiut) on the Noatak River are included. ***Copy seen:*** DLC.

52940. LUCIER, CHARLES. Prenatal memories of an Eskimo man. (Alaska. University. Anthropological papers, May 1958. v. 6, no. 2, p. 122.)

A tale told at Nome, Alaska, in the 1930's by a Seward Peninsula Eskimo.

Copy seen: DLC.

52941. LUCIER, CHARLES. Wolf kill observances, Northwestern Alaska. (Alaska. University. Anthropological papers, Dec. 1958. v. 7, no. 1, p. 39.)

Description of magic rites formerly observed by wolf hunters (including informant's father) in the Noatak, Kivalina, Point Hope regions; as narrated by an Eskimo, Chester Sivik, and recorded on tape at Kotzebue, Aug. 1951.

Copy seen: DLC.

LUCIER, CHARLES V., *see* Pruitt, W. O., *and* C. V. Lucier. Winter activity . . . squirrels in interior Alaska. *1958.* No. 54161.

LUDÁNY, GYÖRGY, *see* Csalay, L., *and others.* Hipotermia . . . *1957.* No. 50399.

52942. LÜTGEN, KURT. Two against the Arctic; the story of a restless life between Greenland and Alaska. New York, Pantheon, 1957. 239 p. illus., maps. Translation by Isabel and Florence McHugh of *Kein Winter für Wölfe.*

Story based on the 1897–98 overland relief expedition, with reindeer trek from Seward Peninsula, to Pt. Barrow where ice-bound whalers were stranded and starving. Includes reminiscences of Hall's *Polaris* in Baffin Bay-Davis Strait 1871–73, and a trip in Labrador 1867–68.

Copy seen: DLC.

52943. LUGEON, JEAN, 1898– . Les buts scientifiques de l'expédition radiométéorologique polaire suisse pendant l'Année Géophysique Internationale. May 16, 1957. 16 p., maps, diagrs., photos. (La Suisse horlogère. Reprint no. 20) 29 refs. Text in French. ***Title tr.:*** Scientific objectives of the Swiss radiometeorological polar expedition for the International Geophysical Year.

Reviews Swedish-Swiss-Finnish program planned for the station at Murchisonfiorden, Vestspitsbergen, with outline of the development of radiometeorology, laws of sferics and value of sferics observations in polar regions. A nomogram enables forecasts of the sferics regime within the Arctic Circle during the polar night. Sferics have practical value in the forecasting of storms at greater distances than is possible by meteorological methods, e.g., in deserts, on the oceans, etc. Studies at Murchison Bay concern behavior of the D layer in the lower ionosphere, the relation between sferics and cosmic rays; comparison between radiosonde and surface measurements of atmospheric electricity, etc.

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52944. LUGINEt͡S, I. P. O neobkhodimosti vozobnovleniîa neftepoiskovykh rabot v Ust'-Eniseĭskoĭ vpadine. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ biûlleten', 1958. vyp. 7, p. 56–59.) Text in Russian. ***Title tr.:*** On the indispensability of renewing oil prospecting work in the Ust'-Yenisey basin.

States that rapid increase of the oil supply in Soviet Russia is an urgent problem, and discusses petroleum finds in various parts of the Soviet Arctic. Oil indications in the Ust'-Yenisey depression may lead to discoveries and oil is important for this region. Exploration should be resumed; it was a mistake to search for oil in Paleozoic sediments instead of Mesozoic. This comment was answered by N. A. Gedrolt͡s, q.v. ***Copy seen:*** DGS.

52945. LUGOV, S. F. Voprosy vliîaniîa assimilîat͡sii na rudonosnost' olovonosnykh intruziĭ Chukotki. (Sovetskaîa geologiîa, Oct. 1958. god 1, no. 10, p. 13–34, tables, diagrs., map.) 18 refs. Text in Russian. Summary in English. ***Title tr.:*** Effects of assimilation upon ore possibilities of tin-bearing intrusions of Chukotka.

Presents extensive data on the distribution of tin, boron and other elements in the various formations of a region, about 250,000 km.^{2} in area, which extends from Chaunskaya Gulf east to the Bering Sea, its southern limit a line Kresta Bay to the source of Chaun River. Chukotka is characterized by widespread development of geosynclinal terrigenous formations of Mesozoic folding, magmatogenic processes, and metallogeny of the same age. The average tin and boron content as determined by spectral analyses, is indicated for the Lower Mesozoic argillo-arenaceous sediments, various types and ages of granitoids, and intrusive bodies. Data on the tin and boron distribution

and its fluctuation are tabulated and diagrammed; map shows the geologic structure of Chukotka. ***Copy seen:*** DLC.

52946. LUKASHEV, KONSTANTIN IGNAT'EVICH, 1906– . Zonal'nye geokhimicheskie tipy kory vyvetrivaniîa na territorii SSSR. Minsk, Izd-vo Belorusskogo gos. universiteta, 1956. 305 p. illus., tables, maps. About 500 refs. Text in Russian. ***Title tr.:*** Zonal geochemical types of the weathering crust on the territory of the U.S.S.R.

Deals with general characteristics of zonality in the soil-forming (weathering) layer of the earth's crust, with review of current concepts on geographic zonality and zonality of geochemical processes on the surface of the earth. The different zones are treated in turn, including the tundra and its soils (p. 41–87) and the taiga-forest zone (p. 88–146). These two zones are also referred to as disintegrated-rock zone and sial-clay zone, respectively; each is described as to general characteristics, physical and geographical conditions of its formation, chemical and biological factors; crust forming rocks, final product, geologic and engineering aspects, soil formation, types of soil, melioration, etc. The book is intended for students of geography, geology, engineering, agriculture, etc. ***Copy seen:*** DLC.

52947. LUKONIN, G. Aviatory pomogaîût moriîakam. (Grazhdanskaîa aviatsiîa, Oct. 1957. god 14, no. 10, p. 35) Text in Russian. ***Title tr.:*** Fliers assist the sailors.

Contains story of air rescue of the diesel motor boat *Milovzorov* stranded during a storm on a sand bank near Sukharnyy Island at the Kolyma River mouth. ***Copy seen:*** DLC.

52948. LUMSDEN, H. G. A snow goose breeding colony in Ontario. (Canadian field-naturalist, July–Sept. 1957. v. 71, no. 3, p. 153–54.)

Contains notes on three downy young with two adult snow geese, *Anser caerulescens*, seen on Cape Henrietta Maria (55°06′ N. 82°15′ W) at the entrance to James Bay in June 1950; also three separate groups of the same birds, of both the white and blue color phase, with downy and half-grown young, observed during a flight on the 55°07′ N. parallel at 82°32′ W. 82°41′ W. and 82°47′ W. According to Indian hunters, the birds first started breeding in that area about ten years ago and have been increasing rapidly.

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LUMSDEN, H. G., *see also* Snyder, L. L., *and* H. G. Lumsden. Variation . . . *Anas cyanoptera*. *1951*. No. 55016.

52949. LUND, HJALMAR MUNTHE-KAAS, 1913– . Penguins north of the polar circle. (Norsk hvalfangst-tidende, Feb. 1955. årg. 44, nr. 2, p. 95–96, 99–100.) Text in Norwegian and English.

Notes nine king penguins having been released in 1936 at Røst in Lofoten and Gjesvaer in Finnmark; also golden and spectacled penguins released at Røst in 1938. Some of these are known to have been killed; others have been observed in different places, but little is known about them at present. ***Copy seen:*** DI.

52950. LUND, K. BUDDE. Den grønlandske radiofoni. (Grønland, May 1958, nr. 5, p. 179–87, illus.) Text in Danish. ***Title tr.:*** The Greenland broadcasting service.

Reviews broadcasting started in 1926, and gives details on administration and program planning of the new service to be inaugurated in summer 1958. The transmitting station (25 kw.) is on one of the Kookø islands (64°01′ N. 52°08′) at the mouth of Godthåbsfjorden, about 15 nautical miles from Godthåb where the studios have been built. The programs are to be 42.4% in Greenlandic, 15.4% in Danish, 42.2% music; at present: 27, 12 and 61% respectively.

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52951. LUND, K. BUDDE. Nu lysner det for Godthåb forsamlingshus. (Grønland, May 1957. nr. 5, p. 197–200, illus.) Text in Danish. ***Title tr.:*** Prospects are becoming brighter for a community center at Godthåb.

Contains a short description of the building to be completed in 1958. It is estimated to cost 550,000 D. kr., of which 440,000 are advanced by the government.

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LUNDBECK, JOHANNES, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958*. No. 51935.

52952. LUNDBERG, HANS. Kritiske synpunkter på den nya skogsvårdslagens tillämpning i Norrland. (Skogen, *Stockholm*, Dec. 1, 1950. årg. 37, nr. 12,

p. 249–51, illus.) Text in Swedish. ***Title tr.:*** Critical views of the application of the new forest conservation law in Norrland.

Deals with the weaknesses of the law as manifest in this large northern province, especially in calculations of regeneration capacity of experimental stands in Västerbotten. ***Copy seen:*** DA.

52953. LUNDBERG, STIG. Bidrag till kännedomen om svenska Coleoptera. 2. (Entomologisk tidskrift, May 1957. årg. 78, häfte 4, p. 276–81, 2 illus.) Text in Swedish. ***Title tr.:*** Contributions to the knowledge of Swedish Coleoptera, 2.

Contains an annotated list of 14 beetles, at least nine native to Norrbotten, with data on distribution and ecology.

Copy seen: DA.

52954. LUNDE, GULBRAND, 1901–1942, *and others.* Jodinnholdet i norsk fisk og fiskeprodukter. Bergen, Grieg, 1928. 41 p. graphs, tables. (Norway. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier, 1928, nr. 4.) 60 refs. Text in Norwegian. Summary in German. *Other authors:* K. Closs, H. Haaland, *and* S. O. Madsen. ***Title tr.:*** Iodine content in Norwegian fish and fish products.

The iodine content of a variety of saltwater fish and fish products, determined in a series of investigations, is discussed, and the methods are described. Fish from Lofoten and Finnmark in northern Norway were included. Of the more important commercial varieties haddock had the highest iodine content. Fish products, processed in customary ways, were analyzed and reported. Availability of iodine in smoked, salted, and fresh fish, and its loss in leaching and cooking were considered.

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52955. LUNDEGÅRDH, PER H. Helge G. Backlund, 1878–1958. (Geologiska föreningen i Stockholm. Förhandlingar no. 495, Nov.–Dec. 1958. bd. 80, häfte 4. p. 488–91, port.) Text in Swedish. ***Title tr.:*** Helge G. Backlund, 1878–1958.

Reviews the scientific activities of this Estonian-born petrologist, known for his studies of crystalline bedrocks and the resulting interpretations of geosynclinal and global geology. His work with the Swedish-Russian expedition to Spitsbergen for the mensuration of latitudes in 1899–1901, astronomical and geological observations between the Yenisey and Anabar Rivers in 1905, studies in 1909 in the Northern Ural and Taymyr Peninsula, southern Swedish Lapland in 1922, and in 1929–1930 with Lauge Koch's East Greenland expedition are cited among others. ***Copy seen:*** DGS.

52956. LUNDEVALL, HERBERT. Snön och grödans övervintring. (Beten, vallar, mossar, Apr. 1951. årg. 3, nr. 3, p. 44–45.) Text in Swedish. ***Title tr.:*** The snow and the overwintering of the crop.

A heavy snowfall upon unfrozen or lightly frozen ground sown in the fall often results in a poor crop stand. If the snow is packed (practical experience with trampling by reindeer in Swedish Lapland is cited) excellent growth ensues. A horse-drawn cylindrical snow packer, 1.5–2 m. long and nearly 1 m. in diameter is described. ***Copy seen:*** DLC.

52957. LUNDGREN, BÖRJE. Den tekniska översynen av riksgränsen Sverige-Finland. (Teknisk tidskrift, Sept. 24, 1957. årg. 87, häfte 34, p. 781–84, illus., diagrs.) 3 refs. Text in Swedish. ***Title tr.:*** The technical survey of the Swedish-Finnish border.

Describes 1956–57 procedures in this boundary survey, carried out every 25 years. It is almost entirely a river boundary, from Treriksröset (approx. 69° N. 29° E.) close to the Norwegian border, running south and east along a system of minor water-courses to Kilpisjärvi, thence by the Könkämä, Muonio and Torne Rivers to the line through territorial waters in the Gulf of Bothnia. To facilitate the field work, a photogrammetric survey was undertaken by the Swedish Map Service in 1955. Subsequent field operations, carried out from four river boats, disclosed that the boundary line usually could be drawn directly from the information on the photo-maps; 119 profiles were established by soundings in the more difficult places.

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52958. LUNDMAN, BERTIL. Publications on the physical anthropology of the Lapps. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 277–84.) 78 refs.

Reviews works published from the 18th century to 1955 supplementing No. 24028, and revises his previously expressed opinion on the racial origin of the eastern Lapps. They are considered an aboriginal "local echo-type derived from

some eastern European" group with less mongoloid elements than believed earlier. Only slight similarities are found between their physical characteristics and blood-groups and those of north Russian and Siberian aboriginals. ***Copy seen:*** DSI.

52959. LUNDMAN, BERTIL. Züge der (vorcolumbischen) Anthropologie Amerikas. (Ethnos, 1955. v. 20, no. 4, p. 216–23.) Text in German. ***Title tr.:*** Traits of (pre-Columbian) anthropology of America.

Using the relation of skull-height to skull-length as an index for race study, author suggests that South and North America were settled by three different invasion waves crossing from Asia over Bering Strait, each wave pushing the preceding migrants south. A primitive low-skulled north-Mongoloid group was followed by high-skulled southern Eurasians. These in turn gave way to a low-skulled north Siberian tundra group that settled in the northern part of North America, mainly in the Bering Strait region. The seeming skull height of the Eskimos, placed into this last group, is due not to a high brain case (Hirnkapsel) but to a prominent sagittal crest (Scheitelkamm) resulting from overdeveloped chewing muscles. Certain anatomical peculiarities (oversized jaws, narrow nasal passages) of the present "Bering area peoples," i.e., the Chukchis and all Eskimos, are attributed to their physical adaptation to polar conditions. An analysis of their q genes also points to the existence of three different groups among the American aboriginals.

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52960. LUNDQUIST, KAARE Z., 1912– . Magnetic observations in Svalbard 1596–1953. Oslo, 1957. 34 p. 3 maps in pocket, tables, diagrs. (Norway. Norsk Polarinstitutt. Skrifter, nr. 110.)

Declination data are tabulated chronologically, also according to latitude, from exhaustive search of materials at Norsk Polarinstitutt and the University of Oslo. Stations are described from these sources. Maps show declination in 1930 in the Svalbard area, and from Norway to 85° N., also magnetic observation stations.

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52961. LUNDQVIST, GÖSTA 1894– . Beskrivning till jordartskarta över Sverige. Stockholm, 1958. 106 p. illus., diagrs., maps. (Sweden. Geologiska undersökning, ser. Ba, Översiktskartor med beskrivningar, no. 17.) 82 refs. Text in Swedish. ***Title tr.:*** Description accompanying the soils map of Sweden.

The origin, division, and localization of Sweden's unconsolidated earthy mantle are outlined and 15 soil provinces described. The soil materials are mainly of glacial, alluvial, aeolian, and organic origin and are characterized according to thickness, particle size, stratification, climate and site effects, natural fertility, and use. The three soil provinces which extend into arctic Sweden are: (1) the northern interior lowland with almost equal proportions of moraine and bogland; (2) the mountain foreland with greater area of moraine and less of bogland; and (3) the upland with bogland predominating over glacial deposits and frost-weathered accumulations, and with much more bare rock than is found at lower elevations. Special attention is devoted to the conventional division of bogs into "mossar" (*Sphagnum* or white moss) and "karr" (sedge or brown moss); to aeolian sands in several locations; to palses on the upland which are reportedly confined to peatbogs where the temperature decreases to −10° C. 120 days annually; and to frozen-ground accumulations, generally above the treeline, and their relation to inclination, vegetation, and content of stones. All sketch maps, diagrams, and photographs have titles in both Swedish and English.

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52962. LUNDQVIST, GÖSTA, 1894– . Kvartärgeologien i Sverige under åren 1921–1945. (Geologiska föreningen, Stockholm. Förhandlingar, 1946. bd. 68, häfte 2, p. 268–302.) Refs. in text. Text in Swedish. ***Title tr.:*** Quaternary geology in Sweden during the years 1921–1945.

The more important research reports in this field and period are summarized. They are grouped as: work on interglacial questions, moraines, and other sediments, glacial movement and waning, glacial lakes, recent ice, changes in level, peat, pollen analysis, limnology, archeology, maps, and reconnaissance studies. Included in the discussion are the areas of northern Fennoscandia, Spitsbergen, Greenland, and Labrador.

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LUNDQVIST, GÖSTA, 1894– , *see also* Svenska turistföreningen. Kebnekajsefjällen . . . *1952.* No. 55256.

52963. LUNELUND, HARALD VILHELM, 1882– . Bestrahlung verschieden orientierter Flächen in Finnland durch Sonne und Himmel. Helsingfors, 1940. 28 p. (Societas Scientiarum fennica. Commentationes physico-mathematicae, v. 10, no. 13.) Text in German. ***Title tr.:*** Radiation by sun and sky on surfaces at different angles in Finland.

Contains tabulated and graphed data on the daily, monthly, and yearly totals of radiation at 60° N. and 70° N. on surfaces of 0°, 45°, and 90° angles in various directions on clear and cloudy days. Solar radiation and diffuse radiation and their variation are compared and discussed. ***Copy seen:*** DLC.

52964. LUNELUND, HARALD VILHELM, 1882– . Norrskensforskning. (Tekniska föreningen i Finland. Förhandlingar, Feb. 1941. årg. 61, häfte 2, p. 32–39, illus., tables, graph.) 5 refs. Text in Swedish. ***Title tr.:*** Auroral research.

Research work and theories on the origin of aurora borealis are reviewed. Work of Birkeland and Størmer is discussed in some detail and Størmer's mathematical formula for the paths of the auroral rays is explained.

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52965. LUNEVA, O. I. K geologii svity Imandra-Varzuga v Prikhibinskom raĭone; po materialam litologicheskikh issledovaniĭ. (Akademiîa nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiîa, 1958, no. 3, p. 15–22, cross-sections.) Ref. Text in Russian. ***Title tr.:*** On geology of Imandra-Varzuga series adjacent to the Khibiny district; from material of lithologic investigations.

Previous studies on the Kola Peninsula between Umba River and Apatity railroad station are reviewed. Three stratigraphic horizons of the Imandra-Varzuga series are distinguished and described in detail on the basis of 1956 field studies. Their lithologic composition, distribution, and age of formation are discussed.

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52966. LUNGERSGAUZEN, G. F. Nekotorye itogi aėrogeologicheskikh issledovaniĭ v Zapadnoĭ Sibiri; ocherk noveĭshikh tektonicheskikh dvizheniĭ. (Sovetskaîa geologiîa, 1955. Sbornik, no. 45, p. 52–77, illus., diagrs., maps.) 39 refs. Text in Russian. ***Title tr.:*** Some results of aerogeological investigations in West Siberia; sketch of the newest tectonic movements.

Reports air survey in the region 58°–64° N. from the Ural foothills to the Ob' depression for geologic mapping at scale 1:one million. The air survey contributed substantially to the detection of recent tectonic movements, which are characterized. General uplift of the region in the present period is evident. Special characteristics in the land forms reveal that this uplift was preceded by elevation of the Severnaya Sos'va River and depression in the Konda region. Relief development, post-glacial hydrography and morphology are also reviewed. The various geologists who participated in this large-scale work are mentioned.

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LUPIEN, P. J., *see* Pett, L. B., *and* P. J. Lupien. Cholesterol levels of Canadian Eskimos. *1958.* No. 53973.

52967. LUR'E, M. L., *and* **S. V. OBRUCHEV.** Osnovnye cherty ėffuzivnogo vulkanizma trappovoĭ formaîsii Sibirskoĭ platformy. (Leningrad. Vsesoîuznyĭ geologicheskiĭ institut. Materialy, nov. seriîa, 1955, vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 159–206, table.) 125 refs. Text in Russian. ***Title tr.:*** Basic characteristics of effusive volcanism of the Siberian platform trap formation.

Comprehensive outline of the gradual and interrelated Permian-Triassic volcanism of the Siberian platform. Lithology and petrology of trap formation are outlined. Types of volcanic eruptions are reviewed. Volcanic activities are distinguished in four phases: pre-tuffic, tuffic and intrusive, lavic, and post-lavic intrusive Each phase is outlined and its products and distribution are given. Eruption in pipes and bombs is extensively treated. Effusive volcanism of this trap formation is compared with formations in South Africa (Kappa), Arizona, Germany (Ries), etc. Much foreign literature is cited.

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52968. LUSHNIKOV, N. Kholod, moĭ soîuznik. (Fizkul'tura i sport, 1957. god 27, no. 1, p. 34–35, illus.) Text in Russian. ***Title tr.:*** Cold is my ally.

Discusses the beneficial results of conditioning to cold and describes bathing in the open at temperatures of less than −50° C. The use of ice-water baths in treatment of tuberculosis is mentioned.

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52969. LUTHER, ALEXANDER FERDINAND, 1877– . Die Dalyelliiden: Turbellaria Neorhabdocoela; eine Monographie. Helsingforsiae, 1955. xi, 337 p. 55 illus. (Acta zoologica fennica, 87.) 216 refs. Text in German. ***Title tr.:*** Dalyelliidae: Turbellaria Neorhabdocoela; a monograph.

Contains in the general part (p. 1–89) taxonomic, morphological and cytological data on free-living, fresh-water flatworms of the family Dalyelliidae. The special part (p. 89–332) is a monographic account of some 150 species and subspecies, with synonyms, keys, descriptions, and critical notes, also data on biology, ecology, habitats and distribution. Three genera, two subgenera, nine species and three subspecies are described as new. About twenty-five of the species occur in fresh-water basins of northern Scandinavia, Kola Peninsula and West Greenland. An alphabetic list of Latin names is appended. ***Copy seen:*** DLC.

52970. LUTKOVSKIĬ, SERGEĬ VASIL'EVICH. Obrazovanie l'da v ozerakh, rekakh i morîakh. Moskva, Izd-vo Akademii nauk SSSR, 1957. 119 p. illus., graphs, tables, map. 12 refs. (Akademiîa nauk SSSR. Nauchno-populîarnaîa seriîa.) Text in Russian. ***Title tr.:*** Ice formation in lakes, rivers and seas.

Formation and growth processes of various types of lake, river, and sea ice and influencing factors are discussed on the basis of the literature. Ice-crystal formation is discussed in chap. 1; lake water temperature distribution during the pre-freezing period and static and dynamic ice formation are described (chap. 2). River ice, including the water-temperature regime before and during ice formation, is treated in chap. 3 The formation of sea ice is examined (p. 52–76) including a description of the thermal regime, ice in seas of low and high salinity and in arctic waters. Basic types and forms of sea ice are described and illus. (p. 76–103). The growth and deformation of sea ice and the effects of hydrometeorological factors on the ice cover are discussed (p. 103–110). Ice forecasting methods are also considered.
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52971. LUTSKIĬ, S. L. O general'nom ėkonomicheskom raĭonirovanii SSSR i ob osobom severnom ėkonomicheskom raĭone. (Akademiîa nauk SSSR. Izvestiîa, ser. geogr., Mar.–Apr. 1957. no. 2, p. 113–19.) Ref. Text in Russian. ***Title tr.:*** The general economic zoning of the U.S.S.R. and a separate northern economic zone.

General remarks on the history, purpose and methods of economic zoning in the U.S.S.R. P.M. Alampiev's suggestion (No. 43538) to establish a separate Northern Zone embracing all the far North (except Kola Peninsula) is discussed favorably. ***Copy seen:*** DLC.

52972. LUTTRELL, GWENDOLYN LEWISE (WERTH), 1927– . Bibliography of iron ore resources of the world (to January 1955). Washington, D.C., U.S. Govt. Print. Off., 1957. p. 187–371. (U.S. Geological Survey. Bulletin 1019–D. A contribution to bibliography of mineral resources.)

Includes references (not annotated) to iron ores, mines, and mining in Alaska, northern Canada, Greenland, northern Scandinavia, and U.S.S.R. References are listed alphabetically by author, with author and subject-geographic indexes. English summaries are indicated when they accompany foreign language reports. Abstracts of reports and reports that contain little information are omitted.
Copy seen: DGS.

LUTZ, HAROLD JOHN, 1900– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210

52973. LUTZ, STANLEY, *Jr.* Cold weather survival. (Military medicine, Mar. 1957. v. 120, no. 3, p. 210–15.)

Text of a speech delivered at the 63rd Annual Convention of the Association of Military Surgeons of the U.S., with information on indoctrination, heat balance, clothing, care of the wounded, emergency landing with airplanes, respiration, food and drink, snow-blindness, skin protection, morale, etc.
Copy seen: DNLM.

52974. LUYET, BASILE JOSEPH, 1897– . An analysis of the notions of cooling and of freezing velocity. (Biodynamica, Oct. 1957. v. 7, no. 153, p. 293–335, illus.)

Account of re-examinations of the process of ice-formation and of the cooling and freezing curves, made with the aim to eliminate part of the cooling and freezing velocities. A tentative evaluation of the actual effects of cooling velocities is made and discussed; several of the

older theoretical predictions are invalidated and new concepts introduced.

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52975. LUYET, BASILE JOSEPH, 1897– , *and* G. L. RAPATZ. An automatically regulated refrigeration system for small laboratory equipment and a microscope cooling stage. (Biodynamica, Oct. 1957. v. 7, no. 154, p. 337–45, illus.) 2 refs.

Description of a small cooling unit producing dry cold air and automatically regulated from the specimen or container. The cooling stage, operated by the unit, permits maintenance of temperatures of 0° to −100° C. with an accuracy of 0.1° and can be raised or lowered ten degrees in less than two minutes.

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52976. LUYET, BASILE JOSEPH, 1897– . On the growth of the ice phase in aqueous colloids. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 434–51, illus.) 34 refs.

A study of growth of macroscopic and microscopic crystallization units, with special attention to their mode of formation from molecular building blocks. A considerable part of investigation is devoted to freezing of gelatin solutions of various concentrations. Three main aspects are followed: structure and growth of the ice phase; methods of investigation, and applications to, with observations on some mammalian cells (erythrocytes, spermatozoa). ***Copy seen:*** DNLM.

LUYET, BASILE JOSEPH, 1897– , *see also* Gehenio, M. P., *and* B. J. Luyet. Hemolysis and freezing velocity. *1958.* No. 51112.

LUYET, BASILE JOSEPH, 1897– , *see also* Rapatz, G. L., *and* B. J. Luyet. Apparatus . . . cinematography . . . rapid freezing. *1957.* No. 54212.

52977. L'VOV, Ю. Samyĭ severnyĭ v mire. (Sovetskiĭ soûz, 1958, no. 11 (105), p. 32, illus.) Text in Russian. ***Title tr.:*** The world's northernmost.

Note on the Botanical Garden of the Academy of Sciences U.S.S.R. Kola Branch, in the Khibiny mts. Over 25% of 24,000 experimental plants from temperate and tropical zones grown in hothouses and in the open have become acclimatized to polar conditions.

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52978. L'VOV, M. Selo olenevodov. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 24, illus., col. plate.) Text in Russian. ***Title tr.:*** Reindeer breeders' village.

Sketch of life in Lovozero (67°59′ N. 38° E.) Kola Peninsula, and of reindeer breeding on a collective farm in Lovozerskaya Tundra; the peaceful coexistence of the local Saami (Lapps), Komi (Zyryans) and Nenets (Samoyeds) is stressed.

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52979. L'VOV, S. Ostrov Mednyĭ. (Vokrug sveta, Sept. 1957. no. 9, p. 20–21, illus., map.) Text in Russian. ***Title tr.:*** Mednyy Island.

Seven photographs and a brief sketch of the second largest of the Commander Islands: coastal rocks, wildlife, the village of Preobrazhenskoye (54°50′ N. 167°30′ E.). ***Copy seen:*** DLC.

52980. LYFTINGSMO, ERLING. Beitekontroll i Nord-Noreg. (Forskning og forsøk i landbruket, 1955, bd. 6, hefte 6, p. 413–55, 36 tables, 3 graphs.) Grassland Experiment Station Apelsvoll, report no. 22. Text in Norwegian. Summary in English. ***Title tr.:*** Testing of pastures in Northern Norway.

Tests of conditions and production over periods of five to nine years are reported for ten surface cultivated, fertilized and controlled pastures between 65°45′ and 69°40′ N. Good mineral soil, peat land and sandy soil are included. Climate, soil, drainage, vegetation, weed problems and control, commercial fertilizers, duration of grazing shifts and pasture seasons, cost accounting, and milk production are considered. Where soil and growing conditions are favorable, fertilization is profitable only if good grazing turf can be maintained. ***Copy seen:*** DA.

52981. LYMAN, CHARLES PEIRSON, 1912– . Metabolic adaptations of hibernators. (Federation proceedings. Symposium on metabolic aspects of adaptation of warm-blooded animals to cold environment, Dec. 1958. v. 17, no. 4, p. 1057–60, illus.)

Information is presented on the various kinds of hibernators and of hibernation; causes precipitating it, internal and external; its physiology; body temperature during it; arousal; hibernation as "metabolic adaptation to cold."

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LYMAN, CHARLES PEIRSON, 1912– , *see also* Patterson, W. B., *and others.* Growth of human tumors in hibernating hamsters. *1957.* No. 53882.

52982. LYNCH, H. F., *and* E. F. ADOLPH. Blood flow in small blood vessels during deep hypothermia. (Journal of applied physiology, Sept. 1957. v. 11, no. 2, p. 192–96, tables.) 10 refs.

Account of microscopic observations on the minute blood vessels of rat mesocecum and hamster cheek pouch in general and local hypothermia. Narrowing of arteriols was generally absent and in the capillaries few closures or even sphincteric constrictions were observed. Changes in viscosity account for slower blood flow. ***Copy seen:*** DNLM.

52983. LYNGE, AUGO. Børn, født udenfor aegteskab i Grønland. (Atuagagdliutit: Grønlandsposten, Sept. 11, 1958. Ukiut 98-iat, nr. 19, p. 3, 7–8, 17, port.) Text in Danish and Eskimo. ***Title tr.:*** Children born out of wedlock in Greenland.

Discusses this problem and gives some statistics for the period since 1850 (for the whole of Greenland 48 per thousand 1851–1880, 50–60 per thousand 1900–1930, at present about 240 per thousand). Reasons for the increase are discussed: concentration of young people to the towns, large number of Danish workmen spending long periods in Greenland, and a change in attitude as a consequence of changes in the structure of society.

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52984. LYNGE, FINN. Grønlands katolske middelalder set gennem Vatikanets arkiver. (Grønland, Feb. 1958, nr. 2, p. 41–49, illus.) Text in Danish. ***Title tr.:*** Greenland's Catholic Middle Ages seen through the archives of the Vatican.

Outlines contents of seven documents, from 835 to 1492, in which Greenland is mentioned. The first two are concerned with administrative matters, the country being under the jurisdiction of the Archbishop of Hamburg and later the Archbishop of Nidaros (Trondhjem); three documents deal with Greenland's contribution to crusade taxes. The two latest documents throw a light on conditions during the decline and fall of the Norse civilization. ***Copy seen:*** DLC.

52985. LYNGNES, RASMUS, 1886– . Sekkdyr som turist i Vestlandsfjordane. (Naturen, 1957. årg. 81, nr. 6, p. 360–68, 2 illus., diagr.) Text in Norwegian. ***Title tr.:*** Tunicates as tourists in the western Norwegian fiords.

Occasionally in the fall season, a rich plankton fauna is observed in Norwegian coastal waters as far north as Varanger. The biology of pelagic animal forms and their drift with the Gulf Stream are discussed. *Salpa fusiformis* is the most common species found on the Norwegian coast. ***Copy seen:*** DGS.

52986. LYONS, JOHN C. Sixty thousand square miles of potential resources, Newfoundland and Labrador. (Canacian mining and metallurgical bulletin, Feb. 1958. v. 51, no. 550, p. 114–19, 3 illus., 2 text maps.) Talk given at Montreal Branch meeting of the Canadian Institute of Mining and Metallurgy, Nov. 27, 1957, illustrated by a colored movie on a recent survey of the Hamilton River power project.

Gives account of progress made by British Newfoundland Corp. Ltd., in exploring and developing natural resources of Newfoundland and Labrador, including minerals, timber, water power. The Corporation's organization in 1953, its 20-year concessions (map) and program are outlined: mineral exploration, reconnaissance and mapping, etc. Uranium mineralization was discovered in Labrador, diamond drilling and an adit carried out. Cost estimates, including construction of an all-weather road between the Hamilton River and the Iron Ore Company's railway, have been completed in the water-power program. Stands of pulpwood amounting to 8 to 10 million cords, mostly black spruce, in Labrador, are noted. ***Copy seen:*** DGS.

52987. LYTKIN, VASILIĬ IL'ICH. Izuchenie dialektov komi ĵazyka. (Voprosy ĵazykoznaniĵa, Sept.–Oct. 1957. god 6, no. 5, p. 108–110.) 15 refs Text in Russian. ***Title tr.:*** The study of Komi dialects.

Describes advances in study of Zyryan and other dialects spoken in Komi A.S.S.R., and lists recent publications.

Copy seen: DLC.

52988. MAASCH, OTTO. Ein neuer kleiner Eisbrecher im Hamburger Hafen. (Schiff und Hafen, Mar. 1956. Jahrg. 8, Heft 3, p. 197–200, illus., plates.) Text in German. ***Title tr.:*** A new small ice-breaker in Hamburg harbor.

Describes the *Christian Nehls*, a 175-hp. diesel-propelled ice-breaking tugboat of 36 tons. During severe ice conditions in 1955, passage was opened through solid ice 30 cm. thick and pack ice up to three m. high. The advantages of this easily maneuverable vessel over larger ice-breakers are emphasized.

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52989. McALPINE, J. F. Identities of lonchaeid flies described by Zetterstedt, with notes on related species; Diptera. (Canadian entomologist, July 1958. v. 90, no. 7, p. 402–418, 40 illus.) 22 refs.

Contains data on eight lonchaeids from the palaearctic region. The types in the Zetterstedt collection at the Zoological Institute in Lund, Sweden, are discussed; comparisons are drawn between these and related species and some synonyms are indicated. When necessary, lectotypes are added. *Lonchaea albitarsis, L. deutschi* and *L. hirticeps*, all native to Swedish Lapland, are included.

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52990. MACAN, T. T. A description of the nymph of *Baëtis macani* Kimmins. (Notulae entomologicae, 1957. v. 37, no. 2, p. 58–60, illus.) 5 refs.

Contains descriptions of seven cast skins and two whole nymphs of *Baëtis macani* from Mt. Saana in the Kilpisjärvi area in the northwest corner of Finland, with notes on their ecology and distribution. The specimens of this species collected by Thienemann from Abisko in Swedish Lapland, are identified by the author as *Baëtis vernus*.

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MACARA, T., *see* Drummond, J. C., *and others*. The examination . . . tinned foods . . . *1938*. No. 50637.

52991. McATEE, WALDO LEE, 1883– . Folk-names of Canadian birds. Ottawa, 1957. 74 p. (Canada. National Museum. Bulletin no. 149; Biological ser. no. 51.) 67 refs.

Lists by species approx. 400 birds, many of them arctic, and discusses for each the English, French and/or Gaelic names, extracted from an unpublished manuscript. ***Copy seen:*** DLC.

52992. McCABE, ROBERT ALBERT, 1914– . Observations on the disappearance of shed caribou antlers. (Journal of mammalogy, May 1957. v. 38, no. 2, p. 275–77.) 7 refs.

Author observed the disappearance of some 30 out of 35 shed antlers within a four-year period along a hundred miles of railway track south of Churchill. Inspection of such antlers and other observations and reports indicate that caribou and rodents slowly consume these antlers, due apparently to their high mineral content. ***Copy seen:*** DI.

McCANCE, R. A., *see* Keatinge, W. R., *and* R. A. McCance. Increase in venous and arterial pressure . . . *1957*. No. 52221.

McCARREY, J. L., *Jr.*, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

52993. MacCARTHY, GERALD RALEIGH, 1897– . Glacial boulders on the arctic coast of Alaska. (Arctic, 1958. v. 11, no. 2, p. 71–85, illus., 2 maps, 2 tables.) 6 refs. Paper presented at the Geological Society of America meeting in Durham, N.C., Apr. 1955; abstract listed as No. 41169.

Reports incidental observations made in the Barrow-Cape Simpson area 1949–50. Pleistocene glaciers of Alaska did not extend north beyond the northern foothills of the Brooks Range, yet glacial boulders have been reported near and along the coast. Altogether 56 such erratic boulders from sheltered spots on the shore, as far as 8–9 mi. inland on the tundra and a few from the present sea floor were examined. Their location and size, rock type with field description and petrographic analysis are tabulated. Of granite (16), diabase (17), quartzite (10), etc., they range in weight from 2–3 lbs. to 4–5 tons. They are thought to represent morainic material left by melting icebergs, and the bergs to have been produced from glaciers in widely separated areas.

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MacCARTHY, GERALD RALEIGH, 1897– , *see also* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958*. No. 50694.

McCAULEY, CAMILLA, *see* American Geographical Society. Geographic study of mountain glaciation. *1958*. No. 49276.

52994. McCLINTOCK, ELIZABETH. A monograph of the genus *Hydrangea*. (California Academy of Sciences. Proceedings, 1957. ser. 4, v. 29, no. 5, p. 147–256, 6 plates, 10 text maps.) 51 refs.

Includes in this monographic treatment, a list of six fossil species (p. 162), among them *H. alaskana* collected in

Paleocene or Eocene deposits in the Jaw Mts. in Alaska Peninsula.

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McCLISH, ANDRÉ, *see* Gravel, J. A., *and* A. McClish. Hypothermie . . . *1958.* No. 51336.

McCLUNE, WALLACE O., *see* Pearsall, N. E., *and* W. O. McClune. Army . . . to heat arctic air base. *1957.* No. 53901.

McCRACKEN, FRANK D., *see* Clark, J. R., *and others.* Summary of gear selection . . . Fisheries. *1958.* No. 50279.

McCRACKEN, FRANK D., *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

McCREADY, R. A. N., *see* Simpson, C. J. W., *and others.* North ice . . . *1957.* No. 54901.

52995. McCULLOUGH, CHARLES RUSSELL. Review of frozen ground excavation methods. Wilmette, Ill., Feb. 1958. 9 p. (U.S. Army. Corps of Engineers. Snow Ice and Permafrost Research Establishment, Technical report 51.) 48 refs.

"Present methods, reviewed and evaluated on the basis of a literature survey, include thawing prior to excavation by solar heat, steam jets, water and electric needles, valveless pulsejet engines, and hydraulic methods as well as fracturing by hand, with saws, drop and pneumatic hammers, and cutter and scraper blades. The potentiality of resonant sound waves for loosening frozen ground should be studied. Modifications of bulldozers to permit installation of pneumatic hammers horizontally along the base of the blade show considerable promise. The use of alternate cutter and scraper blades for trench excavation has proved satisfactory. Drop hammers are suitable for enlarging excavations. Sawing frozen ground has not yielded satisfactory results."—SIPRE.

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McDERMOTT, THOMAS FRANCIS, 1914– , *see* Rose, J. C., *and others.* Cardiovascular function in hypothermic anesthetized man. *1957.* No. 54385.

McDONALD, I. R., *see* Fortier, C., *and others.* The effect of pituitary . . . section . . . stress . . . *1957.* No. 50952.

52996. MacDONALD, M. A., *and* **J. M. BELL.** Effects of low fluctuating temperatures on farm animals, 1; influence of ambient air temperature on the respiration rate, heart rate and rectal temperature of lactating Holstein-Frisian cows. (Canadian journal of animal science, June 1958. v. 38, no. I, p. 10–22, illus., tables.) 20 refs.

Account of observations at daily minimal temperatures ranging from −5° to 38° F. As environmental temperature fell, heart rate and rectal temperatures increased while respiration rate decreased. The three parameters were not significantly correlated with each other; however, change in respiratory rate was positively correlated with change in rectal temperature ($P<.03$). Low temperature resulted in small change in these physiological characteristics but the animals were not entirely free of thermal stress at temperatures as low as 0° F.

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52997. MacDONALD, M. A., *and* **J. M. BELL.** Effects of low fluctuating temperatures on farm animals, 2; influence of ambient air temperature on water intake of lactating Holstein-Frisian cows. (Canadian journal of animal science, June 1958. v. 38, no. 1, p. 23–32, illus., tables.) 20 refs.

Account of observations on animals exposed to 14-day periods of low temperatures with a minimum range of 0° to 38° F. Low temperatures did not affect water intake or the ratios of water intake. Adolph's hypothesis that water requirements of mammals is approximately one milliliter per calorie of produced heat, is supported by this study.

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52998. McDONALD, MYRA P. Seward Sanatorium patients receive rehabilitation training. (Alaska's health, Feb. 1958. v. 15, p. 2–3, illus.)

Outline of the activities of this tuberculosis sanatorium, which is run by the Women's Division of Christian Service of the Methodist Church. The share of the doctor, social and rehabilitation worker and of the teacher in these activities is discussed. Follow-up work and that among the Eskimos is noted.

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McEVOY, R. K., *see* Mavor, G. E., *and others.* Resuscitation . . . hypothermic heart . . . *1957.* No. 53191.

52999. McEWEN, EOIN H. Birds observed at Bathurst Inlet, Northwest Territories. (Canadian field-naturalist, July–Sept. 1957. v. 71, no. 3, p. 109–115.)

Contains data on the spring and autumn migrations, nesting habits, seasonal activities and habitat preferences of 50 bird species, observed May 14–Sept. 6, 1950. It was noted that the spring migration of redpolls, snow buntings and rough-legged hawks took place in May. Geese and swans migrated northwards from May 25 to about June 21; shore birds May 27–June 20. The nesting period for the majority of species was mid-June– mid-July, and by late August most of the birds had left the area.
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53000. McEWEN, EOIN H. Observations on the lesser snow goose nesting grounds Egg River, Banks Island. (Canadian field-naturalist, July–Sept. 1958. v. 72, no. 3, p. 122–27, 2 tables.) 7 refs.

Contains description of Egg River (72°30′ N. 124°05′ W.), data on the spring migration, nesting, hatching, dispersal from hatching grounds, factors on mortality, population estimate, and autumn migration. This goose, *Chen hyperborea hyperborea*, is the commonest of the subfamily in the Western Arctic.
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MacFARLANE, DAVID W., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53001. MacFARLANE, IVAN C. Guide to a field description of muskeg. Ottawa, Jan. 1957. 35 p. illus., tables. (National Research Council of Canada. Associate Committee on Soil and Snow Mechanics. Technical memorandum, no. 44.)

Contains criteria for identification of various types of muskeg or organic terrain. Twelve percent of Canada's terrain consists of muskeg, which causes difficulties for surface transportation and engineering works. Nine classes of surface coverage are summarized, each illus. by photo. Sixteen types of topographic features, found in muskeg areas, are briefly described, and 16 categories of subsurface material, or peat, are named, broadly characterized and illus. This guide, to help classify and describe muskeg types, standardize terminology, and help solve engineering problems, is based on the descriptive system of N.W. Radforth. ***Copy seen:*** DGS.

MacFARLANE, IVAN C., *see also* Radforth, N. W., *and* I. C. MacFarlane. Correlation of palaeobotanical and engineering studies of muskeg . . . *1957.* No. 54188.

53002. MacFARLANE, M. A. The Wadsworth Orthogonal Polynomial Technique over the North Polar area during 1955. Montreal, Oct. 1957.

Unpaged. 9 diagrs., 5 tables. (McGill University. Arctic Meteorology Research Group. Contract AF 19(604)–1141, Scientific report no. 3, supplement no. 1.) 4 refs.

Contains a summary of results obtained in the specification of pressure patterns for a trial series of Edmonton charts, using the Wadsworth Orthogonal Polynomial method; computations were carried out on the IBM 704 computer at the United Aircraft Co. at East Hartford, Conn. The trial series consists of the daily and 5-day mean surface and 500 mb. maps for the entire year of 1955, over the Arctic Meteorology Group's standard 13 x 13 grid area. Objective of this study is to show usefulness of the Wadsworth System: it seems to work better in polar than in middle latitudes.
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MacFARLANE, M. A., *see also* Godson, W. L., *and* M. A. MacFarlane. Pressure-contour variance . . . *1958.* No. 51239.

MacFARLANE, M. A., *see also* Hare, F. K., *and others.* Specification of pressure fields and flow patterns . . . *1957.* No. 51587.

53003. MACFARLANE, W. V., *and* **J. D. MEARES.** Intracellular recording of action and after-potentials of frog muscle between 0° and 45° C. (Journal of physiology, June 1958. v. 142, no. 1, p. 97–109, illus., tables.) 16 refs.

Resting potential increased but slightly between 0° and 35° C.; some muscles maintained voltage in cold as well as in heat. Duration of action potential increased below 10° C. with a Q_{10} of 2.7 to 4.1. After potential was lost in the cold (below 5° C.). ***Copy seen:*** DLC.

53004. McGILL, JOHN T. Map of coastal landforms of the world. (Geographical review, July 1958. v. 48, no. 3, p. 402–405, col. map in pocket.) 5 refs.

First of three maps and a handbook, coast studies by the U.S. Office of Naval Research. Based on Briesemeister's equal-area world projection, in scale 1:25,000,000. Distribution of major classes of coastal landforms (plains, plateaus, hills, mountains), as well as presence of embayments, is shown on coastal outline. Colors identify the principal agents shaping major landforms and shore features. Generalization of complex character of some landforms and omission of local shore features is explained in text. A coastal strip extending inland about 5 to 10 miles is arbitrarily classified on the map: the scale permits identification of types of features 10 to 15 miles in extent. All arctic coasts are classified; Antarctica is omitted. An extensive bibliography is to be issed separately. ***Copy seen:*** DGS.

McGILL UNIVERSITY. ARCTIC METEOROLOGY RESEARCH GROUP, *see* Hare, F. K. Studies in Arctic meteorology. *1958.* No. 51588.

McGILL UNIVERSITY. ARCTIC METEOROLOGY RESEARCH GROUP, *see also* MacFarlane, M. A. The Wadsworth . . . Technique . . . *1957.* No. 53002.

MacGINITIE, GEORGE EBER, 1889– , *see* Lorant, M. "The majority of ice . . . two years old." *1957.* No. 52912.

53005. McGINNIS, JOHN M. Effectiveness of prototype cold weather face masks for military activities. June 1957. 46 p illus. (U.S. Quartermaster Corps. Environmental Protection Research Division. Technical report EP–60.) 58 refs.

Contains a survey of Quartermaster research on face protection under severe windchill conditions, and evaluation of two new face masks: "Cold bar" and "Wood-Hafferty." The latter was found to be highly acceptable to operators of open engineering equipment, tank commanders, sappers, etc. The coldbar was preferred by gunners, physically active. Both masks increased the effectiveness and comfort of their wearers.

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53006. McGLYNN, J. C. Tumi Lake, District of Mackenzie, Northwest Territories. Ottawa, 1957. Report, 6 p., and map 9–1956. (Canada. Geological Survey. Paper 56–4.) Ref.

Report contains geological notes on the area, 63°15′–63°30′ N. 116°30′–117° W. Map, scale 1:63,360, shows areal distribution of ten types of Proterozoic and one type of Ordovician rocks, and structural and glacial notes. Mineral occurrences are located. Base map of the area, located about 100 mi. northwest of Yellowknife, was compiled from vertical aerial photos. ***Copy seen:*** DGS.

53007. McGOWAN, RICHARD E. Mt. Logan-Cook expedition, 1953. (American alpine journal, 1954. v. 9, no. 1, p. 32–38, 3 illus.)

Account of expedition, June 15–Aug. 14, 1953, by four Seattle climbers; objectives were: a new route to summit of Mt. Logan (unsuccessful), and two unclimbed peaks, Mt. McArthur, and Mt. Cook, the former near Mt. Logan, the latter (climbed Aug. 1) near Yakutat Bay. Routes are described; problems of manpower, communications, weather, etc. are noted. ***Copy seen:*** DGS.

53008. MacGREGOR, C. W. *and* **N. GROSSMAN.** Dimensional effects in fracture. (U.S. National Bureau of Standards. Circular, May 1952, no. 520, p. 137–52, illus., diagrs., graphs, tables.) 19 refs.

The influence of size on the transition temperature from ductile to brittle fracture, the effect of various ratios of combined stresses on the brittle transition temperature, and the effect of combined stresses on fracture strength were studied, using specimens of steel containing 0.95% carbon. Size-effect tests on circular disks supported around the circumference and loaded by a concentrated force at the center, showed that a 6-in. disk had a transition temperature 8° F. higher than a disk of 1-in. diameter. Rectangular plates, supported on two sides and loaded by a central concentrated force, were used to study the influence of biaxiality of stresses: the biaxiality ratio varied from 0.483 to 1.0, the brittle transition temperature increased 62° F. Conclusion: brittle fracture strength increases markedly with increasing constraint effect; a decrease in size also causes a definite increase in fracture strength.

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53009. McGUFFIN, W. C. Biological and descriptive notes on noctuid larvae. (Canadian entomologist, Feb. 1958. v. 90, no. 2, p. 114–24, 18 illus.) 9 refs. Contrib. no. 387, Div. of For. Biol.,

Science Service. Canadian Dept. of Agriculture.

Lists 24 species (in four families) of noctuid lepidopter larvae, with description, life history and range. *Mniotype versuta*, *Xylena thoracica* and *Synedoida hudsonica* (Hudson Bay) extend to Alaska.

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MACHEBOEUF, M. A., *see* Le Méhauté, P. J., *and others*. Glimrende resultater . . . *1935*. No. 52744.

53010. MACHOWSKI, JACEK. Arktyka. Warszawa, Wiedza powszechna, 1955. 226 p illus., ports., maps. Over 50 refs. Text in Polish. ***Title tr.:*** The Arctic.

Outlines for general readers the Arctic and arctic problems: main events of its exploration, struggle to discover Northeast and Northwest Passages, conquest of North Pole by Peary, Soviet drifting stations in the Arctic Basin, etc. Climate, geomorphology, flora and fauna are described; economic development and social conditions in the arctic areas are reviewed. Polish participants in the arctic activities (p. 63–68) are noted.

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53011. MACHOWSKI, JACEK. Ryszard Evelyn Byrd, 1888–1957. (Poznaj świat, May 1957. Rok 5, Nr. 5(54), p. 26–27, illus., port.) Text in Polish. ***Title tr.:*** Richard Evelyn Byrd, 1888–1957.

Obituary and brief biography.

Copy seen: DGS.

53012. McILWRAITH, THOMAS FORSYTH, 1899– . Bibliography of Canadian anthropology for 1955. (Canada. National Museum. Annual report for the fiscal year 1955–56, *pub*. 1957. Bulletin no. 147, p. 124–40.)

Lists with notes 178 publications mostly of 1955 or late 1954, and many dealing with Eskimos or Indians of subarctic Canada. For earlier issues: No. 46533.

Copy seen: DGS.

McINNES, BENNET, *see* Paton, J., *and* B. McInnes. Auroral activity 1954. *1955*. No. 53878.

McINNES, BENNET, *see* Paton, J., *and* B. McInnes. Auroral notes. *1954*. No. 53879.

53013. McINTOSH, JOHN. Annual review, underground mining, the trends in 1956: Western Canada. (Mining engineering, Feb. 1957. v. 9, no. 2, p. 196, table.)

Brief notes on active mines in Northwest Territories-Yukon, supported by table of 1955 production.

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53014. McINTYRE, A. D., *and* **J. H. STEELE.** Hydro-biological survey in Denmark Strait, May 1955. (International Council for the Study of the Sea. Annales biologiques, 1955, *pub*. 1957. v. 12, p. 40, illus.)

Outline of surface and bottom temperatures and salinities determined by the R/V *Scotia* in connection with halibut research. Phosphate, plankton, eggs and spent females of halibut are also noted.

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53015. McINTYRE, DONALD G., *and* **H. E. EDERSTROM.** Metabolic factors in the development of homeothermy in dogs. (American journal of physiology, Aug 1958. v. 194, no. 2, p. 293–96, illus.) 11 refs.

Study of dogs 1–25 days old exposed to 5°, 23° and 30° C. When 1–5 days old and exposed to 5° or 23° C., the animals showed a rise of 20–25% in metabolic rate and a fall in rectal temperature. Exposure to 5° C. at an age of 11–21 days caused a fall of about 75% in metabolic rate and rectal temperature fell several degrees in an hour. Finally, exposure to 5° at an age of 21 days, caused a 75% metabolic increase with a rise of only 1° in rectal temperature. Mature dogs under similar conditions show no drop in rectal temperature and a metabolic increase of 80%.

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McINTYRE, DONALD G., *see also* Ederstrom, H. E., *and* D. G. McIntyre. Metabolic rate . . . newborn dogs . . . *1957*. No. 50686.

MACIOCE, M., *see* Scalfati, P., *and* M. Macioce. Effetti dell' ipotermia . . . *1957*. No. 54590.

MACK, S. Z., *see* Serson, P. H., *and others*. A three-component airborne magnetometer. *1957*. No. 54708.

53016. MACKAY, JOHN ROSS, 1915– . The Anderson River map-area, N.W.T. Ottawa, Queen's Printer, 1958. 137 p. illus., 27 maps, graph. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Memoir 5.) 115 refs.

Contains detailed terrain analysis of the area 68°–70° N. 120°–128° W., but including the northern tip of Parry Peninsula and the Cape Bathurst area; based on author's field work and on air-photo interpretation; conditions are described as of 1955. Three physiographic provinces: the Canadian Shield, interior plains, and arctic coastal plains, impose contrasts in terrain and resources on this area. The geology, physiography, glaciation, post-glacial submergence, and geomorphic processes are described for the whole area; and the eight major physiographic regions are treated in turn. Climatic conditions are summarized; data were interpolated from records at Port Radium and Coppermine. Two general vegetation areas (with and without trees) are noted; four vegetation zones are recognizable: open woodland, woodland-tundra, scrub willow-ground birch, and tundra. Human geography is reviewed: settlement and exploitation by white men discussed as well as culture of the Eskimos and the Hare Indians. Population of the map area has averaged 75 since 1930, unevenly distributed, and that is about all the area can support under its present hunting-fishing-trapping economy. Numerous illus. of terrain features are included, also maps showing location and distribution of geologic, geographic, climatic, and botanical elements. ***Copy seen:*** DGS.

53017. MACKAY, JOHN ROSS, 1915– . Notes on small boat harbours, N.W.T. Ottawa. Queen's Printer, 1957. 12 p. 7 text maps. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical paper no. 13.)

Nine harbors between Tuktoyaktuk, on the Mackenzie delta, and Cape Bathurst are described from a geographical survey in summer 1955, of part of the Beaufort Sea coast. Information is to supplement the hydrographic charts of the area. From west to east, shelter may be found near Warren Point (69°43′ N. 132°31′ W.), Atkinson Point (69°57′ N. 131° 30′ W.), McKinley Bay (approx. 70° N. 131° W.), Cape Dalhousie (70°15′ N. 129°40′ W.), Nicholson Peninsula (69°55′ N. 128°55′ W.), Harrowby Bay (70°15′ N. 127°40′ W.), and three anchorages near Baillie Islands-Cape Bathurst (70°31′ N. 128°10′ W.).

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53018. MACKAY, JOHN ROSS, 1915– . Structural features formed by glacier ice at Nicholson Peninsula and Herschel Island, N.W.T., Canada. (Association of American Geographers. Annals, June 1957. v. 47, no. 2, p. 168–69.)

Abstract of paper presented at 53rd Annual Meeting of the Association, Apr. 1–4, 1957, Cincinnati, Ohio. Nicholson Peninsula (69°54′ N. 129° W.) and Herschel Island differ from the adjacent coastal plain in being considerably higher and having deformed sediments; probably caused by pressure of glacier ice against topographic obstructions or by drag effect of the ice. Slight evidence suggests sediments were unfrozen at time of deformation. ***Copy seen:*** DGS.

53019. MACKAY, JOHN ROSS, 1915– . A subsurface organic layer associated with permafrost in the Western Arctic. Ottawa, Queen's Printer, 1958. 12 p. illus., 3 text maps, 2 diagrs. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical paper no. 18.) 19 refs.

Contains results of study of a discontinuous subsurface organic layer of varying thickness, lying close to the permafrost surface in extensive areas. Field work was carried out in summers of 1955-1957, (in 1956 at the Engigsteiak archeological site, Firth River, Yukon Territory). Distribution of organic layers is widespread in the Canadian Western Arctic. Most of the organic material is partly decomposed and dark gray in color; the organic layer is usually located at the bottom of the active layer, at the top of the permafrost zone, or in both. Some layers are estimated to be thousands of years old. Three theories of origin are considered: marine burial, convective circulation, and progressive burial (favored by the author) with slow development, giving a record of former climates and (in inhabited areas) archeological evidence. Maps and diagrams illustrate an example studied near King Point, Yukon Territory.

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MACKAY, JOHN ROSS, 1915– . *see also* Brochu, M., *and* J. R. Mackay. Les lacs . . . de la Baie de Liverpool . . . *1957*. No. 49931.

McKEEVER, STURGIS, *see* Harkema, R., *and others*. *Trichobilharzia alaskensis*, a new . . . schistosome . . . Alaska. *1957*. No. 51589.

53020. MACKENZIE, KENNETH KENT, 1877–1934. *Aira spicata* L. (Rhodora, Oct. 1929. v. 31, no. 370, p. 194–95.)

Deals with the taxonomic status and synonymy of *A. spicata*, a name applied by Linnaeus to a plant (*Aira* N. 7) from the mountains of Lapland. The later combination *Trisetum spicatum* (L.) Richter is found to be invalid.

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53021. MacKEVETT, E. M. Sodium-rich granite from the southern part of Prince of Wales Island, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1834.)

Abstracts paper presented at the Society meeting in Los Angeles, Apr. 19–20. Describes composition of granite outcrops over an area of about three sq. mi.

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53022. MACKWORTH, NORMAN HUMPHREY. Cold acclimatisation and finger numbness; field and laboratory studies. Report prepared for the Climatic Efficiency Sub-committee of the R.N.P.R.C. London?, 1953. 26 p. plates, diagrs. (Great Britain. Medical Research Council. Royal Naval Personnel Research Committee.)

Field studies on the numbing effects of cold were carried out at Fort Churchill, Mar. 1949 on a test group of 30 men, aged 18–32, half completing their first winter, half with two winters in arctic conditions. The tests consisted of two series of experiments: a tactile, two-point discrimination task (the V test), and a vibration threshold method. In addition, the results obtained by the two methods were compared and assessed. The laboratory (cold room) studies at Cambridge, Eng., were used to "develop and extend the meaning" of the field results. With slight winds (4–6 mi./hr.), there was a significant difference in numbing, and performance, between men spending most of their time indoors and those active outdoors, indicating a degree of cold-acclimatization in the latter. Laboratory experiments gave additional support to this conclusion.

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53023. McLACHLAN, DAN, *Jr.* The symmetry of dendritic snow crystals. (National Academy of Sicences. Proceedings, Jan. 1957. v. 43, no. 1, p. 143–51, illus.) 23 refs.

A discussion of the causes of shapes and symmetry observed in snow crystals, with implications to dendritic growth and branching in general. The coordinated growth among the six branches of a snow crystal is attributed to standing waves of thermal and acoustical type within it. The water molecules forming the crystal are greatly influenced in their arrangef ment by the frequency and amplitude o vibration at the given point of the crystal.

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53024. MACLAGAN, JENNIFER, *and* **E. ZAIMIS.** The effect of muscle temperature on twitch and tetanus in the cat. (Journal of physiology, Aug. 1957. v. 137, no. 3, p. 89P—90P, illus.) 2 refs.

As muscle temperature fell, the rate of development of tension declined, twitch tension decreased and the duration of twitch extended. These changes were reversible. Denervation did not modify the effects of cooling. Cooling also decreased frequency of stimulation necessary to produce tetanic fusion.

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53025. McLAREN, DIGBY JOHNS, 1919– . Devonian of southwestern Ellesmere Island, Canada. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1612–13.)

Contains abstract of a paper presented at the Society meeting in St. Louis, Nov 6–8, 1958. Two studied sections are described, including fossil finds.

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53026. McLAREN, I. A. The biology of the ringed seal, *Phoca hispida* Schreber, in the Eastern Canadian Arctic. Ottawa, 1958. 7, 97 p. illus., tables, maps. (Canada. Fisheries Research Board. Bulletin no. 118.) 52 refs.

A study of this animal, particularly off southwest Baffin Island and in northern Foxe Basin, with emphasis on growth, reproduction and distribution. These seals grow from 65 cm. to about 135 cm. in length. Both sexes mature in the seventh year. Duration of rut, ovulation, implantation, gestation, parturition are dealt with and the influence of food and geographic latitude on size is analyzed. Food and food preferences, and fasting, are described, as introductory to the study. Moulting, migration and distribution, morphometry, etc., are also discussed. Study was made intermittently between 1947 and 1955 partly from the *Calanus*.

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53027. MacLELLAN, J. A. Milling practices at Lynn Lake, Man., Sherritt

Gordon Mines Limited. (Precambrian, Mar. 1957. v. 30, no. 3, p. 11–13, diagr., table.)

Crushing plant and concentrator was winter-freighted from Sherridon 150 mi. north to Lynn Lake (56°51′ N. 101°03′ W.). The deposits contain nickel-copper-cobalt ore, occurring in basic intrusive rocks either as massive sulfides, disseminated sulfides, or as stringers of sulfides in the fractured host rock. Most troublesome gangue minerals are talc and actinolite. Crushing (coarse underground, fine at surface), grinding, flotation, separation, cleaning of concentrate and impounding of tailings are described.

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MacLEOD, GORDON K., *see* Depocas, F., *and others.* Studies on glucose metabolism . . . *1957.* No. 50511.

MacLEOD, P., *see* Mamo, H., *and others.* L'influence des variations de température . . . *1957.* No. 53096.

McNAIR, ANDREW HAMILTON, 1909– , *see* Fortier, Y. O., *and others.* Geologiîa . . . neftenosnosti Kanadskogo arkticheskogo arkhipelaga. *1958.* No. 50954.

53028. McNARY, WILLIAM F., *Jr.* Progressive cytological changes in the hypophysis associated with endocrine interaction following exposure to cold. (Anatomical record, June 1957. v. 128, no. 2, p. 233–50, illus., tables.) 19 refs.

Account of experiments with rats exposed to an environment of 6° to 10° C. Exposure for 1–10 hrs. produced an increase in the number of phospholipid-producing cells in the anterior hypophysis. Long exposure (1–61 days) produced changes in the hypophysis indicative of increased thyrotrophin secretion; after 30 days the thyrotrophs showed a cytological evidence of cold-adaptation while the phospholipid cells remained augmented throughout the whole period of exposure. Adrenalectomy, alone or combined with cold stress or cortisone, epinephrine, demedullation of adrenals, etc., were also studied as to their effects upon hypophyseal cytology.

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53029. MACNEIL, FRANCIS STEARNS, 1909– . Cenozoic megafossils of Northern Alaska. Washington, D.C., U.S. Govt. Print. Off., 1957. p. 99–126, text map, 7 plates, 3 tables. (U.S. Geological Survey. Professional paper 294–C.) 55 refs.

Contains study of marine invertebrates obtained from later Tertiary and Quaternary beds on the arctic coastal plain: Tertiary fossils obtained from near Carter Creek (approx. 70° N. 145° W.); consisted of gastropods, pelecypods and a few scaphopods, brachiopods, cirripeds and worms. From the Quaternary Gubik formation, fossils were obtained in four localities on the arctic coastal plain: gastropods and pelecypods, and a few cirripeds and worms. Each species is described; most are compared with other species elsewhere; distribution is summarized in tables. Close relationship is noted with corresponding North Atlantic and European Tertiary fossils, indicating possible entry of Atlantic elements into the polar sea at that time. The presence of several non-synchronous and isolated zones of near shore facies in the Quaternary formation indicates a period of oscillating shore lines.

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53030. MacNEISH, RICHARD STOCKTON, 1918– . Archaeological investigations in the Arctic and subarctic, 1957. (Arctic, 1957. v. 10, no. 3, p. 189–90.)

Summarizes work and significant findings in northern Canada and Alaska during summer 1957. Four aboriginal sites were discovered in the Lake Hazen-Ruggles River region of Ellesmere Island and investigation of these sites, on the hypothetical migration route from the American continent to Greenland, is planned by the National Museum of Canada for the 1958 field season. J. Meldgaard resumed his excavations (cf. No. 41349) at Alarnerk, Melville Peninsula, concentrating on the site's early pre-Dorset remains dated approx. 3,400 years ago by Carbon 14; the artifacts show close affinities to Alaska's Cape Denbigh Flint Complex and Greenland's Sarqaq culture; toggle-head harpoons earlier than hitherto known were found; no transition elements into Dorset appeared among the pre-Dorset remains. The excavations by W. E. Taylor of Dorset sites on Payne Lake and Payne River, northern Ungava Peninsula; author's discovery of 97 sites (including 28 micro-blade) in southern Yukon Territory; I. Skarland's survey of "Yuma" projectile sites in the interior of Alaska; and G. Lowther's discovery

of 14 sites in the Old Crow Flats in Yukon Territory are noted.

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MacNEISH, RICHARD STOCKTON, 1918– , *see also* Harp, E. Arctic. *1957.* No. 51594.

MacNEISH, RICHARD STOCKTON, 1918– , *see also* Harp, E. Arctic. *1958.* No. 51597.

McNIECE, K. J., *see* Creek, D. W., *and others.* Hypervitaminosis A, a toxic reaction. *1958.* No. 50376.

53031. McNIVIN, J. G. Experiences of a northern pioneer. (Western miner and oil review, Nov. 1958. v. 31, no. 11, p. 35–38, illus.)

Recounts experiences as manager of a gold mine in Yellowknife from 1938, and as participant in municipal and territorial political activities.

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53032. MACOUN, JOHN, 1831–1920. Catalogue of Canadian plants. Montreal, 1883–1901. 3 v.: 623; 428; 295, 318, xix p. (Geological and Natural History Survey of Canada.)

Lists flowering and cryptogamous plants, with scientific and sometimes vernacular names, synonyms, variations, notes on habitat and distribution, including Alaska and Greenland as well as Canada. The catalog is presented in seven parts, viz: Polypetalae, Gamopetalae, and Apetalae in v. 1; Endogens, Acrogens in v. 2; Musci (by J. Macoun and N. C. Kindberg), Lichenes and Hepaticae in v. 3. Macoun, a naturalist, was attached to the Geological Survey of Canada, 1882–1920.

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53033. MACOUN, JOHN, 1831–1920. Contribution to bryology of Canada. (Torrey Botanical Club. Bulletin, Apr. 1889. v. 16, no. 4, p. 91–98.)

Describes 13 new species of mosses and liverworts preliminary to publication in No. 55032; together with a few old species. *Bryum* (*Rhodobryum*) *ontariense* n. sp., hitherto confounded with *Bryum roseum* and common throughout Ontario, is included. ***Copy seen:*** DLC.

53034. McPHEE, DUNCAN S. Preliminary report on Eric Lake area, Saguenay electoral district. Quebec, 1958. 5 p. fold. map. (Quebec. Dept. of Mines. Geological Surveys Branch. Preliminary report, no 369.) 5 refs.

Maps (1 in.:1 mi) and outlines the geology of this 320 sq. mi. area (51°45′–52°10′ N. 65°35′–50′ W.) its northern boundary at Mile 154 on the Quebec North Shore and Labrador Railway. The consolidated rocks, all of Precambrian age consist of metasedimentary gneisses, granite gneisses, gneissic granite, gabbro, diorite and various minor dykes. Bands of paragneiss form the main structural unit; the variety of differences within them appears to be due to original compositional differences in the sedimentary beds. Structural trend of the gneisses is northeast, with asymmetrical and cross folds producing a generally complex structure, jointing prominent in some. Gabbro intrusives in the north cut across the trend of the gneisses. No concentration of economic minerals was found within the map-area.

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53035. MacPHERSON, ANDREW H. Arviligjuarmiut names for birds and mammals. (Arctic circular, 1958. v. 11, no. 2, p. 30–33.)

Lists with their English equivalents the names used by natives of Pelly Bay for 41 birds and 21 mammals.

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53036. MacPHERSON, ANDREW H. Ornithological research at Pelly Bay in the summer of 1956. (Arctic circular, Aug. 1958. v. 11, no. 1, p. 11–13.)

Describes experiences during field studies on the Canadian arctic coast (approx. 68°53′ N. 89°51′ W.) on the relationships of *Larus* gulls. ***Copy seen:*** CaMAI.

MacPHERSON, ANDREW H., *see* Manning, T. H., *and* A. H. MacPherson. The mammals of Banks Island. *1958.* No. 53109.

53037. MacPHERSON, BILL. Miners of the permafrost. (Imperial oil review, Apr. 1957. v. 41, no. 2, p. 18–21, illus.)

Discusses permafrost and supply problems at the North Rankin nickel mines on the northwest coast of Hudson Bay. The entire 300 ft. mine shaft is in permafrost, hence the mine cannot be heated above 20° F. and there is hazard of condensation from the hot air used in underground drilling. Supplies must be brought in by air or sea; diesel fuel was delivered in 1956 by the *Firbranch*, first oil tanker to navigate into Hudson Bay. It is expected that 250 tons of ore will be milled daily and reduced to 55 tons of concentrate. ***Copy seen:*** DGS.

53038. MacPHERSON, BILL. Snowball express to Moak Lake. (Imperial oil review, Feb. 1958. v. 42, no. 1, p. 28–32, illus., map.)

Describes haul of 38,000 tons of goods in northern Manitoba, during winter 1956–57, from Thicket Portage (55°20′ N. 97°42′ W. on the Hudson Bay Railway) to Thompson, approx. 25 mi. distant, and to Moak Lake, 20 mi. beyond Thompson. The operation, using tractor-drawn sleigh-trains, was carried out for International Nickel Co. of Canada by Patricia Transportation Co. Ltd. Although −50° F. temperatures caused tractor breakdowns from metal fatigue, crystallization of snow, and obliteration of stencil ink on labels, the job was completed in three months on a 24-hr.-day, 7-day-week schedule. Construction at the mine sites, plans for the town of Thompson, rail connection with the Hudson Bay Railway and between the Thompson and Moak Lake sites, and a power plant development at Grand Rapids on the Nelson River are noted. Production is expected to begin in 1960 and to reach 75 million lbs. of nickel annually.

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MACPHERSON, R. K., *see* Edholm, O. G., *and others.* Cold injury. *1957.* No. 50688.

McQUAIN, R. H., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

McTAGGART, KENNETH CUNNINGHAM, 1919– , *see* Green, L. H., *and* K. C. McTaggart. Structural studies . . . *1958.* No. 51344.

MACY, P., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53039. MADSEN, CHARLES, 1884– , *and* **J. S. DOUGLAS.** Arctic trader. New York, Dodd, Mead, 1956. 273 p. plates.

Account of Madsen's life from about 1900, first as a trader along the Siberian coast and in the Nome area, later as a hunter of polar bear and walrus on the Alaskan and Siberian coasts till about 1915. Customs of Chukchis and Eskimos are described in some detail. A trading expedition through the Northwest Passage initiated upon conversation with Roald Amundsen at Nome in 1906, was abandoned due to severe ice conditions. After several years of storekeeping in Kodiak (till 1929), Madsen became a professional guide. Photographs (31) of native life and sea hunting.

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53040. MADSÉN, LARS BERTIL, 1904– . Helikopterresan, ett reportage från fjällvärldens väglösa bebyggelse. LTs förlag, 1955. 263 p. illus., ports, maps. Text in Swedish. ***Title tr.:*** The helicopter journey, an account of the roadless settlements in the mountain world.

Recounts events and impressions of a journey to north Sweden for the Swedish broadcasting service in the autumn of 1954. Life in this region is described, difficulties arising from lack of roads are stressed. The last part of the journey covered areas above the Arctic Circle, as far north as Nikkaluokta (approx. 67°50′ N. 19° E.). ***Copy seen:*** SPRI.

MADSEN, SIGURD OPSTAD, *see* Lunde, G., *and others.* Jodinnholdet i norsk fisk . . . *1928.* No. 52954.

53041. MAEHLUM, BERNT. The diurnal- and sunspot-cycle variation of the layers E, F^1 and F^2 of the ionosphere as observed in Norway during the period 1932–1956. Oslo, H. Aschehoug, Feb. 1958. 14 p. tables, diagrs. (Norske videnskaps-akademi i Oslo. Geofysiske publikasjoner, v. 20, no. 6.) 6 refs.

Discusses diurnal variation of the critical frequencies of the *E*- and F^1-layers, and seasonal and sunspot-cycle variations of the critical frequencies of the *E*-, F^1-, and F^2-layers and the transmission factor ($M3000$)-F^2, based on observations at Kjeller (near Oslo), Tromsø (69.7° N. 18.9° E.), and (partly) Longyearbyen (78°10′ N. 15°30′ E.), Vestspitsbergen. Linear correlation was obtained between the critical frequencies and the 13-monthly running mean of the sunspot number, *W*. The sensitivity of the critical frequency to sunspot activity for the *E*- and F^1-layers showed a clear maximum in summer; noon values of the sensitivity of the F^2-layer showed a minimum in summer. Diurnal variations of $f_0 F^1$ were in accordance with a $\cos^n \chi$-law; n varying with season and latitude. Good correlation was found between ($M3000$)-F^2 and *W*. ***Copy seen:*** DGS.

MÄKINEN, YRJO, *see* Kallio, P., *and* Y. Mäkinen. Untersuchungen . . . Flora von Utsjoki . . . *1957.* No. 52138.

53042. MAGEE, WAYLAND W. We buried our cans all over Alaska. (Mineralogist, Jan. 1957. v. 25, no. 1, p. 3–7, illus.)

Recounts experiences of a uranium-prospecting trip; describes driving on the Alaska Highway from Dawson Creek to Fairbanks in a caravan of light trucks. Includes advice for motorists and tourists on tires, gas and oil, prices, fishing, clothing, etc. ***Copy seen:*** DGS.

53043. MAGGI, G. C., *and* **S. NOLI.** Comportamento del quadro elettrolitico del sangue arterioso e venoso coronarico nell' ipotermia artificiale. (Archivio di fisiologia, 1957. v. 57, fasc. 4, p. 359–64, illus. tables.) 4 refs. Text in Italian. Summary in English. ***Title tr.:*** Condition of the electrolyte level of the coronary arterial and venous blood during artificial hypothermia.

Plasma electrolytes (Na^+, K^+, Ca^{++}, Mg^{++}) in the blood of dogs made deeply hypothermic (below 17.5° C.) showed no statistically different levels from those in normothermic controls. No differences were noted even when ventricular fibrillation set in. ***Copy seen:*** DNLM.

53044. MAGGI, G. C., *and others.* Modificazioni dell' equilibrio acido-base durante la ipotermia artificiale del cane. (Archivio di fisiologia, 1957. v. 57, fasc. 4, p. 365–70, illus. tables.) 16 refs. Text in Italian. Summary in English. *Other authors:* R. B. Bevacqua *and* S. Noli. ***Title tr.:*** Modifications in the acid-base equilibrium during artificial hypothermia of the dog.

Report on experiments with dogs made hypothermic to 30° and 20° C. During respiratory depression a "cold acidosis" was noted. It was reduced by hyperventilation. ***Copy seen:*** DNLM.

MAGGI, G. C., *see also* Fumagalli, B., *and others.* Comportamento del cuore isolato . . . *1957.* No. 51027.

MAGGI, G. C., *see also* Noli, S., *and others.* Comportamento del quadro elettrolitico . . . *1957.* No. 53620.

53045. MAGNUS, OSCAR. Trykkluftråk. (Teknisk ukeblad, Apr. 11, 1957. årg. 104, nr. 15, p. 299–301, illus., diagr.) Text in Norwegian. ***Title tr.:*** Open water with compressed air.

Describes experiments to keep a 200-meter ferry-crossing clear of ice by use of a perforated 1½ in. plastic hose laid across the bottom of the bay and connected to a compressor on shore. Deepest point was 23 m. from the surface; air pressure averaging four atm. melted a channel 10–15 m. wide in 20 cm. ice in 36 hrs. A universal formula for computing the air consumption is presented. ***Copy seen:*** DLC.

53046. MAGNUSSON, ADOLF HUGO, 1885– . Some interesting lichens from Norway. (Nytt magasin for botanikk, 1957. v. 5, p. 17–21.)

Contains notes on eight lichens collected in the Sognefjord region, one species and a variety described as new. Range extensions of some arctic species are included, among them *Lecidea leucothallina* formerly recorded in Nordland and Finnmark, *L. Paanaënsis* known from Kuusamo, Finland, and *Caloplaca epithallina* described from East Greenland. ***Copy seen:*** DA.

53047. MAGNUSSON, ADOLF HUGO 1885– . Studies in the Rivulosa-group of the genus *Lecidea.* Göteborg, Elander, 1925. 50 p. (Göteborgs k. vetenskaps- och vitterhets-samhälle. Handlingar, 4. följden, bd. 29, no. 4.)

Contains general information on this group of lichens, viz.: morphology and anatomy, taxonomy, distribution and habitat. A key is given, and descriptions of 16 species, one of them new, several occurring in northern Scandinavia or Alaska. Notes are appended on additional seven forms possibly belonging to this group. ***Copy seen:*** DLC.

53048. MAGNÚSSON, JAKOB. Icelandic redfish investigations in 1955. (International Council for the Study of the Sea. Annales biologiques 1955, *pub.* 1957. v.12, p. 49–52, illus., map.) ref.

Account of investigation of the East Greenland banks (one cruise) and of the fishing grounds off the north, northeast and east coasts of Iceland (two cruises). In the first instance, length distribution of redfish, and some cod, saithe, etc., was studied. In the second area, catches of redfish were poor and their evaluation below expectation. ***Copy seen:*** DI.

MAGNÚSSON, JAKOB, *see also* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

53049. MAGNUSSON, NILS HARALD, 1890– . Den fasta grunden. (Svenska turistföreningen. Årsskrift, 1957, p.

24–40, 8 illus.) Text in Swedish. ***Title tr.:*** Bedrock.

Includes economic data on iron ore, 5% of the world resources and 7% of the production being Swedish, with 25 million tons exported in 1952. Sweden's iron reserves are 90% in Norrland, largely in Kiirunavaara and Gällivare. Mining there, originally a surface operation, in an ore mass with 325,000 m.^{2} surface area, is now becoming an underground operation. ***Copy seen:*** DGS.

53050. MAGNUSSON, NILS HARALD, 1890– . Den svenska urbergsforskningen under de senaste tjugofem åren, en återblick. (Geologiska föreningen, Stockholm. Förhandlingar, 1946. bd. 68, häfte 2, p. 171–200.) Refs. in text. Text in Swedish. ***Title tr.:*** The Swedish primeval rock investigations of the last twenty-five years, a review.

Swedish contributions to problems concerning older rocks in mineralogy, petrology, stratigraphy, and orogeny. Much of the work has been done in the mountain tracts of the northern region where these studies have accompanied geologic mapping. Kiruna, Gällivare, Pajala, and the northern Finland areas are discussed in reviews of reports by Axel Gavelin, P. A. Geijer, Erland Grip, Bror Asklund, and others.

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MAGNUSSON, NILS HARALD, 1890– , *see also* Geijer, P. A., *and* N. H. Magnusson. The iron ores of Sweden. *1952.* No. 51113.

53051. MAGOMEDOV, A. D. Ispol'zovat' fitotekhnicheskie metody regulirovaniîa vodno-teplovogo rezhima zemlîanogo polotna. (Avtomobil'nye dorogi, Aug. 1957. god 20, no. 8 (178), p. 19.) Text in Russian. ***Title tr.:*** Phytotechnical methods of regulation of hydrothermal conditions in the road beds.

Road heaving due to ground freezing may be prevented by the thermal effects of certain vegetation planted along the roadside ditches (lupine, Lombardy or black or balsam poplar). Excessive water accumulated in the ground beneath the road bed, is removed: absorbed by the roots of this vegetation due to their capillarity. ***Copy seen:*** DLC.

53052. MAGUIRE, BASSETT, 1904– . *Arenaria rossii* and some of its relatives in America. (Rhodora, Feb. 1958. v. 60, no. 710, p. 44–53.)

Contains a key to the *Arenaria rossii-A. stricta* complexes and related herbs in North America; descriptions of *A. rossii* ssp. *rossii* native to Greenland, Baffin, Ellesmere, and other Canadian islands, *A. rossii* subsp. *elegans,* in coastal and montane Alaska and Yukon of the Yukon River drainage, and *A. rossii* subsp. *columbiana* var. *apetala* occurring in Yukon Territory. ***Copy seen:*** DLC.

53053. MAGUIRE, BASSETT, 1904– *Arnica* in Alaska and Yukon. (Madroño, Jan. 1942. v. 6, no. 5, p. 153–55.)

Lists 17 new entities, new names and new combinations, with principal synonymy in the treatment of the genus *Arnica* prepared by the author for Dr. Hultén's *Flora* (No. 7540, 22739). *A. louiseana* var. *pilosa n.* var., *A. chamissonis* var. *interior* n. var., *A. amplexifolia* subsp. *prima* n. subsp. and *A. lessingii* subsp. *norbergii* Hultén and Maguire are included.

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53054. MAGUIRE, BASSETT, 1904– . Studies in the Caryophyllaceae, III; a synopsis of the North American species of *Arenaria,* sect. *Eremogone* Fenzl. (Torrey Botanical Club. Bulletin, Jan. 1947. v. 74, no. 1, p. 38–56, diagr.) 2 refs.

Contains a taxonomic annotated list of 13 species and about 30 subspecies and varieties of *Arenaria* (sandwort), of which three subspecies and eleven varieties are described as new, and some new combinations established. Keys, synonyms, descriptions, type localities, data on distribution and lists of specimens are provided. One new subspecies of this herb, *A. capillaris* ssp. *capillaris* n. ssp., is found in Alaska and Northwest Territories and another, *A. capillaris* ssp. *americana* n. ssp., "possibly in Alaska." Pts. 1 and 2 of this paper do not include arctic species.

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MAHALEY, STEPHEN, *Jr., see* Woodhall, B., *and others.* The . . . effects of localized cerebral hypothermia. *1958.* No. 56110.

MAHLANDT, BILL G., *see* Mazur, P., *and others.* Survival of *Pasteurella tularensis* . . . cooling and warming . . . *1957.* No. 53196.

MAHONEY, EARLE BARNES, 1909– , *see* DeWeese, J. A., *and others.* Myocardial metabolism . . . hypothermia . . . *1958.* No. 50537.

MAHONEY, EARLE BARNES, 1909– , *see* Mavor, G. E., ***and others.*** Resuscitation . . . hypothermic heart . . . *1957.* No. 53191.

53055. MAILLARD, CLAUDE. Groenland-sud. (Alpine journal, May 1958 v. 63, no. 296, p. 18–26, 4 illus., text map.) Text in French. ***Title tr.:*** South Greenland.

Contains short account by leader of the Expédition française au Groënland Sud, 1956, of the first climbing expedition in a mountain massif near the head of Ilua Fjord (approx. 61° N. 45′ W.) in Aug. 1956. With the author, the party of 11 alpinists explored the little-known region less than 100 miles northwest of Kap Farvel, observing the geologic structure, climate, glaciation, vegetation, and climbing 16 peaks noted on map. The party also added details to existing maps of the region. Several interesting mountains along the east coast, and their ascent are mentioned.

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53056. MAINS, EDWIN BUTTERWORTH, 1890– . New and unusual species of Uredinales. (Torrey Botanical Club. Bulletin, Dec. 1, 1939. v. 66, no. 9, p. 617–21.)

Contains Latin descriptions of five new rusts, among them two from Alaska: *Puccinia nephrophyllidii* n. sp. on *Nephrophyllidium crista-galli*, Ketchikan, Aug. 1938, and *Pucciniastrum alaskanum* n. sp., collected on *Gentiana glauca*, in Mt. McKinley National Park, July 1933.

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MAJ, JERZY, *see* Oszacki, J., ***and others.*** Objętość wątroby . . . *1957.* No. 53809.

MAJ, JERZY, *see* Oszacki, J., ***and others.*** Wpływ krwotoku . . . *1957.* No. 53810.

MAKARENKO, F. A., *see* Fomin, V. M., ***and others.*** O razvitii . . . termal'nye vody . . . *1958.* No. 50943.

53057. MAKAROV, E. V. Stroitel'stvo kamennykh zdaniĭ na torfi͡anom bolote, zasypannom proizvodstvennymi otkhodami. (Stroitel'nai͡a promyshlennost', May 1958 god. 36, no. 5, p. 23–25, illus.) Text in Russian. ***Title tr.:*** Construction of brick buildings on peat bog filled with industrial waste.

Ground stability of a peat bog, with fill of rock waste from sulfuric acid production over a thirty-year period is studied for its resistance to load (industrial buildings and stores). Geological structure of the land, arrangement and cross section of the buildings and their details are discussed and figured. Foundations with proper structural reinforcement (described) have stood satisfactorily for many years; deformations were observed only in the buildings with insufficient reinforcement. ***Copy seen:*** DLC.

MAKAROV, G. N., *see* Poli͡anichko, I͡A. I., ***and others.*** I͡Ubileĭnai͡a . . . sessii͡a Karel'skogo . . . *1958.* No. 54055.

53058. MAKAROV, GAVRIIL GEORGIEVICH. Obrazovanie I͡Akutskoĭ avtonomnoĭ sovetskoĭ sot͡sialisticheskoĭ respubliki. I͡Akutsk, I͡Akutskoe knizhnoe izdatel'stvo, 1957. 210 p. ports. Approx. 100 refs. Text in Russian. ***Title tr.:*** The formation of the Yakut Autonomous Soviet Socialist Republic.

Chronicle of the years 1917 to 1922, based on national and local party archives and contemporary newspapers, stressing role of Russian revolutionists and political exiles. Statistical data on population, education, health, etc. are given, economic and social conditions sketched. The social-democratic (Feb. 1917) and socialist (1917–1918) revolutions, Kolchak's counter-revolution, reinstatement of Soviet power (1919–1920), the fight for autonomy (1920–21) and formation of Yakut A.S.S.R. (1921–22) are recounted. Local and regional elections and the First All-Yakut Constituent Congress (1922) are described. The economic and cultural achievements of the Soviet era are illustrated by selected 1955 statistics. Texts of decrees, etc., bibliography and an index of names are included. ***Copy seen:*** DLC.

MAKAROV, NIKOLAĬ NIKOLAEVICH, *see* Zri͡akovskiĭ, M. S., *and* N. N. Makarov. Taĭna i͡akutskikh almazov. *1958.* No. 52649.

53059. MAKAROV, P. Russkiĭ i͡azyk v uchebnykh planakh nat͡sional'nykh shkol RSFSR. (Russkiĭ i͡azyk v nat͡sional'noĭ shkole, July–Aug. 1958. god. 2, no. 4, p. 18–22.) Text in Russian. ***Title tr.:*** Russian in the scholastic plans of nationalities' schools of R.S.F.S.R.

Compares the 1938, 1951–52 and current Russian language instruction in elementary and high schools for Yakutia, the far North (Chukchi, Koryak, Eskimo, Gold, Tungus, Lamut, Ostyak, Vogul, Samoyed), etc. Increasing stress is laid

on study of Russian, taught now through all grades. ***Copy seen:*** DLC.

53060. MAKAROV, P. Vyshe uroven' raboty nerusskikh shkol. (Narodnoe obrazovanie, Feb. 1955. no. 2, p. 8–20, illus.) Text in Russian. ***Title tr.:*** Raise the level of studies in non-Russian schools.

Criticism by the deputy chief of the Main Administration of Schools of the Ministry of Education of R.S.F.S.R. of the teaching methods and educational program of non-Russian schools, including those of northern minorities. Teaching is conducted in the native language through the seventh grade (end of junior-high school) in Yakut and Zyryan schools; to the second grade in Nenets (Samoyed), Ostyak, Vogul, Evenki (Tungus), Lamut, Gold, Koryak, Chukchi and Eskimo schools. Though tuition of Russian is started in the first grade and the curricular load is 13–15% higher than in Russian schools, the students' progress is slower and the average educational standard lower. Unsatisfactory results in Russian and native languages is ascribed to poorly compiled textbooks and inadequate teaching methods. The entire program for non-Russian schools, training of qualified teachers, etc., needs to be revised.
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MAKAROV, STEPAN OSIPOVICH, 1848–1904, *see* Ottosen, P. H. The *Vitiaz* . . . Okhotsk . . . *1957*. No. 53812.

53061. MAKAROV, V. V. K faune rakov-otshel'nikov, Paguridae, dal'nevostochnykh morei. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia morei SSSR, 1937. vyp. 23, p. 55–67, illus.) 19 refs. Text in Russian. Summary in German. ***Title tr.:*** The fauna of hermit-crabs, Paguridae, of the Far Eastern seas.

Account of 20 species from material collected since 1926 in the Chukchi, Bering, Okhotsk and Japanese Seas. Synonyms, morphology, size, occurrence and geographical distribution, are discussed. ***Copy seen:*** DLC.

53062. MAKAROV, V. V. Materialy po kolichestvennomu uchetu donnoĭ fauny severnoĭ chasti Beringova moria i Chukotskogo moria. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia morei SSSR, 1937. vyp. 25, p. 260–91, illus., tables, map.) 13 refs. Text in Russian. Summary in English. ***Title tr.:*** Materials to a quantitative estimate of the bottom fauna in the northern Bering Sea and in the Chukchi Sea.

Description of bottom animal associations found in these areas, and based on sampling at 84 stations. The amount of biomass (weight of living matter per $m.^3$ of water) is calculated both in average and for select animal groups. The northern Bering Sea was found to be the richer in bottom life, Chukchi Sea the poorer. ***Copy seen:*** DLC.

53063. MAKAROVA, L. A., *and others.* Pochvennoe raionirovanie. (*In:* Akademiia nauk SSSR. Komi filial. Pochvy Komi ASSR, 1958. p. 159–91, map, tables.) Text in Russian. *Other authors:* O. A. Polyntseva, D. M. Rubtsov, S. V. Beliaev *and* L. A. Verkholantseva. ***Title tr.:*** Regional division of soils.

Soils of Komi A.S.S.R. are considered in five districts and twelve soil regions. Characteristics of each area are given with data (in $km.^2$ also percentage) of each kind of soil in the specified districts. The following districts are dealt with: Ural mountain (with two soil regions), Ural foothills (one), Pechora lowlands (four), Timan district (two), and the Vychegda-Mezen' basins (three). Of most interest for arctic studies are the Pechora northern lowlands and the polar Ural where tundra soil predominates. Territorial expansion of various kinds of soils, their attributes, vegetation and partial utilization are outlined. Several state farms in the Komi far North (Lëk Vorkuta, Gornyak, Sivaya Maska) are mentioned. ***Copy seen:*** DGS.

MAKAROVA, L. A., *see also* Polyntseva, O. A., *and others.* Opisanie pochv. *1958*. No. 54069.

MAKAROVA, T. I., *see* Kleĭnenberg, S. E., *and* T. I. Makarova. Kitoboĭnyĭ promysel . . . *1955*. No. 52314.

53064. MAKEDON, IU. A. O raschete na prochnost' valov sudov ledovogo plavaniia. (Sudostroenie, Jan. 1957. god 23, no. 1, p. 14–18, graph, tables.) 5 refs. Text in Russian. ***Title tr.:*** Calculation of the durability of shafts on ships in ice navigation.

Theoretical approach to the calculation of the diameter of intermediate and propeller shafts for ice-breakers, with examples of calculations satisfactory and unsatisfactory. The *I. Stalin, Severnyĭ*

Polîûs, Don and *Volna* are exemplified; propeller shafts of the last two cracked three times. By proper selection of propulsion engine characteristics, the magnitude of the moment developed by the engine from sudden stops can be minimized and a reduction realized in the diameter of the engine rotor.

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53065. MAKEDONOV, A. V., *and* **N. I. RODNYĬ.** Sostav nizhnepermskikh osadochnykh format͡siĭ Pechorskogo kamennougol'nogo basseĭna. (Geokhimiîâ, 1957, no. 6, p. 538–52, tables.) 25 refs. Text in Russian. Summary in English. ***Title tr.:*** Composition of Lower Permian sedimentary formations of the Pechora coal basin.

Presents results of comprehensive chemical investigation of the composition of sedimentary formations, coal and coal cinders in the northeastern Pechora coal basin. Some 900 spectral and 600 chemical analyses were made, and 600 concretions and 200 coal cinders were analyzed. The average content of the most abundant chemical elements in the coal-bearing substrata is calculated, also the most important lithological components of these strata: sandstones, aleurolites, argillites, concretions, coal beds and coal ashes. These values are compared with each other and with the average content of elements in some other Permian formations.

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MAKEDONOV, A. V., *see also* Golubev, S. A., *and* A. V. Makedonov. Sovremennye predstavleniîâ o Pechorskom kamennougol'nom basseĭne . . . *1958.* No. 51260.

MAKHLAEV, L. V., *see* Pogrebit͡skiĭ, I͡U. E. Rezul'taty uvîâzochno-revizionnykh rabot . . . *1957.* No. 54031.

53066. MAKRIDIN, V. Samolety v tundre. (Okhota i okhotnich'e khozîâĭstvo, Feb. 1957. no. 2, p. 12–13, illus.) Text in Russian. ***Title tr.:*** Airplanes in the tundra.

Describes use of aircraft in protecting reindeer from wolves in the Nentsy (Samoyed) National District: 92 wolves and six wolverines were killed from airplanes in 1955, and 72 wolves in 1956; the number of predators is now considerably reduced and the total disappearance of wolves from this area is in prospect. ***Copy seen:*** DLC.

53067. MAKSIMOV, IGOR' VLADISLAVOVICH. Gidrologicheskie raboty v prolive Karskie Vorota letom 1932 i 1933 gg. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîâ moreĭ SSSR, 1936. vyp. 24, p. 185–221, illus., tables, map.) 14 refs. Text in Russian. Summary in German. ***Title tr.:*** Hydrological studies in the Kara Strait during the summers of 1932 and 1933.

A study of currents, tides and tidal currents, temperature and salinity in this strait between Vaygach and Novaya Zemlya. Conditions in all these aspects were highly complicated and irregular. Most currents are wind produced and swift, reaching 2.12 knots. Tidal currents are weak except in the southeastern part where they attain 2.45 knots. Salinity and temperature are affected by the Pechora discharge on one hand, and ocean water coming from the west, on the other; currents and tides further complicate these conditions.

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53068. MAKSIMOV, IGOR' VLADISLAVOVICH. K izucheniîû svobodnykh i vynuzhdennykh dvizheniĭ polîûsa Zemli. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 73–84, diagrs., graphs, tables.) 19 refs. Text in Russian. ***Title tr.:*** A study of the free and forced movements of the earth's pole.

Tabulates and diagrams computations of amplitudes and phases of the 14-month and 12-month free and forced elliptical movement of the axis pole, also its annual, semi-annual, and six-year movement, for the period 1892–1936. Climatic effects are briefly discussed.

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53069. MAKSIMOV, IGOR' VLADISLAVOVICH. Nutat͡sionnye îâvleniîâ v atmosfere vysokikh shirot zemli i ikh klimatoobrazuîûshchaîâ rol'. (Problemy Severa, 1958, vyp. 1, p. 97–115, diagrs., tables, maps.) 24 refs. Text in Russian. ***Title tr.:*** Nutation phenomena in the atmosphere of high latitudes and their role in the formation of climate.

The study of 14-month nutational fluctuations of the mean sea level caused by fluctuations of the instantaneous axis of the earth's rotation and producing the so-called "polar tide," suggested the possibility of similar phenomenon in atmosphere. Detailed analysis of atmospheric pressure, observed in 14-year periods of 1903–1916 by 194 stations and of 1922–35

by 182 stations, revealed the existence of 14-month fluctuations of atmospheric pressure with maximum amplitude of 0.64–0.94 mm. at 70° N., producing the standing wave of baric "polar tide." Data on latitudinal distribution of the phenomenon and its periodic fluctuations are given; features of the circumpolar baric wave and of its rotation are discussed in detail. Interrelation of the 14-month nutational and 12-month seasonal fluctuations of atmospheric pressure is analyzed and its effect on the climatic conditions in the polar regions indicated.
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MAKSIMOV, NIKOLAĬ IVANOVICH, *see* Voskoboĭnikov, M. G. Chukotka . . . *1957*. No. 55891.

53070. MALAGIN, ALEKSANDR PAVLOVICH. Magadanskiĭ ėkonomicheskiĭ raĭon. Magadan. Magadanskoe knizhnoe izd-vo, 1957. 119 p. illus., tables, fold. map. 8 refs. Text in Russian. ***Title tr.:*** The Magadan economic area.

Outlines economic progress and development of the mining industry during the Soviet period in the far northeast of Asia. This province, over 1,200,000 km.² in area, comprises Chukotka, Vrangel Island, the upper Kolyma and Indigirka basins and the northwestern coasts of Okhotsk Sea. Its geography and the economy of its 15 administrative districts (eight in the Chukotsk National District), their population and industrial centers are outlined (p. 11–26). Exploration of the area, gold, tin and coal discoveries, rise of the mining industry and improvement of its technical equipment are reviewed (p. 26–72). Factory and workshop, transportation and construction data are given (p. 72–83); reindeer, livestock and vegetable growing by collective and state farms (p. 83–96); fisheries and hunting, local light industry and food industry (p. 96–104) and development prospects (p. 104–117) complete the survey. Activities of the Main Administration of Construction in the Far North (Dal'stroĭ, founded in Nov. 1931, and transformed into the Magadan National Economic council in 1957) are noted, also those of organizations responsible for geological prospecting. Scarcity of population in this area is stressed: in 1941 it averaged only 31 per 1000 km.² in the 720,000 km.² Chukotsk National District. Fold. map 1:20 million shows boundaries of the province, main population centers, distribution of mining and industry. ***Copy seen:*** DLC.

53071. MALAISE, RENÉ EDMOND, 1892– . Oceanic bottom investigations and their bearings on geology. (Geologiska föreningen, Stockholm. Förhandlingar, 1957. bd. 79, häfte 2, no. 489, p. 195–224, 6 text maps, 7 diagrs.) 35 refs.

On the basis of ocean bottom investigations, changes in climate, ocean currents, and sea level, constriction and expansion of the earth's crust, and foundering of mid-Pacific and mid-Atlantic land masses are discussed. The origin of the glacial period in the Northern Hemisphere is related to restriction of warm water flow into the Arctic, and its termination to the breaking down of the land bridge between Greenland and Europe which permitted entrance of the Gulf Stream into the Arctic Basin. Zonal distribution of land plants around the North Pole is believed to have been constant since the Eocene, although floral characteristics changed with climate. The related effects on climatology, biogeography, archeology, and movements and migrations of peoples are noted.
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53072. MALANDIN, M. M. Novye dannye po stratigrafii i uglenosnosti Sangarskogo raĭona Lenskogo uglenosnogo basseĭna. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp 6, p. 42–58, fold. cross-section, diagr., tables.) 5 refs. Text in Russian. ***Title tr.:*** New data on the stratigraphy and coal-bearing capacity of the Sangar district in the Lena coal basin.

Two cross-sections are presented of the Sangar area (64°–64°30′ N. 126°–127° E.) coal-bearing deposits. Types of coal seams are examined and the chemical composition and petrographic characteristics of the coal are given. Field investigation was made by the author, and two lithologists, A. S. Zaporozhtseva and T. M. Pchelina, in 1954. The coal, due to specific carbon-forming material and richness in bitumen and tar, seems of value for the chemical industry. Stratigraphy of the coal stratum is also treated, and the flora and fauna characterized. ***Copy seen:*** DLC.

53073. MALAURIE, JEAN NOËL. Destin des rois de Thulé; perspectives offertes par l'intégration de l'Eskimo au

monde moderne. (Société royale de Geographie d'Anvers. Bulletin, 1956. t. 68, fasc. 1–4, p. 6–13.) Ref. Text in French. ***Title tr.:*** The fate of the kings of Thule: prospects suggested by the integration of the Eskimo into the modern world.

Discusses the problem of the ethnic survival of Eskimos (total: 52,000; Asia: 1,292; Alaska, 21,135; Canada; 7,700; Greenland: 22,000). Threatened by the industrial and military outposts of the white race, Eskimos may disappear or lose their racial purity (over one-third of Greenland's Eskimos are of mixed blood) unless they adapt themselves to the changing economic and social conditions of the Arctic and sub-Arctic. A parallel cultural evolution is mandatory to avoid the Eskimos' exploitation as unskilled labor. ***Copy seen:*** DLC.

53074. MALAURIE, JEAN NOËL. Die letzten Könige von Thule; ein Jahr allein unter den Polareskimos. Leipzig, F. A. Brockhaus, 1957. 335 p. illus., maps. 75 refs. Text in German. ***Title tr.:*** The last kings of Thule; a year alone among the polar Eskimos.

German edition of No. 41230, translated by Anneliese Dangel. A preface by J. Georgi stresses the ethnological and sociological value of the book.

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53075. MALAURIE, JEAN NOËL. Régions polaires. (Annales de géographie, July–Aug. 1957. année 66. no. 356, p. 379–82.) Approx. 30 refs. Text in French. ***Title tr.:*** Polar regions.

Brief notes on recent literature dealing with patterned ground, arctic research generally, results of Expéditions polaires françaises, morphological studies in northern Canada, snow and sea ice terminology. ***Copy seen:*** DGS.

53076. MALAURIE, JEAN NOËL. Richard E. Byrd. (Annales de géographie, Sept.–Oct. 1957. année 66. no. 357, p. 466–67.) 3 refs. Text in French.

Obituary. ***Copy seen:*** DGS.

MALAURIE, JEAN NOËL, *see also* Bibliographie géographique internationale. *1957, 1958.* No. 49713.

53077. MÁLEK, PROKOP, *and* **J. KOLC.** Reaktivita organismu vůči toxinům za šoku a hypotermie. (Rozhledy v chirurgii, 1957. v. 36, no. 4, p. 209–213, illus.) 11 refs. Text in Czech. Summary in English. ***Title tr.:*** Reactivity of the organism to toxins during shock and hypothermia.

Report on experiments with rabbits made hypothermic to 30° and 23° C. rectal temperature. Hypothermia was found to increase resistance to toxins. It also was found to lessen increased sensitivity when applied during shock.

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MALHOTRA, C. L., *see* Anand, B. K., *and others.* Effect of hypothermia . . . *1958.* No. 49282.

53078. MALINOVSKIĬ, V. ſŪ. K voprosu o proiskhozhdenii rel'efa basseĭna Nizhneĭ Tunguski. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Bûlleten', 1958, no. 22, p. 91–104, maps.) 5 refs. Text in Russian. ***Title tr.:*** On the question of the origin of relief in the Nizhnyaya Tunguska River basin.

Reviews main tectonic structures and recent tectonic movements and outlines morphologic forms of the present relief development in this basin from the river's source to its tributary, the Ilimpeya (approx. 58°–63°31′ N. 106°–110° E.). The geologic-tectonic structures which predominate in the region are described and summarized in maps. According to the forms of relief, three geomorphic provinces are distinguished, divided in sections and characterized. Present relief forms are closely related to the previous tectonic structures. ***Copy seen:*** DGS.

53079. MALLING, HEINRICH. The chromosome number of *Honckenya peploides* (L.) Ehrh., with a note on its mode of sex determination. (Hereditas, 1957. bd. 43, häfte 3–4, p. 517–24, 2 illus., table.) 22 refs.

"The chromosome number of nine samples of *Honckenya peploides* from Denmark, Germany, Greenland, and Alaska have somatic number $2n=68$, in contradistinction to earlier counts of $2n=48$, 64 and 66 of this species. The number $2n=68$ is considered to be the only one present in the species. Preliminary investigations of the sex-determining mechanism of *Honckenya* which is a sub-dioecious species, suggest that the male sex is heterogametic."

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53080. MALME, GUSTAV OSKAR ANDERSON, 1864–1937. Västra Jämtlands *Rhizocarpon*-arter. (Svensk botanisk tidskrift, Dec. 1914. bd. 8, häfte 3,

p. 273–94.) Text in Swedish. ***Title tr.:*** *Rhizocarpon* species of western Jämtland.

Contains a conspectus (in Latin) and annotated list of 21 species of these lichens, with synonyms, occasional descriptions, and data on distribution. A few species spread to Swedish Lapland.

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MALMEJAC, CLAUDE, *see* Malmejac, J., *and others.* Action de l'adrénaline . . . *1957.* No. 53081.

MALMEJAC, CLAUDE, *see* Malmejac, J., *and others.* Diabète rénal en "hypothermie provoquée." *1958.* No. 53082.

MALMEJAC, CLAUDE, *see* Malmejac, J., *and others.* Possibilités expérimentales de ventriculotomies . . . *1957* No. 53085.

MALMEJAC, CLAUDE, *see* Malmejac, J., *and others.* Sur l'activité du coeur . . . *1957.* No. 53086.

MALMEJAC, CLAUDE, *see* Malmejac, J., *and others.* Sur . . . transfusion sanguine . . . le chien refroidi. *1957.* No. 53087.

MALMEJAC, CLAUDE, *see* Malmejac, J., *and others.* Variations quantitatives de la sécrétion urinaire . . . *1958.* No. 53088.

53081. MALMEJAC, JEAN, 1905– , *and others.* Action de l'adrénaline sur le coeur refroidi. (Journal de physiologie, 1957. t. 49, no. 1, p. 293–95.) 21 refs. Text in French. *Other authors:* G. Chardon, P. Plane *and* C. Malmejac. ***Title tr.:*** Action of adrenaline upon the chilled heart.

A review and discussion of the action of adrenaline upon the hypothermic heart. Means of administration, dosage, effect at moderate and deep hypothermia, effects, especially on fibrillation, etc. are dealt with. ***Copy seen:*** DNLM.

53082. MALMEJAC, JEAN, 1905– , *and others.* Diabète rénal en "hypothermie provoquèe." (Académie des Sciences, Paris. Comptes rendus, 1958. t. 246, no. 25, p. 3507–509.) 16 refs. Text in French. *Other authors:* G. Neverre, M. Bianchi, C. Malmejac *and* R. Fredenucci. ***Title tr.:*** Renal diabetes in "induced hypothermia."

Reduction of core temperature in dogs to 20° C. caused a considerable drop in urinary secretion. Prior to this oliguria, from about 20°–26°, the urine became charged with reducing sugars. This "diabetes" was reversed upon rewarming.

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53083. MALMEJAC, JEAN, 1905– , *and* **G. NEVERRE.** Étude, à l'aide de la technique "coeur-poumon" de Starling, de l'effet de l'hypothermie sur le coeur. (Société de Biologie, Paris. Comptes rendus, July 1956. t. 150, no. 8–9, p. 1527–28.) 5 refs. Text in French. ***Title tr.:*** Study with the aid of Starling's "heart-lung" method on the effect of hypothermia upon the heart.

Following an outline of the method, the author describes the progressive stages of hypothermia obtained with it; auriculoventricular dissociation; changes in the ECG; effects of intracardiac intervention (at 8°–10° C.), etc.

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53084. MALMEJAC, JEAN, 1905– , *and* **G. CHARDON.** Mécanismes d'action de l'adrénaline sur le coeur refroidi à 19°–20°. (Académie des Sciences, Paris. Comptes rendus hebdomadaires des séances, Jan. 1957. t. 244, no. 2, p. 238–40, illus.) 5 refs. Text in French. ***Title tr.:*** Mechanism of adrenaline action in the heart cooled to 19°–20°.

Report on ECG study of cardiac accidents during hypothermia in dogs and monkeys. A progressive weakening of intracardiac conduction was noted. Small doses of adrenaline were found to re-establish sinus activity and to improve auricular and ventricular conduction.

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53085. MALMEJAC, JEAN, 1905– , *and others.* Possibilités expérimentales de ventriculotomies droites prolongées sous hypothermie à 19–20° combinée avec transfusion intraarterielle intermittente. (Académie des Sciences, Paris. Comptes rendus, 1957. t. 245, no. 2, p. 203–205.) 11 refs. Text in French. *Other authors:* G. Neverre, P. Plane *and* C. Malmejac. ***Title tr.:*** Experimental possibilities of prolonged right ventriculotomies under hypothermia of 19–20° combined with intermittent intraarterial transfusion.

Intermittent intracarotid administration of fresh blood to hypothermic (19°–20° C.) dogs made it possible to extend the time of ventriculotomies under occluded circulation, from some 20 to over 40 minutes. The implications of these findings are discussed.

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53086. MALMEJAC, JEAN, 1905– , *and others.* Sur l'activité du coeur de chien ou de singe en hypothermie provoquée à 20° et au-dessous. (Journal de physiologie, 1957. t. 49, no. 1, p. 287–89.) 13 refs. Text in French. *Other authors:* G. Chardon, P. Plane, C. Malmejac *and* R. Fredenucci. ***Title tr.:*** The activity of the heart of the dog or monkey during induced hypothermia of 20° and below.

An analysis and discussion of principal factors causing cardiac fibrillation at 20° C. and below, and of the means to avert it. Following these precautions, the author reports to have lowered body temperature in monkeys to 12° without injury.

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53087. MALMEJAC, JEAN, 1905– , *and others.* Sur les difficultés de la transfusion sanguine intracarotidienne chez le chien refroidi. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 6, p. 1152–54.) 4 refs. Text in French. *Other authors:* G. Neverre, P. Plane *and* C. Malmejac. ***Title tr.:*** On the difficulties of intracarotid blood-transfusion in the chilled dog.

The author notes the difficulties of this kind of blood reinjection into dogs and monkeys chilled to 18°–20° C. The use of anticoagulants was found to cause complication. A method of using fresh blood from another animal is described and suggested. ***Copy seen:*** DNLM.

53088. MALMEJAC, JEAN, 1905– , *and others.* Variations quantitatives de la sécrétion urinaire pendant une épreuve d'hypothermie provoquée. (Société de Biologie, Paris. Comptes rendus, Sept. 1958. t. 152, no. 3, p. 498–99.) 9 refs. Text in French. *Other authors:* G. Neverre, C. Malmejac *and* R. Fredenucci. ***Title tr.:*** Quantitative variations in urinary secretion during a test of induced hypothermia.

Report on urinary excretion in dogs cooled to 20° C. and rewarmed. First a reduction was noted parallel to the fall in arterial pressure and body temperature. This was followed by a rise in excretion at body temperatures of 24°–25° and arrest at 19°–20° C. Slow restoration to normal followed rewarming in water of 30°–40° C.

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53089. MALONEY, RAYMOND P. Reconnaissance of the Beluga River coalfield, Alaska. Washington, D.C., 1958. 18 p. maps, incl. 1 fold., cross-sections, table. (U.S. Bureau of Mines. Report of investigations, 5430.)

Summarizes results of investigations of this coalfield to Aug. 1957 to determine the possibility of developing reserves by open-pit mining for Anchorage (50–70 mi. distant) power requirements. Eight outcrops of coal measures are described, analyses of samples, and favorable locations are considered. ***Copy seen:*** DGS.

53090. MALYKH, M. I. Sovremennoe oledenenie Koriâkskoĭ gornoĭ sistemy. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiâ, Nov.–Dec. 1958. no. 6, p. 507–520, illus., 3 maps incl. 2 fold.) 24 refs. Text in Russian. ***Title tr.:*** Contemporary glaciation of the Koryak mountain system.

Presents results of two years' work on existing glaciers in the Koryak mountain area, 60°17′–63° N. 166°35′–176°30′ E. Through field investigation and airphoto survey, 282 active glaciers were identified, occupying 179.87 km². They are concentrated in seven regions, and for each, the glaciers are enumerated (with areas) and characterized. Maps show districts and distribution of the glaciers. Features of glaciation, glacier basins, and types of glaciers are outlined. The snow line is indicated for various mountains; the nourishment and wastage of the glaciers are discussed. ***Copy seen:*** DLC.

53091. MAMEN, CHRIS. Mining in Scandinavia; part 1, some Norwegian operations. (Canadian mining journal, Dec. 1957. v. 78, no. 12, p. 59–70, illus., text map.)

Three mines and one hydro-electric tunnelling project are described, viz: Skorovas (64°45′ N. 14° E.), Fosdalens Bergverk (64° N. 11° E.), Løkken (63°06′ N. 09°43′ E.), and Fortun hydro-electric power project (61°29′ N. 07°42′ E.). A brief historical account; description of ore bodies; mining methods, illustrated by photos and sectional diagrams; compressed air supply; transportation of ore; pumping; and miscellaneous notes are given, with a few brief, important features of each mine preceding the account. Some comparisons with Canadian mining methods are suggested. The Løkken mine has produced iron and copper ores for more than 300 years.

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53092. MAMEN, CHRIS. Mining in Scandinavia; part 2, operations in northern Sweden. (Canadian mining journal,

Jan. 1958. v. 79, no. 1, p. 67–77, illus.)

Describes mines visited in Aug.–Sept. 1957, viz: Kiirunavaara, open pit and underground; Malmberget; Renström, Långsele (Boliden). Mining operations, transportation of ore, crushing, measuring, ventilation and other features of the Renström and Långsele mines (64°50′ N. 20°20′ E.) are noted. Differences from Canadian practices and features otherwise of interest to Canadian operators are stressed. ***Copy seen:*** DGS.

53093. MAMEN, CHRIS. Mining in Scandinavia; part 3, operations in south-central Sweden. (Canadian mining journal, Mar. 1958. v. 79, no. 3, p. 71–78, illus.)

Describes three mines visited in Aug.–Sept. 1957: Grängesberg, Stora Kopparberg (Falun) and Bodås, producing iron, copper and iron, respectively. Brief remarks on reserves, ownership, history of the mines, ore deposits, mining methods, development practices, transport hoisting, production, and miscellaneous details are given. Stora Kopparberg is the world's oldest continuous mining operation, having owned its royal charter for more than 600 years; it was one of Europe's chief sources of copper. ***Copy seen:*** DGS.

53094. MAMEN, CHRIS. Mining in Finland; part 4, mining, milling, smelting Outokumpu copper ore. (Canadian mining journal, May 1958. v. 79, no. 5, p. 73–81, illus., 6 tables.) Final report of this series on mining in Scandinavia and Finland.

Describes mining operations, also milling and smelting aspects of large, state-owned producer. Principal mine is the Outokumpu; reserves of about 13 million tons of ore grade 3.8% copper, plus small amounts of iron, sulphur, zinc and other minerals. Mining methods, with diagrams, use of roof bolts, hauling and hoisting of ore, crushing, concentrating and flotation, illustrated by a flow sheet, are noted for the Outokumpu mine. Flash smelting process used at Harjavalta is explained, with a flow sheet and a table of operating statistics. During the Russian-Finnish war, the smelter, located previously near the new boundary line, was moved *in toto* crosscountry to Harjavalta. ***Copy seen:*** DGS.

53095. MAMINA, K. I. V taĭge. (Pioner, Mar. 1958. god 35, no. 3, p. 52–54, illus.) Text in Russian. ***Title tr.:*** In the taiga.

Popular account of the hunting habits of the Ostyak reindeer herders and their dogs. ***Copy seen:*** DLC.

53096. MAMO, H., *and others.* L'influence des variations de température sur l'aspect et la latence des réflexes paradoxaux sensitivo-sensitifs; réflexes de Toennies. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 12, p. 2025–2030, illus.) 8 refs. Text in French. *Other authors:* P. Laget *and* P. MacLeod. ***Title tr.:*** Influence of temperature variations on the nature and latency of paradoxic reflexes; Toennies' reflexes.

Report on experiments with rabbits made hypothermic down to about 20° C. With the fall of body temperature, the shape, latency, amplitude and duration of the paradoxic (antidromic) discharge change: latency and duration increase, amplitude first rises, then diminishes.

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MANGUS, MARVIN D., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

MANIS, WALLACE E., *see* Baxter, D. V., *and* W. E. Manis. *Polyporus ellisianus* . . . and *P. anceps* PK. . . . *1939.* No. 49585.

53097. MANITOBA. DEPT. OF MINES AND NATURAL RESOURCES. Annual report for the period ending March 31st, 1957. Winnipeg, Queen's Printer, 1958. 107 p. illus., maps, tables, graphs. Refs.

Contains text and statistics on the administration and use of resources, with sections on mining (No. 53098) oil, forestry, fur and game, fisheries, lands, recreational development, water resources, the Manitoba Government Air Service, and surveys. The decisions of the International Nickel Co. of Canada and the Hudson Bay Mining and Smelting Co. to bring deposits of base metals in the Mystery-Moak Lakes and Herb Lake areas into production by 1960 are noted, also the rapid decline of Barren Ground caribou despite the extensive timber wolf control program, and preliminary power surveys on northern rivers including the Nelson and Churchill.

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53098. MANITOBA. MINES BRANCH. Annual report for period ending March 31st, 1957. Winnipeg, Queen's Printer, 1958. 16 p. illus., map. (Dept.

of Mines and Natural Resources, Ann. Rept. p. 9–23.)

Reviews developments in the Manitoba mining industry Apr. 1956 through Mar. 1957. After ten years' exploration by the International Nickel Co. of Canada, Ltd., two mines were to be put into production in the Mystery Lake-Moak Lake area. Hudson Bay Mining & Smelting Co. Ltd. discovered a major zinc deposit and a copper deposit in the Herb Lake area. Production of the Sherritt Gordon Mines Ltd. plant at Lynn Lake declined slightly. Activities of the Geological Division and other offices of the Mines Branch are summarized; production is tabulated, operating companies are listed. ***Copy seen:*** DGS.

53099. MANITOBA. MINES BRANCH, Annual report for period ending March 31st, 1958. Winnipeg, 1958. 19 p. illus., text maps, diagrs., tables.

Reviews developments of 1957, the most active prospecting period and one of the most successful periods of mine development for Manitoba. Notes progress at the two new International Nickel Co. of Canada, Ltd. mines in the Mystery-Moak Lakes area; at the Hudson Bay Mining and Smelting Co. Ltd. deposits near Chisel Lake; increased tonnage at Sherritt Gordon Mines Ltd.'s Lynn Lake plant; extensive exploration.

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53100. MANKAU, SAROJAM K. Studies on *Echinococcus alveolaris*, Klemm 1883, from St. Lawrence Island, Alaska, 1; histogenesis of the alveolar cyst in white mice. (Journal of parasitology, Apr. 1957. v. 43, no. 2, p. 153–59, illus.) 6 refs.

Description of developmental stages of the larval cyst of *Echinococcus alveolaris* in the liver of white mice, fed gravid segments from naturally infected arctic foxes. The cysts were found to invade the host tissue by exogenous and endogenous budding, with fatal results to the host. Scolex formation was noted after four months of infection.

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53101. MANKER, ERNST MAURITZ, 1893– . Den bottniska skidtypen i nya myrfynd. (På skidor, 1957. p. 167–82, illus., map.) 7 refs. Text in Swedish. ***Title tr.:*** The Bothnian ski type in new bog finds.

Lists 13 finds, in north Sweden, of this ski type: short and broad, lancet-shaped tip, flat ungrooved underside, and a raised concave foot plate, set in from the sides and sloping backwards. The skis are described in detail; sites of the finds, also described, are shown on map. An intermediate type between arctic and Bothnian skis seems to be represented in one of the finds. ***Copy seen:*** SPRI.

53102. MANKER, ERNST MAURITZ, 1893– . Lapparna inte längre nomader; ett apropå till dagens läge. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1957, p. 7–14, illus.) Text in Swedish. ***Title tr.:*** The Lapps no longer nomads; a note on the situation today.

Traces the history of the Lapps from prehistoric times, and describes the development from reindeer-hunting to -husbandry. Reindeer-herding nomads were always a minority and the nomadic culture was mainly created by the Scandinavian inland Lapps. The yearly cycle of migration is described. Most Lapps have given up their nomadic life and nowadays the reindeer are tended by special herders using modern transport.

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53103. MANKER, ERNST MAURITZ, 1893– . Lappland i besittning. (Till fjälls, 1957. årg. 29, p. 8–11, illus.) Text in Swedish. ***Title tr.:*** Conquest of Lapland.

The last remnants of the ice age had disappeared from Lapland about 8,000 years ago, and the oldest dated archeological finds are about 5,000 years old (tools, skis, etc.). The racial characteristics of the Lapps are discussed. Two interesting early finds are probably relics of visitors to Lapland.

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53104. MANKER, ERNST MAURITZ, 1893– . The last of the reindeer Lapps. (Natural history, Feb. 1958. v. 67, no. 2, p. 70–81, 20 illus.)

A remnant of a separate paleo-arctic race, the Lapps (or Fenni, self-appellation Samer) evolved from reindeer hunters to herders, most of them, adopting a semi-nomadic life with hunting, fishing and primitive farming. Their origin, physical characteristics, former religious beliefs (animism, shamanism) are dealt with and some statistical data on present population and reindeer given. The changing ways of life of the truly nomadic Lapps, the reindeer herders of the Scandinavian interior, are discussed. Their annual

migration routes, adaptation to nomadic conditions (ambulatory tent, *kata*, and boatlike sledge, *akja*), their working team, *sita*, combination of private and communal ownership, etc., are described and the present transition to an industrialized reindeer economy with meat production as its main objective is sketched.

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53105. MANKER, ERNST MAURITZ, 1893– . Nomaderna, de bofaste och Kvikkjokksledens resenärer. Föredrag vid Svenska naturskyddsföreningens opinionsmöte i Stockholm för bevarandet av Lilla Lule älvs sjösystem. (Samefolkets egen tidning, Apr. 1957. årg. 39, nr. 1, p. 2–5, illus.) Text in Swedish. ***Title tr.:*** The nomads, the settlers and the Kvikkjokk route travelers. Lecture given at a meeting of Svenska naturskyddsföreningen (Swedish Association for the Protection of Nature) in Stockholm in support of preserving the Lilla Lule River lake system.

Traces the history of the Lilla Lule River valley (approx. 66°30′–67° N. 18°–20° E.) from the time of the stone age nomadic reindeer hunters to the present. In 1657 silver was found north of Kvikkjokk, mining was started and in the 1670's the first agricultural settlers came to the district. Some well-known travelers in the region are mentioned, beginning with Carl von Linné in 1732.

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53106. MANKER, ERNST MAURITZ, 1893– . Sista rajden. (Svenska turistföreningen. Årsskrift, 1957, p. 108–126, 11 illus., text map.) Text in Swedish. ***Title tr.:*** The last reindeer caravan.

Changing conditions in reindeer husbandry in arctic Sweden are noted: the last migration, in which family tents were packed and carried by reindeer, took place in late summer, 1954. The author accompanied Lapps on this trek from Parajaure, at the edge of the summer pasture on Padjelanta through valleys of the Sarek massif to Nanto. Family cooperation in the undertaking is emphasized, and experiences en route are recounted. ***Copy seen:*** DGS.

53107. MAN'KO, M. A. Degradiruet li "vechnaîa" merzlota pochv v raîone g. Mezeni? (Akademiîa nauk SSSR. Izvestiîa, ser. geograficheskaîa, May–June 1958, no. 3, p. 60–64, table, graph.) 17 refs. Text in Russian. ***Title tr.:*** Is permafrost degradation in progress in the Mezen' district?

Reports that rapid degradation of permafrost soils reported by N. G. Datskiĭ (1937) and M. I. Sumgin is not in agreement with author's observations of 1940 in the district of Mezen' (approx. 65°50′ N. 44°16′ E.). The permafrost degradation found by Datskiĭ in Semzha and Mgla area was under peat cover and represented man's destruction of the peat. Permafrost (the continuous or island types) in the drifting peat bogs is similar in structure and distribution to that in other regions of European Russia. Sumgin's assumption on changes of climate is also deemed unfounded: climatological data for Arkhangel'sk indicate temperature variations but not a general warming trend to support an hypothesis of permafrost degradation. Destruction of the peat cover may lead to local degradation.

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MAN'KOVSKIĬ, G. I., *see* Shevîakov, L. D., *and* G. I. Man'kovskiĭ. Problemy bor'by s vodoĭ . . . *1958*. No. 54781.

MANLEY, GORDON, 1902– , *see* Court, A., *and others*. The classification of glaciers. *1957*. No. 50358.

53108. MANN, TREVOR PHILIP, *and* **R. I. K. ELLIOTT.** Neonatal cold injury due to accidental exposure to cold. (Lancet, Feb. 2, 1957. v. 272, no. 6962, p. 229–34, illus., table.) 21 refs.

Neonatal cold-injury is fairly common, but usually misdiagnosed as hemorrhagic pneumonia or sclerema. Symptoms are discussed and illustrated with two case reports. Therapy is described and prevention elaborated on in detail.

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53109. MANNING, THOMAS HENRY, 1911– , *and* **A. H. MacPHERSON.** The mammals of Banks Island. Montreal, Aug. 1958. 74 p. illus., tables, map. (Arctic Institute of North America. Technical paper no. 2.) 65 refs.

Account of field observations made during short stops in 1951, and during the summers of 1952 and 1953, and of taxonomic studies of the material collected or of such in the National Museum of Canada. Fifteen species are recorded (hare, lemmings, whales, wolf, fox, bears, ermine, wolverine, seals, caribou, muskox). Most of them described in detail including morphometry of body and skeleton, geographic variants, earlier

records and field observations, coloration, sexual differences, breeding data, etc. A new race of *Lepus arcticus* and of *Lemmus trimucronatus* are described. Topography of Banks Island, southwesternmost of the Canadian Arctic Islands is outlined briefly. ***Copy seen:*** DI.

53110. MANNING, THOMAS HENRY, 1911– . National Museum expedition to Adelaide Peninsula, 1957. (Arctic circular, 1958. v. 11, no. 2, p. 24–27.)

Account of field work on the north coast of Keewatin District (approx. 68°09′ N. 97°45′ W.) collecting birds and mammals: 1,150 specimens were obtained by the author and Andrew MacPherson. ***Copy seen:*** CaMAI.

53111. MANSELL, T. A. Northwest Territories, 1957. (Canadian mining journal, Feb. 1958. v. 79, no. 2, p. 106–107, illus., table, map.)

Annual survey of exploration and production, stressing search for uranium, lithium, lead-zinc and nickel, and extensive exploration for oil. Production and working force at seven mines and at claims are tabulated; locations (6) are indicated. ***Copy seen:*** DGS.

53112. MANSELL, T. A. Northwest Territories review: down slightly from 1955, but prospects are excellent for '57. (Canadian mining journal, Feb. 1957. v. 78, no. 2, p. 94–95, illus.)

Total mineral production in the area amounted to nearly 23 million dollars in 1956, down slightly from 1955. The Dept. of Mines and Technical Surveys plans an airborne geological survey of some 100,000 sq. mi. in the upper Mackenzie region. Increased exploration is expected with new concessions in the Coppermine River district.

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53113. MANSTRUP, H. Træk af Holsteinsborg skoles historie og lidt om skolen i dag. (Grønland, Oct. 1957. nr. 10, p. 386–400, illus.) Text in Danish. ***Title tr.:*** An outline of the history of Holsteinsborg school and some notes on the school today.

This West Greenland town (66°55′ N. 53°35′ W.) was founded in 1756 and a school, which served also as church and home for the missionary, was built in 1759. Its history, activities (number of pupils, subjects taught, equipment) etc. are outlined. A new school was inaugurated in 1949 and enlarged in 1952, 1954 and 1955; its teaching and some current problems are described. Church direction of schools was terminated in 1950. ***Copy seen:*** DLC.

53114. MANTEĬFEL', PETR ALEKSANDROVICH, 1882– . Buryĭ medved'. (Okhota i okhotnich'e khozi͡aĭstvo, Aug. 1958. god 4, no. 8, p. 26–28, illus.) Text in Russian. ***Title tr.:*** The brown bear.

Outlines the habits, food, propagation, hibernation, etc. of *Ursus arctos* L., which was found not long ago even in the central regions of U.S.S.R., but now chiefly in northern forests and taigas. Dangers of encountering this bear are noted and a story is told of an elk attacked by a brown bear in the Pechora-Ilych preserve: both animals perished. The preservation of brown bears in the least inhabited areas (Kamchatka) is advocated. ***Copy seen:*** DLC.

53115. MANTEĬFEL', PETR ALEKSANDROVICH, 1882– . Sozdadim novufi porodu severnoĭ ovt͡sy. (Karakulevodstvo i zverovodstvo, Mar.–Apr. 1957. god 10, no. 2, p. 43–45, illus., table.) Text in Russian. ***Title tr.:*** Let us create a new breed of northern sheep.

Pointing out the failure to breed sheep resistant to arctic cold, the author suggests a way to achieve it by crossing a domestic breed with the "snow ram" (*Ovis nivicola*). The latter's appearance, body cover, weight of males and females, period of gestation and lambing, food and way of life are described. The possibility of crossing it with the Romanovski breed is also discussed.

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53116. MANTEĬFEL', PETR ALEKSANDROVICH, 1882– . Zaĭt͡sy. (Okhota i okhotnich'e khozi͡aĭstvo, Nov. 1957. god 3, no. 11, p. 16–19, illus.) Text in Russian. ***Title tr.:*** Hares.

Popular outline of the distribution, habits, food, reproduction and ecology of the four main species of hares in the U.S.S.R., including *Lepus timidus* abundant in tundras and northern areas.

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MANTEL, N., *see* Bartlett, R. G., *and others.* Core to surface thermal gradients . . . rat . . . *1958.* No. 49562.

53117. MANUĬLOV, PAVEL. Na Sos'-ve-reke. (Druzhba narodov, Feb. 1955. no. 2, p. 151–60.) Text in Russian. ***Title tr.:*** On the Sos'va River.

Boat trip with a Vogul guide down the Severnaya Sos'va, with visits to kolkhozes, settlements and the main Vogul cultural center (Kul'tbaza) at Shomy, is sketched. Herring fishing, fur farming, hunting, agriculture and agronomy, education, recreational activities, etc. are described. ***Copy seen:*** DLC.

53118. MANUĬLOV, PAVEL. Nad nami svet. (Okhota i okhotnich'e khozîaĭstvo, Nov. 1957. god 3, no. 11, p. 46–48, illus.) Text in Russian. ***Title tr.:*** Bright future.

Sketches Tungus (Evenki) hunters' life in the Evenki National District, their squirrel and sable hunting, reindeer-sled driving, food, etc. Local history Museum in Tura and activities of the collective farm at Nidym (64°10′ N. 99°53′ E.) are noted. ***Copy seen:*** DLC.

53119. MANUĬLOV, PAVEL. U okhotnikov Ėvenkii. (Okhota i okhotnich'e khozîaĭstvo, May 1957, no. 5, p. 20–23, ports, illus.) Text in Russian. ***Title tr.:*** With hunters of Evenki land.

Sketches the hunting industry in the Evenki (Tungus) National District, as studied on a trip (by aircraft) to Baykit on the Podkamennaya Tunguska River and Tura on the Nizhnyaya Tunguska. The most successful kolkhozes are described; progress in acculturation of the Evenki is mentioned, but shortcomings are noted in several areas: they are lagging behind pre-war production, due to lack of dogs and equipment, and to poor organization. ***Copy seen:*** DLC.

53120. MANUĬLOV, PAVEL. Urman otstupaet. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 12–13, illus.) Text in Russian. ***Title tr.:*** The taiga retreats.

Sketch of the collectivization of the Khanty (Ostyaks) living in the taiga of the Nazym River (62° N. 68°13′ E.) basin: the case for and against collectivization; establishment of the new collective farm and its center, Novyy Nazym; its fishing, hunting and fur farming.

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53121. MANVELL, ROGER. Robert Flaherty, geographer. (Geographical magazine, Feb. 1957. v. 29, no. 10, p. 491–500, port., 9 illus.)

Sketch of his life (1884–1951) and contribution to geography through moving pictures, including (p. 491–94) his first film, *Nanook of the North*, made in 1920–1921, of an Eskimo family at Port Harrison, northeast coast of Hudson Bay. Flaherty prospected for iron and copper on Ungava Peninsula, Baffin Island, and Belcher Islands during 1910–1916 and made (in 1913) a film which was destroyed by fire. *Nanook*, released in 1922, was reissued with sound in 1947.

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53122. MARAKOV, S. V. Kalan. (Okhota i okhotnich'e khozîaĭstvo, Mar. 1958. god 4, no. 3, p. 28–30, illus.) Text in Russian. ***Title tr.:*** Sea otter.

The sea otter, one of the most valuable fur animals, is native to the North Pacific area, with the Commander and Kuril Islands as centers of the population. Rapacious hunting in pre-Revolutionary times almost extinguished the species; but with protection and prohibition of hunting in Soviet time, the herds have begun to recover and the number of sea otter is estimated today at 1,500–2,000. Its external characteristics, food, reproduction, also herd migration and behavior as observed on Mednyy Island are briefly noted; continued strict protection is advocated. ***Copy seen:*** DLC.

53123. MARAKOV, S. V. Komandorskie griby. (Ogonëk, Nov. 1958. god 36, no. 49, p. 31, illus.) Text in Russian. ***Title tr.:*** Mushrooms on the Commander Islands.

These islands, almost treeless, have an abundance of edible fungi: *Boletus versipellis*, *B. scaber*, *Russela*, etc., which cover the bare hills and tundras in September; free of worms, they may be used at once. ***Copy seen:*** DLC.

53124. MARAKOV, S. V., *and* **G. A. NESTEROV.** O vrede, nanosimom sivuchami nakhodîashchimsîa na lezhbishche kotikam. (Rybnoe khozîaĭstvo, Oct. 1958. god 34, no. 10, p. 27–32, illus.) 2 refs. Text in Russian. ***Title tr.:*** Injury caused by sea lions to pupping fur seals.

Account of observations made during 1952–56 on the Komandorskiye Islands especially on Mednyy, with data on the first appearance, successive landings of the fur seal (*Callorhinus ursinus*) and formation of harems; appearance of the sea lions (*Eumetopias jubata*), mainly males; their earlier appearances and continuous increase in numbers during recent years; disruption of harem life caused by the presence of these eared seals, and their trampling of pups; diffi-

culties in management caused by their presence; suggestions for keeping the eared species away.

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53125. MARAKUSHEV, ALEKSEĬ ALEKSANDROVICH. Paragenezisy borsoderzhashchikh magnezial'nykh skarnov v Taezhnom mestorozhdenii v arkhee Aldanskoĭ plity. (Geokhimiîa, 1958, no. 1, p. 39–46, tables, diagrs.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** Paragenesis of boron-containing magnesian skarns in the Tayezhnyy deposits of the Archean Aldan plateau.

Presents result of investigation of the post-magmatic skarn parageneses in connection with the intrusion of Archean alaskites into beds of dolomite marbles. Three groups of skarns are distinguished and for each, mineralic characteristics are given. Dependence of skarn paragenesis on the chemical potentials of iron and boron in solution is shown in diagrams. Examples of aluminum silicate rock (gneisses and migmatites) replacement are considered. ***Copy seen:*** DLC.

53126. MARAKUSHEV, ALEKSEĬ ALEKSANDROVICH. Paragenezisy izvestkovykh skarnov v Taezhnom magnezial'no-skarnovom zhelezorudnom mestorozhdenii v arkhee Aldanskoĭ plity. (Geokhimiîa, 1958. no. 2, p. 155–62, illus., tables, diagrs.) 3 refs. Text in Russian. Summary in English. ***Title tr.:*** The paragenesis of lime skarns in the Tayezhnyy magnesium-skarn iron-ore deposits in the Archean Aldan plateau.

The high-temperature post-magmatic replacement of dolomites has led to the development of two metasomatic facies: the magnesium and lime infiltration skarns. The dolomite beds and the aluminum silicate rocks directly adjacent to them are replaced by magnesium skarns. The somewhat remote aluminum silicate rocks are replaced by lime skarns. Examples of skarnization of aluminum-silicate rocks under various conditions of alkalinity and oxidizing-reducing conditions are considered.—From English summary

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MARBLE, DAVID W., *see* Yaglou, C. P., *and others.* Reflective wall lining . . . heat loss . . . *1957.* No. 56133.

53127. MARCUS, MELVIN G. Glacier studies in Alaska, 1957. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 39–43.) Ref.

Brief account of progress by four field parties sponsored by the American Geographical Society. Project 4.11 surveyed Worthington Glacier near Thompson Pass (61° 09′ N. 145° 45′ W.), Polychrome Glacier in Mount McKinley National Park, and West Gulkana Glacier in the Delta River area. Large scale maps (1:5000, 1:10,000) are in preparation. Juneau Ice Field research project carried out field work June 5–17 and Sept. 1–16, mainly on Lemon Creek Glacier. Final (tenth) year's work is planned for 1958. In project 4.2, a reconnaissance survey of numerous accessible glaciers in southeast Alaska was made; a field party of seven examined 15 glaciers, June–Aug., then continued glacial studies near Prince William Sound. Project 4.17 plans a detailed study of McCall Glacier in the Brooks Range, especially its microclimate for correlation with the arctic ice pack. ***Copy seen:*** DGS.

53128. MARDOIAN, M. G., *and others.* Winterization of construction equipment; report of CIMTC Sub-committee XV, winterization. (SAE transactions, 1957. v. 65, p. 349–76, illus., maps, tables, diagrs., graphs.) *Other authors:* F. M. Baumgardner, J. A. Klisch, T. H. Fones, W. W. Cornman, A. Q. Spitler *and* P. W. Espenschade.

Presents joint report (seven papers, two appendices, discussions) of this subcommittee and the Engineer Research and Development Laboratories' Winterization Section, on low-temperature operation of vehicles. A condensed version of the report was listed as No. 46617. Introduction (p. 349–53) reviews background of the program directed toward: fundamental information on characteristics of equipment and material at temperatures to −65° F.; study of systems and techniques permitting successful operation at such temperature (emphases on proper engine operation and improvement of the operator's environment, i.e., heating, accessibility to controls, escape hatches, etc.); and possible standardization of winterizing equipment used on construction machinery. Civil and military activities in arctic areas are outlined in relation to equipment requirements. Studies are reported on a motor grader and three tractors designed (by Austin-Western, Caterpillar Tractor, International Harvester, or Allis-Chalmers Mfg.) with a different approach to winterization in compliance with ten basic requirements (listed); all the equipment to be

serviced with arctic military fluids, lubricants, hydraulic fluids, and antifreeze (cf. table). Subsequent to assembly and servicing, each was tested in cold room at −25° and −65° F.; field tests were conducted during winter 1955–56 at Aurora, Minn., and 1956–57 tests to be made in Alaska. Each of the winterized vehicles is described in turn, major modifications are illustrated. Results of starting tests are summarized, mechanical deficiencies, cause and corrective action are tabulated, and the warm-up time graphed. In conclusion, by P. W. Espenschade (Engineer Research and Development Laboratories), military-industry liaison is outlined; overall performance factors, deficiencies of specific features and/or their arrangements are reviewed and recommendations are made to further development. Ease of maintenance accessibility check-off chart is appended. ***Copy seen:*** DLC.

53129. MARENINA, T. Ю. Geologo-petrograficheskiĭ ocherk Mutnovskogo vulkana. (Akademiîa nauk SSSR. Laboratoriîa vulkanologii. Trudy, 1956, vyp. 12, O vulkanizme, geologii i gidrotermakh Kamchatki, p. 3–52, illus., tables, map.) 7 refs. Text in Russian. ***Title tr.:*** A geologic and petrographic outline of the Mutnovskiy Volcano

Monographic study of Mutnovskiy Volcano, called also Mutnovskaya or Povorotnaya Sopka, on the southeast coast of Kamchatka (52°27′ N. 158°11′ E.), based on published literature and on author's investigations in 1948 and 1952. The orography and stratigraphy of the area are outlined and a detailed geomorphic, petrographic and mineralogic description is given of the piedmont, slopes and parts of the volcano, including its two craters, lateral cones, fumaroles and hot springs. Data from chemical and physical analyses of the main rocks, lavas, pumice, tuffs, sublimates and gases are included. The present activity of the volcano is limited to vapors from fumaroles of the northeast crater (p. 44–49). History of the volcano's formation is sketched (p. 49–51); photographs and a geological text map amplify the text.
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53130. MARGOLIS, LEO, 1927– . Parasitic helminths and arthropods from Pinnipedia of the Canadian Pacific Coast. (Canada. Fisheries Research Board. Journal, 1956. v. 13, no. 4, p. 489–505, illus., table.) 45 refs.

These parasites from the harbor seal and the Steller sea lion were studied to discover the definite host of the *Anisakis* larvae found in Pacific marine fishes. Six species of round and tapeworms and six species of parasitic arthropods are described; notes on hosts, geographic distribution, anatomy and taxonomy are included. Relationship of the parasites is discussed. ***Copy seen:*** DI.

53131. MARIE-VICTORIN, *Brother,* **1855–1944,** *and* **J. ROUSSEAU.** Les *Artemisia* de la section *Dracunculus* dans le Québec. (Naturaliste canadien, July–Aug. 1944. v. 71, no. 7–8, p.176–200, 3 illus.) Text in French. ***Title tr.:*** *Artemisia* of the section *Dracunculus* in Quebec.

Contains keys to typical species and to forms of *A. borealis, A. canadensis,* and *A. caudata.* Descriptions are provided of *A. borealis* f. *typica,* native to Hudson and James Bays region, and *A. borealis* f. *purshii* occurring on Baffin Island, also on Little Diomede in Bering Strait.
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53132. *MARINE ENGINEERING AND SHIPPING REVIEW.* MSTS prototype for arctic water. (Marine engineering and shipping review, July 1955. v. 60, no. 7, p. 46–48, illus.)

Describes an ice-strengthened cargo ship designed for arctic supply trips. The small, twin-screw, diesel-electric vessel, to be known as the T-AK270-class, is to carry refrigerated cargo, also 12 military passengers. ***Copy seen:*** DLC.

53133. *MARINE ENGINEERING AND SHIPPING REVIEW.* Rugged powerful USS. *Glacier,* Navy's answer to arctic ice packs. (Marine engineering and shipping review, July 1955, v. 60, no. 7, p. 34–36, 45, illus.)

Notes on construction, machinery and expected performance of this ice-breaker.
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53134. *MARINE ENGINEERING AND SHIPPING REVIEW.* USNS *Alatna,* first of seven MSTS prototypes. (Marine engineering and shipping review, Oct. 1957. v. 62, no. 10, p. 75–81, 106, plates.)

Contains detailed description with illus. of this small tanker of the class T-AOG-82, built for the Military Sea Transportation Service by Bethlehem Steel Co.'s Staten Island yard. The twin-screw, diesel-electric bulk-petroleum carrier is

designed for operation in arctic waters; the construction permits it to function also as a limited ice-breaker.

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53135. ***MARINE ENGINEERING AND SHIPPING REVIEW.*** USNS *Eltanin*, a prototype ship for MSTS. (Marine engineering and shipping review, Feb. 1958. v. 63, no. 2, p. 49–57, illus.)

Contains a detailed description with plans for the first of three diesel-electric cargo ships (class T–AK–270) to be built for polar work of the Military Sea Transport Service, by Avondale Marine Ways, Inc., New Orleans. The vessel generally is of welded-steel construction; it is strengthened by an ice-belt of high-tensile steel plate covering from 3 ft. above the deep-load line to 3 ft. below the light-load line. The displacement on full load is 4,942 tons. Maneuvering the two propulsion motors is carried out either from the engine room or from remote-control stands in the wheel house and the ice-pilot station, which contains duplicate navigational equipment for use by an observer during operations in ice.

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53136. ***MARINE ENGINEERING/LOG.*** USNS *Point Barrow*, cargo ship (dock). (Marine engineering/log, Aug. 1958. v. 63, no. 9, p. 49–56, illus., diagrs.)

Describes in detail, with profiles, deck and machinery plans, this vessel designed for lighterage operations of arctic outposts. Main specifications are: length over-all 465½ ft., displacement 9,415 t., turbine propulsion engines of 6,000 hp., cruising speed 15 knots and cruising range 10,000 mi. Provisions are made for emergency dry-docking of small craft; draft can be increased by eight ft. in less than 30 min. A 1¼ in. high-tensile-strength steel ice belt girds the vessel, a three-in. blanket of fibrous glass insulates living and working spaces. The twin propellers are of nickel-aluminum bronze alloy. Design criteria allow for 100 knots max. wind velocities and −65° F. min. temperature.

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MARINI, ANTONIO, *see* Miller, J. A., *and* A. Marini. Cardiac activity . . . five hundred eighty gram human fetus . . . 22° C. and 0.1° C. *1958*. No. 53297.

53137. MARIS, H. B. Report of the Radio Section of the 1932–1933 American Polar Year Expedition. Washington, D.C., 1934. 13 p. 5 tables, 15 plates. (U.S. Naval Research Laboratory, report no. H–1032.)

Presents results of observations and investigations of ionosphere heights and echoes, magnetic disturbances, sky spectra, aurora, and stratospheric pressures, temperatures and temperature radiation, made at Fairbanks, Alaska. Some results are tabulated; recording instruments are described and illustrated; photographs and drawings of auroral displays are reproduced.

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MARKALI, JOAR, *see* Gaarder, K. R., *and* J. Markali. On *Crystallolithus hyalinus* n. gen. n. sp. *1957*. No. 51032.

53138. MARKEVICH, ALEKSANDR PROKOF'EVICH, 1905– . Paraziticheskie veslonogie ryb SSSR. Kiev, Izd-vo Akademii nauk Ukr.SSR, 1956. 259 p. illus. tables. Approx 250 refs. Text in Russian. ***Title tr.:*** Parasitic copepods from fish of the U.S.S.R.

The study consists of a general part (p. 5–40) dealing with the current status of this branch of parasitology in the U.S.S.R.; morphologic-anatomical outline of the group; its ontogeny, biology and injurious effects. The special part (p. 41–245) offers descriptions of nearly 200 species parasitizing on both freshwater and sea fishes of the Soviet Union. Synonymy, morphology of both sexes, host(s) and area or organs affected, also geographic distribution are discussed. A considerable number of these parasites are reported from arctic waters.

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MARKHAM, W. E., *see* Wilson, H. P., *and* W. E. Markham. A study . . . surface winds. *1957*. No. 56075.

53139. MARKIN, ARKADIĬ BORISOVICH. Ėpokha velikikh rabot. (Druzhba narodov, Apr. 1958. no. 4, p. 167–79.) Text in Russian. ***Title tr.:*** The era of great undertakings.

Describes Soviet industrial achievements including the power stations on the Ob, Yenisey and Angara Rivers. Lack of foresight is criticized in some of the projects: unavoidable flooding of the West Siberian plains by the reservoirs of the Ob super-hydro-complex; building the Irkutsk power installation without locks, thus destroying possibility of a Kara Sea - Lake Baykal - Pacific Ocean waterway, etc. Projects of the future are

considered: a bridge or tunnel across Bering Strait to join Eurasia and America; railroad connecting the Trans-Siberian line with the Bering Strait, Yakutsk with the Sea of Okhotsk, and a railroad down the Kamchatka Peninsula; creation of an artificial warm current by pumping water through the Bering Strait thus drawing warm Atlantic ocean water into the Arctic Basin. ***Copy seen:*** DLC.

53140. MARKIN, ARKADIĬ BORISOVICH. Strategiîa velikikh rabot; zametki inzhenera. (Novyĭ mir, Jan. 1957, no. 1, p. 225–37.) Text in Russian. ***Title tr.:*** Strategy of great undertakings; notes of an engineer.

Describes visit of a committee of scientists from the Academy of Sciences in Moscow to its East-Siberian branch at Irkutsk, as introduction to a critical appraisal of research-development projects in that, and other, areas. In general, centrally approved industrial undertakings are not coordinated with other, local, projects and their future side-effects, as distinct from the main objective, are not sufficiently considered in advance. For example, the Irkutsk hydro-electric station has its dam built without locks, cutting off all water traffic to Lake Baykal, thus killing hope of a future waterway connecting Kara Sea with the Pacific, via the Yenisey, Angara, Lake Baykal, Selenga and Amur Rivers. The Lena railroad built without consideration of the Angara cascade scheme is now threatened with partial flooding by the Bratsk hydro-electric station dam. Ruthless deforestation has stripped the lower Angara region due to the lack of railroads to the taiga hinterland. The planned construction of the Ob River power stations, whose dams are to convert 35 million hectares into an artificial sea, will submerge invaluable mineral resources and destroy the agricultural potential of a large part of western Siberia by raising its already high ground-water level, etc. Discrepancies between the claimed and actual geological exploration of the lower Yenisey-Lena region are criticized; the accidental discovery of natural gas at Tas-Tumur (70°40′ N. 131°15′ E.) and Zhigalovo on the Angara River, is noted, etc. ***Copy seen:*** DLC.

53141. MARKIN, ARKADIĬ BORISOVICH. Velikoe dvizhenie na Vostok. (Druzhba narodov, Feb. 1956. no. 2, p. 121–32.) Text in Russian. ***Title tr.:*** The great movement to the East.

Discusses the industrial potential of Siberia, including: hydro-electric power stations on the Angara, Ob and Yenisey Rivers, discovery of natural gas at Berezovo on the lower Ob, rock-salt deposits along the Lena. Plans are advanced for linking the White Sea and the Pacific Ocean by a railroad and waterway system and the construction of an electric railroad from Irkutsk to Cape Dezhnev. The harnessing of Siberian rivers is essential to increase power production and local resource development for industrial purposes in the East. ***Copy seen:*** DLC.

53142. MARKIN, ARKADIĬ BORISOVICH. Zaglîanem v budushchee. (Vokrug sveta, Nov. 1957, no. 11, p. 17–25, illus., maps.) Text in Russian. ***Title tr.:*** Let us look into the future.

Discusses large-scale construction plans including M. M. Davydov's suggestions to redirect waters of northern rivers toward the south; water power developments on the Ob, Yenisey and Angara Rivers for hydro-electric stations; A. I. Shumilin's project to construct a dam across Bering Strait, etc.

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53143. MARKLUND, GUNNAR, 1892– . Fröbildning utan befruktning och därmed sammanhängande mångformighet hos växter; föredrag vid Finska vetenskaps-societetens möte den 20 April 1953. Helsingfors, 1954. 23 p. 10 maps. (Finska vetenskaps-societeten. Årsbokvuosikirja, 1952-1953. v. 31B, no. 3.) Text in Swedish. ***Title tr.:*** Seed development without pollenization and consecutive multiple variation therewith in plants; lecture before the Finnish Scientific Society's meeting April 20, 1953.

The development of viable seed by certain plant species lacking stamens and pollen, both naturally and experimentally, and the occurrence of multiple varieties within these species are discussed. Agamogenesis, chromosome counts, hybridization, plant migration, and multiple variations of *Ranunculus, Alchemilla, Hieracium,* and *Taraxacum* are considered. Some forms appear to have become locally established in postglacial locations and even in historical times. Several of the varieties are found in far northern as well as other Scandinavian localities. ***Copy seen:*** DGS.

53144. MARKOV, F. G., *and others.* Geologicheskoe stroenie Taĭmyrskogo po-

luostrova. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiia Sovetskoĭ Arktiki, 1957, p. 313–87.) Text in Russian. *Other authors:* M. G. Ravich *and* V. A. Vakar. ***Title tr.:*** Geological structure of the Taymyr Peninsula.

Contains a comprehensive outline of the relief, stratigraphy (p. 317–63), volcanism (p. 363–81), tectonics, and geological indications of mineral resources; based on post-World War II exploration by the Arktikrazvedka Trust (Glavsevmorput') and the Institute of Geology of the Arctic, the authors participating. Geological structure of the Taymyr folded zone is complicated and not sufficiently explored. Proterozoic and Paleozoic formations are mainly represented. Mesozoic formations, less so. Tertiary is unknown. Quaternary deposits are represented everywhere. Magmatic formations are of large extent. Coal, mica, molybdenum, etc., are possibilities. This area is covered by the geological map at scale 1: 2½ million, which accompanies the volume.

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53145. MARKOV, F. G., Konferentsiia po razvitiiu proizvoditel'nykh sil Vostochnoĭ Sibiri. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958. vyp. 11, p. 4–7.) Text in Russian. ***Title tr.:*** Conference on development of productive powers in eastern Siberia.

Reports that this conference held at Irkutsk near the end of August 1958, had about 2,500 delegates representing some 300 organizations. Its main purpose was to plan resource development for the 1958–1965 period. Of the papers presented (18 at the plenary and 445 at meetings of 13 sections) topics are given, among others A. I. Gusev on the coal reserves in the central part of the Soviet Arctic, K. R. Chepikov and V. G. Vasil'ev on oil possibilities in the northern Verkhoyansk Mts. ***Copy seen:*** DGS.

53146. MARKOV, F. G. Soveshchanie po razvitiiu proizvoditel'nykh sil Krasnoyarskogo kraia. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958. vyp. 11, p. 7–14.) Text in Russian. ***Title tr.:*** Conference on development of productive powers in Krasnoyarsk province.

Reviews the conference held at Krasnoyarsk Aug. 11–15, 1958, to acquaint people with the present status of resource development in this province and to work out plans for 1958–1965; 1,150 delegates were present. Among the briefly mentioned reports are those of: S. V. Levchenko on oil-bearing regions of Krasnoyarsk province; N. N. Sokolov on engineering-geologic regions in the western part of East Siberia; N. V. Pavlov on the genesis of magnetic ores of the Tungusska syncline; F. G. Markov and M. G. Ravich on geologic structure, magnetism and metallogenetics of the Taymyr folded zone; V. N. Sokolov on oil and gas prospects in the northern part of Krasnoyarsk province; M. I. Rabkin and S. F. Dukhanin on diamonds in the Kotuy and Maymecha region, N. N. Urvantsev on nickel in the northeastern Siberian platform. Conference conclusions are summarized.

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53147. MARKOV, F. G. Stratigrafiia otlozheniĭ nizhnego i srednego paleozoia Tsentral'nogo sektora Sovetskoĭ Arktiki. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958. p. 5–19.) Text in Russian. ***Title tr.:*** Stratigraphy of the Lower and Middle Paleozoic deposits in the central zone of the Soviet Arctic.

Outlines the stratigraphy of Sinian, Cambrian, Ordovician, Silurian, Devonian and Carboniferous deposits distributed in Pay-Khoy, Novaya Zemlya, Taymyr Peninsula, Severnaya Zemlya, Kharaulakh Range, Central Siberian plateau and other parts of this broad area. The lithology, thickness, series, tectonic displacements, faunal and floral characteristics of the deposits are reviewed. Special attention is given to conditions for oil development.

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MARKS, RONALD A., *see* Carlton, P. L., *and* R. A. Marks. Cold exposure . . . operant behavior. *1958.* No. 50135.

MARKS, RONALD A., *see* Carlton, P. L., *and* R. A. Marks. Heat . . . operant behavior . . . cold exposure. *1958.* No. 50136.

MARKS, RONALD A., *see* Peacock, L. J., *and* R. A. Marks. Behavioral concomitants . . . cold adaptation, 1 . . . *1957.* No. 53898.

MARKS, RONALD A. *see* Peacock, L. J., *and* R. A. Marks. Behavioral concomitants . . . cold adaptation, 2 . . . *1957*. No. 53899.

MARKS, RONALD A., *see* Peacock L. J., *and* R. A. Marks. Behavioral concomitants . . . cold adaptation, 3 . . . *1957*. No. 53900.

MARMORSTON, JESSIE, *see* Sobel, H., *and others*. Influence of morphine on urinary corticoid excretion . . . *1958*. No. 55017.

MARR, NIKOLAĬ ÎAKOVLEVICH, 1864–1934, *see* Avrorin, V. A. Ob oshibkakh v osveshchenii . . . nanaĭskogo îăzyka . . . *1953*. No. 49445.

MARRARO, HOWARD, *see* Jeghers, H., *and* H. Marraro. Hypervitaminosis A, its broadening spectrum. *1958*. No. 52053.

MARROW, L. B., *see* Adolph, E. F., *and others*. Reversible cessation . . . circulation . . . hypothermia. *1958*. No. 49119.

53148. MARS, K. E. A preliminary investigation of the relative abundance of the carbon isotopes in Swedish rocks. (Journal of geology, Mar. 1951. v. 59, no. 2, p. 131–41, 2 tables, 3 diagrs., text map.) 14 refs. *Also pub. as:* Stockholm högskolas mineralogiska institut. Meddelanden, 1953. ny följd, bd. 9, no. 186.

The ratio C^{12}/C^{13} is presented for 18 samples of graphite and 23 of limestone, all except one from Sweden. The measurements confirm results obtained by earlier investigators. Graphites from supracrustal series in northern Sweden are found to have values comparable to a similar rock in northern Finland.

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MARSH, G. A., *see* Schuster, R. O., *and* G. A. Marsh. A study . . . Megarafonus . . . *1958*. No. 54633.

53149. MARSH, GORDON H., *and* W. S. LAUGHLIN. Human anatomical knowledge among the Aleutian Islanders. (Southwestern journal of anthropology, Spring 1956. v. 12, no. 1, p. 38–78, tables.) 16 refs.

Enlarged from a paper presented to the Linguistic Circle of New York, Nov. 1950, and based chiefly on field work conducted in 1948–1952. Aleut sources of anatomical information (autopsy, comparative anatomy, dry mummification, etc.) and the extent and utilization of their anatomical knowledge are discussed. Their medical practices of acupuncture (based on individual diagnosis), bloodletting, massage (especially in connection with pregnancy), surgery and early ritual custom of dismemberment of slain foes are described. Aleut medical knowledge is compared with that of the Eskimos of southern and western Alaska and the ancient Chinese. The application of anatomical concepts to inanimate objects and the linguistic methods of forming descriptive anatomical terminology are dealt with. Phonological features of the eastern Aleut dialect spoken in Nikolski and Unalaska villages are given and a glossary of approx. 370 anatomical terms with English equivalents and literal translations is appended.

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53150. MARSHALL, C. J. North America's Distant Early Warning Line. (Geographical magazine, Apr. 1957. v. 29, no. 12, p. 616–28, 14 illus., text map.)

Building of this 2,500-mile chain of radar stations, extending from Pt. Barrow, Alaska, to the east coast of Baffin Island, is described by the Canadian representative on the DEW Line Site Survey Team in 1955. Work was completed in summers of 1955 and 1956 by 7,000 men at a cost of over $400 million, financed by the U.S. Air Force, the construction and operation handled by civilians. Site surveys, delivery of men and supplies, and actual construction took place in spring 1955. Some 50,000 tons of material were airlifted that year, the bulk of supplies (120,000 tons) was landed by 57 ships and 15,000 men. Some of the problems of aerial supply, and construction under arctic conditions are discussed; also the accessibility of the region, and Eskimo population as affected by these bases. ***Copy seen:*** DLC.

53151. MARSHALL, C. J. Operation Bellot. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 104–111, maps, illus.)

Describes joint Canadian-United States survey, during summer 1957, to determine the existence of a navigable channel through Bellot Strait (71°58′ N. 94°95′ W., north of Boothia Peninsula). A route along the northern mainland coast of Canada through the Strait to Prince Regent Inlet was found practical for deep-draft ships, facilitating the supply of DEW Line sites. A passage through

Barrow and Prince of Wales Straits farther north was proved navigable in 1954 by the HMCS. *Labrador*. Arctic water routes connecting the Atlantic and Pacific are afforded by these two "Northwest" passages. ***Copy seen:*** DGS.

53152. MARSHALL, JEAN M. Effects of low temperatures on transmembrane potentials in isolated auricles of rabbits. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 84.)

Brief account on transmembrane potentials and auricular contractions at temperatures below 30° C. Conditions were studied in pacemaker cells, in areas close to the pacemaker region and in areas distant from it. ***Copy seen:*** DLC.

53153. MARSHALL, JEAN M. Effects of low temperatures on transmembrane potentials of single fibers of the rabbit atrium. (Circulation research, Nov. 1957. v. 5, no. 6, p. 664–69, illus., table.) 11 refs.

Lowered temperature caused a fall in diastolic and action potentials, and prolongation of the latter in both pacemaker and nonpacemaker fibers. Pacemaker fibers were most resistant to cooling and continued to discharge at temperatures where conducted action potentials and contractions ceased. Acetylcholine administered at this stage elicited action potentials and contractions.

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53154. MARSHALL, P. T. Primary production in the Arctic. (International Council for the Exploration of the Sea. Journal, Apr. 1958. v. 23, no. 2, p. 173–77, illus., table.) 5 refs.

An analysis of phytoplankton production in the western Barents Sea, based on Sverdrup's theory of initiation of production. Two phenomena are accounted for by it: (1) the beginning of production in April on Bjørnøya Bank and in June in the deeper Atlantic water; (2) the outburst of phytoplankton as the ice recedes to the northeast over the Central Bank. ***Copy seen:*** DLC.

MARTENS, HERMAN H., *see* Mefferd, R. B., *and others*. Metabolic responses of adapted rats . . . stress. *1957*. No. 53211.

MARTER, GEORGE, *see Aircraft*. The DEW airlift . . . *1956*. No. 49145.

53155. MARTI, ÎŪLIĬ ÎŪL'EVICH. Osnovnye ėtapy zhiznennogo t̂sikla atlantichesko-skandinavskikh sel'dei. (Murmansk. Polîarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozîaĭstva i okeanografii. Trudy, 1956. vyp. 9, p. 5–61, illus. tables, maps.) 81 refs. Text in Russian. ***Title tr.:*** Main stages in the life cycle of Atlantic-Scandinavian herring.

A comprehensive study dealing with areas and conditions of spawning; passive migration of the fry and early life conditions; growth of young and beginning of return migration; separation of maturing herring and spawning migration of recruits. Feeding migrations of adult fish and composition of shoals, fattening and concomitant physiological changes are considered; also migration routes and main feeding grounds of the adult; spawning aggregation and migration to spawning grounds. Enemies and competitors of herring are indicated. The problem of separate herds (races) is discussed, and stocks and their exploitation by the industry analyzed.

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MARTI, ÎŪLIĬ ÎŪL'EVICH, *see also* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958*. No. 51935.

MARTIN, D. E., *see* Fletcher, R. D. Arctic weather-forecasting problems . . . *1958*. No. 50929.

53156. MARTIN, JEAN, 1908– . Note sur un phénomène électrique observé dans un puits de glace sur l'inlandsis Groenlandais. Rapports scientifiques des Expéditions Polaires Françaises N II 3. (Annales de géophysique, 1957. v. 13, no. 1, p. 87–89, diagr.) 8 refs. Text in French. ***Title tr.:*** Note on an electric phenomenon observed in an ice pit on the Greenland Icecap.

"The phenomenon observed in 1949 at 'Camp IV latéral' (69°39′ N. 49°32′ W.) is described and its causes are discussed. A difference in potential of 29 v. was recorded with an ordinary voltmeter between a pocket of water (at −10° C.) at the bottom of a refrozen, 30-m. deep pit and the meltwater in its upper portion. The phenomenon is attributable to the Workman-Reynolds effect, which accompanies the freezing of diluted aqueous solutions. The water contained in the pit was probably contaminated by the boring tool and surface meltwater."—SIPRE.

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53157. MARTIN, JOHN DANIEL, *Jr.*, **1903– ,** *and others.* The utilization of hypothermia in early burn therapy. (Surgery, Feb. 1958. v. 43, no. 2, p. 258–65, illus.) 25 refs. *Other authors:* H. H. Stone *and* F. W. Cooper, Jr.

Account of observations on dogs submitted to various periods of hypothermia of ca. +30° C. immediately after receiving experimental burns. The metabolic rate of the burned area was definitely lowered, and water, electrolytes and plasma accumulation reduced.

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MARTIN, PAUL F., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

MARTIN, W. R., *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

MARTIN, W. R., *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

MARTÍNEK, J., *see* Křeček, J., *and others.* Vývoj thermoregulace, 5 . . . *1957.* No. 52479.

MARTINET, M., *see* Giroud, A., *and others.* Malformations urinaires . . . *1957.* No. 51202.

MARTINEZ, JOSEPH DIDIER, 1915– , *see* Howell, L. G., *and* J. D. Martinez. Polar movement . . . rock magnetism. *1957.* No. 51831.

53158. MARTINSON, G. G. Opredelitel' mezozoĭskikh i kaĭnozoĭskikh presnovodnykh mollîûskov Vostochnoĭ Sibiri. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1956. 92 p. illus., 16 plates. (Akademiîa nauk SSSR. Vostochnosibirskiĭ filial. Baĭkal'skaîa limnologicheskaîa stantsiîa.) 34 refs. Text in Russian. ***Title tr.:*** Key to Mesozoic and Cenozoic freshwater fossil molluscs of Eastern Siberia.

Monographic study of fossil Gastropoda and Pelecypoda collected in the Vilyuy depression, Vitim uplift, Lake Baykal region and other parts of Eastern Siberia. Ten Jurassic, 36 Cretaceous, 39 Miocene, and 19 Pliocene species are identified and full descriptions given. Many of them appear to be new. Many of these molluscs have widespread distribution and are of importance for Western Siberia, the Far East, and other regions.

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53159. MARTYNOV, G. A., *and* **S. V. SHIMANOVSKIĬ.** Termoparnaîa ustanovka dlîa izucheniîa temperaturnogo rezhima gruntov v estestvennykh usloviîakh. (*In:* Akademiîa nauk SSSR. Institut merzlotovedeniîa. Sezonnoe promerzanie gruntov i primenenie l'da dlîa stroitel'nykh tseleĭ, 1957. p. 35–51, tables, graphs, diagr.) Ref. Text in Russian. ***Title tr.:*** Thermocouples for studying soil temperatures under natural conditions.

Measurements made at the Zagorsk Experimental Station of the Institute of Permafrostology are described in detail, and the accuracy of data obtained 1952–1954 is analyzed. Observations to depths of 3–5 m. were supplemented with measurements of soil moisture and temperature and thickness of the snow cover. Frost penetration was studied with the Danilin frost-profile gage, but the ground-thawing heat was insufficient to melt the ice in the gage. Photographic records made simultaneously at 20 thermocouples were used to calculate thermal conductivity and to analyze soil-temperature variations with depth and time. Statistical analysis of all data collected, including those obtained with Lamont thermometers, showed standard deviations of 0.11° C. for individual readings and 0.03° C. for 10-day means.—From SIPRE. ***Copy seen:*** DLC.

MARTYNOV, G. A., *see also* TSytovich, N. A., *and others.* O fizicheskikh îavleniîakh . . . v . . . gruntakh. *1957.* No. 55539.

MARTYNOV, M. N., *see* Akademiîa nauk SSSR. IAkutskiĭ filial. Istoriîa IAkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957.* No. 49168.

53160. MARTYNOV, S. Luchshe snabzhat' okhotnikov Severa. (Okhota i okhotnich'e khozîaĭstvo, Mar. 1958. god 4, no. 3, p. 57.) Text in Russian. ***Title tr.:*** Better equipment for the hunters of the North.

Lack of wolf traps and too small caliber rifles are the complaint of the "organizer of hunting" (*okhotoorganizator*) in Arkhangel'sk Province. ***Copy seen:*** DLC.

53161. MARTYNOV, V. Kormlenie serebristo-chernykh lisits syroĭ rybo. (Sel'skoe khozîaĭstvo Sibiri, 1958, no. 1, p. 47–49.) Text in Russian. ***Title tr.:*** Feeding silver fox with raw fish.

Fur farmers in the Khanty-Mansi National District had 552 silver foxes in

1949, 8,513 in 1950, and in 1955 their pelts sold for over 12 million rubles. The abundant local fish supply the cheapest fox feed. Possibilities of making fuller use of small fish and methods of controlling infection from fish parasites, especially *Opistorchis*, which causes liver disease, are discussed, and selection of fishes unaffected by parasites is recommended. ***Copy seen:*** DLC.

53162. MARTYNOV, V. T. Vyîavlenie podvodnykh opolznel po lente ékholota. (Problemy Arktiki, sbornik statel, 1958. vyp 3, p. 95–101, illus., table, map.) 6 refs. Text in Russian. ***Title tr.:*** Detection of submarine landslides on the tape of an echo sounder.

Landslides of sediments occurring on steep inclines of the sea bottom, are usually recorded on the echo-sounder tape by a relatively thin line. Methods of computing the angle of inclination, from this record allowing for the speed of the vessel and rate of the tape's roll are discussed. Data are cited (cf. sketch map) on the distribution of submarine landslides in the Kara Sea, derived from the author's study of the records of 50 echo-sounder tapes of six expeditions.
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53163. MARTYNOVA, O. M. Skorpionnitsy (Mecoptera) fauny SSSR, II; semeĭstvo Panorpidae. (Éntomologicheskoe obozrenie, 1957. t. 36, no. 3, p. 721–47, 125 illus.) 29 refs. Text in Russian. Summary in French. ***Title tr.:*** Scorpion-flies (Mecoptera) of the fauna of the U.S.S.R., II; fam. Panorpidae.

Contains a discussion of the family, a table for the determination of the species of the genus *Panorpa*, and an annotated list of 15, of which one is described as new. *P. communis* occurring in the Vilyuy River basin in Yakutia, and *P. cognata* known from Khibiny in Kola Peninsula, are included. Pt. I of this work (1954) was listed as No. 36137.
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MARTYNOVA, Z., *see Shipping world.* Experimental ice channel. *1958.* No. 54804.

53164. MARUSOVA, V. Ĭ A. Opyt postroeniĭa shkaly shtrikhovykh uslovnykh oboznacheniĭ dliĭa pochvennykh kart SSSR. (Pochvovedenie, Aug. 1957, no. 8, p. 12–18, fold. plate.) Text in Russian. Summary in English. ***Title tr.:*** An attempt at preparation of a scale of hatchings for soil maps of the U.S.S.R.

Suggests marking soil types on black-and-white soil maps by conventional hatchings. Sample hatchings for 157 soil types, including those in tundra zones are shown on folded plate.
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53165. MARX, EDWARD J. F. A review of the subgenus *Donacia* in the Western Hemisphere; Coleoptera, Donaciidae. (American Museum of Natural History, New York. Bulletin, July 22, 1957. v. 112, art. 3, p. 191–278, 54 illus. (incl. 28 text maps.) 57 refs.

Contains a critical revision, with a review of the study, data on distribution, biology and morphological characters of the long-horned leaf beetles. Keys are given with a systematic annotated list of 28 species, of which one species and one subspecies are described as new; synonyms, type locality, general distribution, host plants and data on ecology are supplied, and distributional data appended (p. 263–76.) *D. distincta* (Northwest Territories, Yukon Territory and Alaska), *D. hirticollis* (Yukon, Alaska) and *D. proxima* (Northwest Territories), are included. ***Copy seen:*** DSI.

MARZINEK, B., *see* Bober, S., *and others.* Zmiany elektrokardiograficzne . . . *1957.* No. 49782.

53166. MASAĬTIS, V. L. Differentsirovannaîa intruziîa trappov v basseĭne srednego techeniîa r. Vilûĭ. (Leningrad. Vsesoûznyĭ geologicheskiĭ institut. Materialy, nov. seriîa, 1955. vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 213–16.) Text in Russian. ***Title tr.:*** Differentiated trap intrusion in the central Vilyuy River basin.

Preliminary report of author's work in 1953 and 1954 on a 300 km.^{2} area in the upper course of the Akhtaranda, tributary to the Vilyuy. Type, age, thickness and forms of the trap intrusions are outlined. The following groups of rocks are distinguished: gabbro-diorites and dolerite porphyrites; pegmatoid gabbro-dolerites and dolerite-pegmatites; pyroxenic techenites, quartzite alkali gabbro, alaskites and granophyres; troctolitic dolerites; olivine gabbro norites. Investigation of trap intrusions has a practical as well as theoretical interest. ***Copy seen:*** DLC.

53167. MASAĬTIS, V. L. Novye dannye o rasprostranenii ûrskikh otlozheniĭ v predelakh Vilûĭsko-Angarskogo

mezozoĭskogo progiba. (Leningrad. Vsesoĭuznyĭ geologicheskiĭ institut. Materialy, nov. seriĭa, 1955. vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 141–47, fold. map.) 10 refs. Text in Russian. ***Title tr.:*** New data on extension of Jurassic deposits within the limits of the Vilyuy-Angara Mesozoic depression.

Presents results of field work with the Tunguska-Lena Expedition in 1950 on the Lower Jurassic transgression and continental and marine deposits in the Chona valley (approx. 61° N. 109° E.) tributary to the Vilyuy. The transgression with NE–SW direction extends further SW than previously recognized, almost to the Chona-Nizhnyaya Tunguska watershed. This changes the geological understanding (also the map) of the region. ***Copy seen:*** DLC.

MASAĬTIS, V. L., *see also* Krasnov, I. I., *and* V. L. Masaĭtis. Tektonika Olenekskо-Vilĭuĭskogo vodorazdela . . . *1955.* No. 52467.

53168. MASLOV, N. A. Cod, Arcto-Norwegian stock; Soviet investigations into the biology of gadoid fish in the Barents Sea. (International Commission for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 141–45, illus., table, map.)

Contains information on size and age composition of cod and haddock stocks in 1951–1955 from catches of reconnaissance trawlers; similar data on young fish caught by small-meshed nets; distribution of young and adult fish in various regions of the Barents Sea; effect of fishing on the stock; catch forecast. ***Copy seen:*** DI.

53169. MASLOV, N. A. Saithe, Arcto-Norwegian stock; Soviet investigations. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 160–63, table, maps.)

Discusses the distribution of this fish in the Norwegian arctic waters throughout the year, with details on density of population, its size composition, and movements. Catch statistics on saithe and cod fry taken with young-fish seine in certain Murmansk inlets since 1949 are also discussed. ***Copy seen:*** DI.

MASLOV, N. A., *see also* Zenkevich, L. A. Deĭatel'nost' . . . *1958.* No. 56186.

53170. MASLOV, V. Aviatsionnaĭa navodka sudov na kosiaki sel'di. (Rybnoe khoziaĭstvo, Apr. 1958. god 34, no. 4, p. 35–37.) Text in Russian. ***Title tr.:*** Aerial guidance of boats to herring shoals.

Reports experiments in locating these shoals along the western and southern coasts of Kamchatka. Dependence of shoal position on winds, time of day and water conditions is discussed. Behavior of shoals towards boat and nets, as seen from the air, is described as well as routine air operations in guiding vessels during commercial fishing.

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53171. MASLOVA, G. S., *and* **L. M. SABUROVA.** Étnograficheskoe izuchenie russkogo naseleniia vostochnoĭ Sibiri; predvaritel'noe soobshchenie o rabote étnograficheskikh otriadov Angarskoĭ ékspeditsii AN SSSR v 1957 g. (Sovetskaia étnografiia, 1958, no. 3, p. 154–67, illus., diagrs., fold. map.) Ref. Text in Russian. ***Title tr.:*** Ethnographic study of the Russian population of eastern Siberia; a preliminary report on the work of the ethnographic teams of the Angara expedition of the Academy of Sciences of U.S.S.R. in 1957.

Review by leaders of the ethnographic teams of the Angara archeological expedition of the Institute of the History of Material Culture investigating settlements along the upper and middle Angara and its tributaries. The adaptation to local living conditions by the original, 17th–19th century, colonists (peasants, soldiery) and 19th century settlers (mostly political exiles) and the mutual cultural influence between the Russian and aboriginal Tungus (Evenki) and Buryat population are discussed. The material culture, customs and specific traits of this Siberian civilization are described: agri- and horticulture, animal husbandry, hunting and fishing, arts and crafts, housing (log cabins and outbuildings), clothing, food, religious rites, etc. The uniformity of customs and ways of life among this originally heterogenous population inhabiting both the middle and upper Angara regions is noted. ***Copy seen:*** DLC

53172. MASLOVA, G. S. Opyt sostavleniia kart rasprostraneniia russkoĭ narodnoĭ odezhdy. (Akademiia nauk SSSR. Institut étnografii. Kratkie soobshcheniia, 1955. vyp. 22, p. 12–20, fold. maps.) 18 refs. Text in Russian. ***Title tr.:*** An experiment in mapping the territorial spread of Russian national clothing.

Discusses two maps compiled by the Institute of Ethnography showing the spread of female national clothing in European Russia, including Arkhangel'skaya Oblast', in the mid-19th century. The different garment parts: dress (*sarafan*, cf. No. 55359), skirt, waist, etc., and their local variants are described and mapped. ***Copy seen:*** DLC.

53173. MASLOVA, G. S. Starinnaîa odezhda i goncharnoe proizvodstvo Kargopol'shchiny; po materialam komandirovki 1947 g. (Akademiîa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniîa, 1949. vyp. 6, p. 3–8, illus.) Text in Russian. ***Title tr.:*** Ancient clothing and pottery production of the Kargopol' region; materials from the scientific mission in 1947.

Preliminary report on author's advance investigations in southwestern Arkhangel'skaya Oblast' in connection with the North Russian (Severovelikorusskaîa) expedition of the Institute planned for 1948. The 16th–20th century national women's dress (sarafan) and headdress (kokoshnik), pearl and bead ornaments, embroideries, etc., are described. The local production of earthern-ware and clay toys is mentioned.

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53174. MASLOVA, G. S. Uzornoe tkan'e na russkom severe; po materialam Severnovelikorusskoĭ ėkspediťsii 1948–1949 gg. (Akademiîa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniîa, 1950. vyp. 9, p. 10–18, illus.) Text in Russian. ***Title tr.:*** Pattern-weaving in the Russian North; based on materials collected by the North Russian expedition of 1948–1949.

Describes the yarns (flax, cotton, worsted), articles of clothing, and household linens with variegated borders of the Pogost area on the mid Chur'ega River, a tributary of the Onega, north of Kargopol'. The patterns, color combinations and weaving techniques used in the 19th century and still practised by local kolkhoz women are discussed.

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MASLOVA, G. S., *see also* Levin, M. G. Polevye issledovaniîa . . . 1947 g. *1948.* No. 52791.

MASLOVA, G. S., *see also* Levin, M. G. Polevye issledovaniîa . . . 1948 g. *1949.* No. 52792.

MASLOVA, G. S., *see also* Levin, M. G. Polevye issledovaniîa . . . 1949 g. *1950.* No. 52793.

MASON, B. J., *see* Hallett, J., *and* B. J. Mason. Influence of organic vapours . . . crystal habit of ice. *1958.* No. 51520.

53175. MASORO, EDWARD JOSEPH, 1924– , *and others.* Effect of prolonged cold exposure on hepatic lipogenesis. (American journal of physiology, June 1957. v. 189, no. 3, p. 479–82, tables.) 12 refs. *Other authors:* J. M. Felts *and* S. N. Panagos.

A study of the ability of liver slices to convert acetate-I-C^{14} to $C^{14}O_2$ and fatty acid-C^{14}. Slices from cold-exposed rats incorporated much less acetate-I-C^{14} than those from unexposed controls. Carbohydrate metabolism of the tissue showed no differences between cold-exposed rats and controls indicating that depressed lipogenesis in the chilled animals is not associated with reduced carbohydrate metabolism.

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53176. MASORO, EDWARD JOSEPH, 1924– , *and others.* Lipogenesis from carbohydrate in the negative caloric balance state induced by exposure to cold. (American journal of physiology, July 1957. v. 190, no. 1, p. 177–79. table.) 9 refs. *Other authors:* C. L. Asuncion, R. K. Brown *and* D. Rapport,

Rats exposed to 0–2° C. for one or two days showed loss in weight and fatty acids, in spite of large food intake. Dietary glucose isotopic carbon was incorporated into fatty acids under these conditions indicating that even during negative caloric balance, lipogenesis is a pathway of carbohydrate metabolism.

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53177. MASSEY, P. M. O. Finger acclimatization in Grahamland. (Advancement of science, June 1957. v. 13, no. 53, p. 418–19.)

Account of comparative study between one-year residents and newcomers to the Antarctic. Adaptation of tactile acuity in cold fingers took six weeks; skin temperatures of the newcomers were higher and equalization with the old residents took six months. There was increased resistance to controlled, experimental frostbite in the oldtimers.

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MASSEY, WILLIAM C., *see* Driver, H. E., *and* W. C. Massey. Comparative studies of North American Indians. *1957.* No. 50629.

MASSIMO, C., *see* Boffi, L., *and* C. Massimo. Comportamento . . . ipotermia. *1958.* No. 49807.

53178. MASTERTON, JOHN POTTER, *and others.* Food intakes, energy expenditures and faecal excretions of men on a polar expedition. (British journal of nutrition, 1957. v. 11, no. 4, p. 346–58, illus., tables.) 19 refs. *Other authors:* H. E. Lewis *and* E. M. Widdowson.

Account of investigations made during the British North Greenland Expedition, 1951–1954. Records are presented of dietary intake of four men while sledging or living at the base hut and their energy expenditure. Analysis is made of nitrogen and fat in the feces while sledging; data are given on caloric intake of the huskies and the contribution of human feces to it. No physiological reason was found why huskies prefer human feces to other food. Other animals and birds, it is noted, also eat the feces of other species. ***Copy seen:*** DNLM.

53179. MASTERTON, JOHN POTTER, *and others.* Nutrition and energy expenditure during a polar expedition. (Advancement of science, June 1957. v. 13, no. 53, p. 414–16, tables.) 3 refs. *Other authors:* H. E. Lewis *and* E. M. Widdowson.

Account of investigation on the energy balance of men while sledging (on the British North Greenland Expedition) with energy balance of men living at the base hut used for comparison. Fat utilization by the sledging parties was also studied. Caloric intake of sledging men was found to be 4,770 cal./day against 4,200 cal. offered in earlier expedition. Fat, though high in the diet, was absorbed 96.8 and 96.3%.

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MASTERTON, JOHN POTTER, *see also* Lewis, H. E., *and others.* Changes in body weight . . . *1956.* No. 52799.

Lewis, H. E., *and others.* The food value of biltong . . . *1957.* No. 52800.

Lewis, H. E., *and* J. P. Masterton. A modern sledging ration. *1958.* No. 52801.

Lewis, H. E., *and others.* Science . . . sledging ration. *1958.* No. 52802.

Lewis, H. E., *and others.* Selection . . . measuring . . . human subcutaneous tissue thickness. *1958.* No. 52803.

Lewis, H. E., *and* J. P. Masterton. Sleep and wakefulness. *1957.* No. 52804.

Lewis, H. E., *and* J. P. Masterton. Sleep and wakefulness . . . men polar . . . *1957.* No. 52805.

Simpson, C. J. W., *and others.* North ice . . . *1957* No. 54901.

53180. MATERIALY PO LABORATORNYM ISSLEDOVANIÎAM MERZLYKH GRUNTOV, SBORNIK 3. Moskva, 1957. 323 p. illus., diagrs., tables, graphs. (Akademiîa nauk SSSR. Institut merzlotovedeniîa). Text in Russian. ***Title tr.:*** Data on the laboratory study of frozen ground, collection 3. In sequence to No. 41307, 41308.

Contains 17 papers: preliminary studies of physical effects and processes originating in freezing, frozen, and thawing soils are reported in part 1 (p. 5–114), a collective work by 12 authors; some recent investigations on the physics and mechanics of frozen ground in part 2 (16 papers). All papers are abstracted in this Bibliography under their authors' names, viz. (titles translated):

T͡SYTOVICH, N. A., *and others.* Physical effects and processes in freezing, frozen, and thawing soils.

BOZHENOVA, A. P., *and* F. G. BAKULIN. Experimental study of moisture migration in freezing ground.

BOZHENOVA, A. P. The role of osmotic forces in moisture migration in soils.

KOMAROV, V. D. Water permeability of frozen sand.

IVANOV, V. I. Water penetration through frozen ground.

NERSESOVA, Z. A. Changes in the active surface of soils by positive and negative temperatures.

NERSESOVA, Z. A. The effect of exchange cations on the phase composition of water in frozen ground.

GRIGOR'EVA, V. G. Depression of the freezing point of water in dispersed soils.

KONNOVA, O. S. Results of structural studies on frozen ground.

ZOLOTAREV, N. V. Certain thermal characteristics of hydraulically deposited sand.

VÎALOV, S. S. Rheological processes in frozen soils and their stress limit.

PEKARSKAÎA, N. K., *and* N. A. T͡SYTOVICH. Role of friction and cohesion in actual shear stress of frozen ground for cases of rapid load increase.

PEKARSKAÎA, N. K. Methods of determining the shear strength of frozen ground.

SHUSHERINA, E. P., *and* N. A. T͡SYTOVICH. Experiments on the effects of freezing and subsequent thawing on clay strength.

BEREZANT͡SEV, V. G. Soil stress limit under pressure of a spherical die.

GOL'DSHTEÎN, M. N. The use of models to study ground deformation under foundations during freezing.

VÎALOV, S. S. Using an electrical integrator for determining ground stress.

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53181. MATHER, JOHN R., *and* **C. W. THORNTHWAITE.** Microclimatic investigations at Point Barrow, Alaska, 1957–1958. Centerton, N. J., 1958. 239 p. illus., text maps, diagrs., tables. (Drexel Institute of Technology. Laboratory of Climatology, Publications in climatology. v. 11, no. 2.) 4 refs. Final report, Arctic Institute of North America, Subcontract project ONR no. 199, no. 223, no. 230.

Describes sites (five), instrumentation, program of observations, continued from 1956. Records of heat and moisture budgets, daily heat balance, precipitation, evapotranspiration, are analyzed. Minor microclimatic variations were found between a high-centered polygon area and the low-lying coastal area. Changes in some instruments are recommended.

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53182. MATHEWS, S. T. Investigation into icebreaking. (Canadian shipping, Apr. 1957. v. 28, no. 7, p. 38–41, illus., diagrs.)

Presents, in condensed form, paper read to the Eastern Canadian Section of the Society of Naval Architects and Marine Engineers, describing and analyzing author's experiences abroad an icebreaker of the *Wind*-class in Canadian Arctic Islands waters. Ice conditions are described; the mechanics of icebreaking, and bow and propeller design are discussed. The action of the bow riding up on an ice sheet is analyzed; relative importance of the mass of the ship, its speed, and the associate kinetic energy are shown. Improvements in design features are suggested.

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53183. MATHIASSEN, THERKEL, 1892– . Nekrolog: Peter Freuchen, 20. februar 1886–2. september 1957. (Grønland, Nov. 1957. nr. 11, p. 438–40, port.) Text in Danish. ***Title tr.:*** Obituary: Peter Freuchen, Feb. 20, 1886–Sept. 2, 1957.

Outlines the main events in Freuchen's life and includes some personal recollections.

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53184. MATHIASSEN, THERKEL, 1892– . The Sermermiut excavations 1955. København, C. A. Reitzel, 1958. 52 p. illus., diagrs., tables. (Meddelelser om Grønland, bd. 161, nr. 3.) 30 refs.

Deals with author's investigations at Disko Bugt, West Greenland, continuing the excavations of 1953 by J. Meldgaard (cf. No. 52664). Populated during three different periods, separated by sterile layers, the site contains objects (dated by C^{14}) belonging to the Sarqaq (9th–7th century B.C.) and Dorset peoples (1st century A.D.), and Inugsuk Eskimos succeeded by the West Greenlanders (12th–13th century to about 1850). The stratigraphy of the site, the chipped and rubbed stone (angmaq) implements of Sarqaq and stone (micro-blades), bone and wood artifacts of Dorset are described and tabulated. The spread and origin of Sarqaq (linked to Denbigh Flint Complex of Alaska and thence the neolithic and mesolithic of the Old World) and Dorset (favors theory of Canadian Arctic versus Alaska and ties with eastern Indian cultures) are discussed. The local West Greenland variant of the Dorset layer is noted.

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MATHIEU, S., *see* Chevallier, R., *and* S. Mathieu. Susceptibilité magnétique . . . pyroxènes monocliniques. *1958.* No. 50227.

MATIŬSHKIN, FEDOR FEDOROVICH, 1799–1872, *see* Angere, J. Jukagirisch-deutsches Wörterbuch . . . *1957.* No. 49326.

53185. MATIŬSHKINA, N. A. Osobennosti termoregulîat͡sii u cheloveka pri dozirovannoĭ i pri maksimal'no naprîazhennoĭ rabote. (Fiziologicheskiĭ zhurnal SSSR, Nov. 1956. t. 42, no. 11, p. 939–45, illus. tables.) 7 refs. Text in Russian. Summary in English. ***Title***

tr.: Characteristics of thermoregulation in man doing graded and most intensive work.

Account of axillary and rectal temperatures of men working in extremely high or low temperatures. Exercise of maximal intensity was in both cases followed by a greater rise in temperature "in men who were in good training form, as shown by their high performance in the competition."

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53186. MATLIN, GRIGORIĬ MARKOVICH. Perspektivy razvitiĭa vnutrennikh vodnykh putei SSSR na osnove kompleksnogo gidrotekhnicheskogo stroitel'stva. (Rechnoĭ transport, Aug. 1958. god 17, no. 8, p. 24–28, maps.) Text in Russian. ***Title tr.:*** Outlook on development of inland waterways in the U.S.S.R. on the basis of complex hydraulic-engineering construction.

The possibility of deepening rivers to prolong the navigation season, as part of a hydro-electric construction program is discussed. The system of hydro-electric plants, dams, canals, etc., is reviewed for European and Siberian areas, including the northern regions, with such rivers as the Vychegda, Pechora, Usa, Kama, Ob', Irtysh, Yenisey, Angara, Lena, and others.

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MATSEN, WILMETTA B., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

53187. MATSUSHITA, S. Some studies on the upper atmosphere in the auroral zone. (Annales de géophysique, 1958. t. 14, fasc. 4, p. 483–91, 3 graphs.) 28 refs. Summary in French.

Discusses correlations between ionospheric and geomagnetic phenomena in the auroral zone, based largely on recent observations at College, Alaska. Most remarkable geomagnetic phenomenon is the bay disturbance; described and related with ionospheric variations. The ionospheric phenomenon called the polar blackout is also described and explained.

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53188. MATTHEWS, M. K. Training for hardships; Naval curriculum contains the pioneering spirit. (Engineering, Dec. 6, 1957. v. 184, no. 4787, p. 706–707, illus., map.)

Describes the Royal Naval Colleges' program to train personnel for expeditionary work, and the 1957 training expedition to Iceland of a party of 41 naval officers with five leaders. Food, clothing, organization of the fieldwork (surveying, etc.) are noted.

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MATTHEWS, TED C., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

53189. MATVEEV, A. K. Iskopaemyĭ triton v zone vechnoĭ merzloty. (Priroda, July 1957, no. 7, p. 103–105, 2 illus.) 5 refs. Text in Russian. ***Title tr.:*** A fossil triton in the permafrost zone.

Records find of *Hynobius keyserlingi*, on Aug. 12, 1955, in the Susuman region of Magadan province (Okhotsk Sea region) at a depth of 14 m. in permafrost ground, consisting of clay overlain by a layer of gravel and peat. The newt thawed in tepid water was said to have moved for almost twelve hours. This phenomenon is discussed. The rather high permafrost temperatures in the area (average −1.0° to −1.5° C.) and presence in unfrozen strata in the active layer are suggested as factors in the resuscitation, if such it was.

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MATVEEV, V. D., *see* Danilovskaĭa, L. I., *and others*. Opyt stroitel'stva sbornykh domov . . . *1956*. No. 50438.

MATVEEV, V. D., *see* Shishkanov, G. F., *and* V. D. Matveev. K voprosu o zalozhenii fundamentov . . . *1956*. No. 54807.

53190. MAVOR, GEORGE E. Elective cardiac arrest with potassium during hypothermia. (Edinburgh, Royal College of Surgeons. Journal, Sept. 1957. v. 3, no. 1, p. 1–18, illus., tables.) 28 refs.

Account of experiments with hypothermic dogs subjected to potassium-induced elective cardiac arrest during circulatory stoppage. Resuscitation was obtained by a method using glucose and insulin. This method eliminates quickly the potassium, facilitates idioventricular activity and sinus rhythm. Of 44 dogs, 42 had normal heart action restored.

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53191. MAVOR, GEORGE E., *and others*. Resuscitation of the K-arrested hypothermic heart; an experimental study. (British journal of surgery, Mar. 1957. v. 44, no. 187, p. 521–29, illus. tables.) 30 refs. *Other authors:* R. K. McEvoy, R. A. Harder, and E. B. Mahoney.

Account of experiments with hypothermic dogs subjected to caval occlusion

and to K-induced cardiac arrest; in six cases ventricular fibrillation was also present. Resuscitation by means of cardiac massage with intravenous glucose and insulin led to recovery of sinus rhythm and a normal ECG. Three animals died, one as a result of K-overdose. ***Copy seen:*** DNLM.

53192. MAVROUDIS, ANTHONY N. Heated aggregates for concrete keep winter paving spread moving. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 30–33, illus.)

A boiler was used for live-steam heating of the aggregates in the bins and stockpiles on a road construction project at Hamburg, Pa. A six-in. subbase of crushed slag was protected against frost by a covering of straw between curing papers, used also to cure the concrete. An eight-in. layer of concrete at 60–100° F. was placed on the subbase, a wire mesh was positioned over the lift, and two in. of concrete upon that. Both pavers used had equipment for heating the water before mixing into the concrete batch. As added precaution against freezing a solution of 100 lb. calcium chloride: 25 gal. water was mixed into each concrete batch in the paver skip.

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MAXWELL, E. W., *see* Alaska. Employment Security Comm. Financing program . . . *1958*. No. 49198.

MAYER, WILLIAM VERNON, 1920– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

53193. MAYFIELD, HAROLD. Starlings nesting at Churchill, Manitoba. (Auk, Apr. 1954. v. 71, no. 2, p. 199.)

Note on *Sturnus vulgaris* first seen at Churchill in June 1940, and found nesting by the author in June 1952.

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53194. MAZOR, ĬŪ. R. O metamorfizme ugleĭ Noril'skogo raĭona. (Izvestiĭa vysshikh uchebnykh zavedeniĭ, Geologiĭa i razvedka, 1958, no. 4, p. 52–67, tables, maps.) 2 refs. Text in Russian. ***Title tr.:*** Metamorphism of coal in Noril'sk District.

Investigation of the origin of various types of coal in northwestern part of the Siberian platform, based on detailed studies of five main deposits on the Fokina and Serebryanaya Rivers, at Kayyerkan, in Shmidta and Nadezhdy Mts., in Rudnaya Mt., and at Imangda Ugol'naya. Data on specifications of coal in various seams of these deposits are tabulated and processes of metamorphic alterations of original brown coal by tectonic and geochemical factors are discussed. Known coal deposits of the area are located on text map.

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53195. MAZOVER, ĬÂKOV ALEKSANDROVICH. Raĭonirovanie potrebleniĭa ugleĭ i razvitie ugol'noĭ promyshlennosti v Krasnoyarskom krae. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. Izvestiĭa, 1958. no. 7, p. 3–12.) 2 refs. Text in Russian. ***Title tr.:*** Zoning of coal consumption and development of the coal industry in Krasnoyarsk Province.

Four coal basins are located in Krasnoyarsk Province: Kansko - Achinskiy, Minusinskiy, Tungusskiy and Taymyrskiy, and their combined resources amount to 2.5 trillion tons or a third of all Soviet coal. Some 39 billion tons are suitable for surface mining, yet only about 11 million tons are produced annually, including the 2.2 million mined at Noril'sk and the Kayyerkan deposits in the Tungusskiy coal basin. Flanked on the west and east by the Kuznetsk and Irkutsk coal basins, the Krasnoyarsk coal industry works only for local consumption. The interrelation of local coal-production and -consumption zones is discussed; the local coal supply problem at Noril'sk (p. 10) is noted.

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53196. MAZUR, PETER, *and others.* Survival of *Pasteurella tularensis* in sugar solutions after cooling and warming at sub-zero temperatures. (Journal of bacteriology, Mar. 1957. v. 73, no. 3, p. 394–97, illus., table.) 13 refs. *Other authors:* M. A. Rhian *and* B. G. Mahlandt.

Report on cooling this bacterium in 0.30 and 0.62 molal glucose or in 0.30 molal lactose solutions, to temperatures between −15° and −75° C. Recoveries after slow warming depended on the rate of cooling and the minimum temperature obtained, survival decreasing with increased speed of cooling. In general, recovery was apparently related to the extent of intracellular freezing.

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MEAD, WILLIAM RICHARD, *see* Jaatinen, S., *and* W. R. Mead. . . . Finnish farming. *1957*. No. 52031.

53197. MEADOWS, E. B., *and* **J. W. TOWNSEND,** *Jr.* Diffusive separation in the winter night time arctic upper atmosphere 112 to 150 km. (Annales de géophysique, 1958. t. 14, fasc. 1, p. 80–93, illus., 6 graphs.) 10 refs. Summary in French.

Analysis of 103 spectra obtained on the flight of an Aerobee-Hi rocket, Nov. 20, 1956, from Fort Churchill, produced data indicating the diffusive separation of argon and nitrogen in the region studied. Data on the general composition of the upper atmosphere were also obtained. Instruments are shown. Comparison is not made with data from other places or other times. ***Copy seen:*** DLC.

MEADOWS E. B., *see also* Townsend, J. S., *and* E. B. Meadows. Density . . . upper atmosphere . . . *1958*. No. 55497.

MEARES, J. D., *see* Macfarlane, W. V., *and* J. D. Meares. Intracellular . . . action and afterpotentials . . . muscle . . . 0° and 45° C. *1958*. No. 53003.

53198. MEDBØE, ODD. SAS' nordpolsrute gir aktuelle israpporter; en verdifull service til fangst og shipping i de nordlige farvann. (Polarboken 1957. p. 121–23, map.) Text in Norwegian. ***Title tr.:*** The SAS polar route gives up-to-date ice reports; a valuable service for hunting, fishing, and shipping in northern waters.

The Scandinavia to Japan route via the geographic North Pole and Alaska, was opened in Feb. 1957. On each flight, ice observations are made and transmitted to the company's radio stations (Andenes in north Norway, Isfjord in Svalbard), where they are available to shipping in the area. Series of photographs are likewise taken with special cameras mounted in the belly of the aircraft: these are at the disposal of Arktisk Institut in Copenhagen and Norsk Polarinstitutt, Oslo. ***Copy seen:*** DLC.

53199. MEDLER, J. T. A review of the genus *Scleroracus* in North America; Homoptera, Cicadellidae. (Entomological Society of America. Annals, May 1958. v. 51, no. 3, p. 230–41, 30 illus.) 11 refs.

Contains a key to the species of this genus of leafhoppers and treatment of 28 and one variety, with a synoptic description, a drawing of the internal male genitalia, distribution and known plant records. Several *S. plutonius, S. dasidus* and *S. angustatus,* are native to Alaska. ***Copy seen:*** DSI.

53200. MEDVEDEV, P. F. O khozfiâĭstvenno-biologicheskikh osobennostiâkh dvudomnykh rasteniĭ *Urtica dioica* L. (Botanicheskiĭ zhurnal, Dec. 1958. t. 43. no. 12, p. 1704–07, 4 tables.) 10 refs. Text in Russian. ***Title tr.:*** On the economic and biological significance of dioecious specimens of *Urtica dioica* L.

Presents information on various geographic races of the dioecious nettle, *Urtica dioica,* from various regions; and the flat-leaved nettle, *U. platyphylla,* in Kamchatka, considered a good fodder plant for cattle. Their economic and biological properties are given in tables. ***Copy seen:*** DLC.

53201. MEDVEDEV, V. S. Kratkiĭ ocherk dinamiki i morfologii zapadnogo poberezh'iâ Belogo moriâ. (Akademiiâ nauk SSSR. Okeanograficheskaiâ komissiiâ. Trudy, 1957. t. 2, p. 69–85, illus.) 37 refs. Text in Russian. ***Title tr.:*** A short outline of the dynamics and morphology of the west coast of the White Sea.

A study made during 1952–1953 from Kandalaksha (67°09′ N.) to Oneka (63°54′ N.) Bay. Earlier work is reviewed. Changes of relief in south-north direction are described, and discussed in relation to differences in structure and geology, role of fractures in the earth's crust. Three regions are distinguished on the basis of geological and geomorphological differences. Vertical movements of the coast, action of waves, tides and frost, deposition of transported material, etc., are considered in turn. ***Copy seen:*** DLC.

MEDVEDEV, V. S., *see also* Budanov, V. I., *and others.* Present-day vertical movements . . . seacoasts. *1957*. No. 49977.

MEDVEDEV, V. S., *see also* Budanov, V. I., *and others.* Sovremennye vertikal'nye dvizheniiâ beregov . . . *1957*. No. 49978.

53202. MEDYNSKIĬ, S. Na Chukotke; iz dnevnika kinooperatora. (Iŭnost', Mar. 1957. god 3, no. 3, p. 92–97, illus.) Text in Russian. ***Title tr.:*** In Chukotka; from the diary of a cameraman.

Sketches from his stay in Chukotka: a motorboat trip from Lavrentiya Bay around Cape Dezhneva to the village of

Naukan and Uelen; Uelen school; bone carvers; visit to the village of Lorino; acculturation of the Chukchis and improvement in their living conditions, new houses replacing the old "yarangas," etc. ***Copy seen:*** DLC.

53203. MEEK, JACK H. Polar disturbances. (*In:* Polar Atmosphere Symposium, *Oslo*, 1956. v. 2, *pub.* 1957, p. 120–28, maps, graphs.)

Status of ionospheric prediction is characterized and research of the last 25 years relative to the problem of polar geomagnetic disturbances reviewed. Variations in the critical frequency of F 2-layer with time and positional variations in northern regions are described, and their relation to magnetic disturbances is discussed. ***Copy seen:*** DLC.

53204. MEEK, JACK H. Prediction techniques at high latitudes. (Polar Atmosphere Symposium, Oslo, 1956. v. 2, *pub.* 1957. p. 101–107, graphs.)

A method of HF predictions developed in Canada by J. C. W. Scott, similar to existing methods and adapted to polar communication problems, is presented in detail. As with other methods, the system is based empirically on a linear relationship between the critical frequency and the sunspot number; its success thus depends on ability to estimate the sunspot number. An important limitation of this polar prediction system is that predictions are made for quieter periods whereas the ionosphere is often disturbed.

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MEEK, JACK H., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53205. MEEN, VICTOR BEN, 1910– . Chubb Crater, a meteor crater. (Royal Astronomical Society of Canada. Journal, Apr. 1957. v. 51, no. 2, p. 137–54, illus., diagrs., graphs, tables.) 8 refs.

Account of field observations of the (now-called) Ungava Crater (61°17′ N. 73°40′ W.) and adjacent areas about 61 mi. southeast of Wakeham Bay on Hudson Strait. Rocks of apparent Precambrian age underlie the region; bedrock near the crater is an almost white granite; the rim consists of granite, with a sprinkling of fragments on top and on the slopes. The area has been glaciated; the surface is almost completely boulder-covered; boulders are rough near the crater, rounded elsewhere. A generalized map, scale 1 in.=3 mi., indicates geologic and topographic features. Greatest depth measured was 825 ft., and rim-to-rim dimensions of the slightly elliptical crater are 11,500 by 11,000 ft. Limnological observations on Ungava Crater Lake and neighboring lakes are given in tabular summary. J. A. C. Keefe's survey of vertical magnetic intensity near the crater July–Aug. 1951, is reported (p. 148–54) by Keefe, S. H. Ward and J. T. Wilson, with graphs of magnetic profiles and contours. Sparse field observations suggest the presence of several zones of anomalous intensity, (see map). Rough estimates of the types of body causing the anomaly indicate presence of magnetite-bearing bands or dikes, believed to be of non-meteoritic origin. No meteoritic fragments were found, but from other evidence, the crater is concluded to have been produced by the explosion of a meteor, probably toward the end of the ice age. ***Copy seen:*** DLC.

53206. MEEN, VICTOR BEN, 1910– . Merewether crater, a possible meteor crater. (Geological Association of Canada. Proceedings, Dec. 1957, v. 9, p. 49–67, illus., 5 sketch maps, 4 tables.) 9 refs.

Meteoric origin of this crater, 58°02′ N. 64°02′ W., about 12 mi. east of the Quebec-Labrador boundary, is suggested after study of the area carried out July 23–Aug. 19, 1954. Evidence favors such origin: extreme symmetry, great depth, character of rim, excellent agreement with Baldwin's law for explosion craters; evidence is lacking for other origin, such as glaciation, solution of underlying bedrock, or vulcanism. Study of this crater started from an air photo taken by Col. Arthur F. Merewether, U.S. Army Air Force, in 1943. Its similarity in appearance to the Ungava, formerly Chubb Crater (No. 36170) is noted in support of meteoric origin. ***Copy seen:*** DGS.

MEEN, VICTOR BEN, 1910– , *see also* International Geographical Congress, 1952. Proceedings. *1957.* No. 51939.

MEFEDOVA, N. A., *see* Rozenberg, L. A., *and* N. A. Mefedova. Vzaimosvi͡az' bakterii . . . *1956.* No. 54424.

53207. MEFFERD, ROY B., *Jr., and* **H. B. HALE.** Effect of altitude, cold and heat on metabolic interrelationships in rats. (American journal of physiology, May 1958. v. 193, no. 2, p. 443–45, tables.) 14 refs.

Report on experiments with rats ex-

posed to either of these stresses for three months and examined in the final month for a series of metabolic variables. It was observed that many of them "remained in constant association in the different environments regardless of the extent of their separate quantitative changes." ***Copy seen:*** DLC.

53208. MEFFERD, ROY B., *Jr., and* **H. B. HALE.** Effects of abrupt temperature changes on excretion characteristics of rats acclimated to cold, neutral or hot environments. (American journal of physiology, Dec. 1958. v. 195, no. 3, p. 726–34, illus. tables.) 17 refs.

A study of some 30 variables in animals exposed to the new environment and fasting for 24 hrs. When compared to the neutral controls, most of the variables in the heat- and cold-acclimated rats were different under all conditions. Despite acclimatization, changes due to thermal shift were somewhat similar in most variables. Other variables in the cold-acclimated group tended to nonresponsiveness. ***Copy seen:*** DNLM.

53209. MEFFERD, ROY B., *Jr., and* **H. B. HALE.** Effects of altitude, cold, and heat on metabolic relationships in rats. Randolph AFB, Texas, Aug. 1957. 10 p. tables (U.S. Air Force. School of Aviation Medicine. Research report 57–141.) 14 refs.

Comparative study of rats exposed for three months to simulated altitude, cold or heat. Body weight, food and water intake and urine composition were studied during the last month. It was noted that many studied variables "remained in constant relationship in the different environments regardless of the extent of quantitative changes."

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53210. MEFFERD, ROY B., *Jr., and* **H. B. HALE.** Effects of thermal conditioning on metabolic responses of rats to altitude. (American journal of physiology, Dec. 1958. v. 195, no. 3, p. 735–38, tables.) 7 refs.

Exposures (with fasting) of altitude-adapted rats to ground level pressure with low (3° C.), neutral or high temperatures seldom produced a return to preacclimative conditions. Temperature response curves of the altitude group tended to parallel the corresponding curves of the controls, but most variables were on higher or lower planes.

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53211. MEFFERD, ROY B., *Jr., and others.* Metabolic responses of adapted rats to acute stress. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 87.) *Other authors:* H. B. Hale *and* H. H. Martens.

Account of urine determinations as indicators of metabolic cost in combinations of four groups of rats with controls. Following problems were studied: (1) effect of low barometric pressure on cold- or heat-adapted rats; (2) effect of cold or heat on altitude-adapted rats; (e) effect of cold on heat-adapted animals; and (4) vice versa. The overall metabolic "cost" for adapted animals did not appear to be greater than for controls.

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53212. MEFFERD, ROY B., *Jr., and* **H. B. HALE.** Temperature-dependent metabolic responses in cold- and heat-acclimated rats. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 109.)

Report on reactions of rats kept at 4°, 24° or 35° C. and then exposed to heat or cold. Indices of mineral and N metabolism were used for comparison. The reactions were complex and indicate the importance of prior treatment upon metabolic responsiveness.

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53213. MEFFERD, ROY B., *Jr., and others.* Whole body lipid metabolism of rats after chronic exposure to adverse environments. (American journal of physiology, Dec. 1958. v. 195, no. 3, p. 744–46, table.) 16 refs. *Other authors:* M. A. Nyman *and* W. W. Webster.

Report on experiments with rats exposed for two months to cold (2° C.), neutral, and hot environments and discontinuous simulated altitude with neutral temperature. All indices showed a lipid elevation in the cold, and most of them a depression in heat and altitude. The solid fatty acid/cholesterol ratio was temperature independent.

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MEFFERD, ROY B., *Jr., see also* Criscuolo, D., *and others.* Oxygen transport . . . rats . . . *1958.* No. 50383.

MEGEZHEKSKIĬ, M. V., *see* Akademiĭa nauk SSSR. ĬAkutskiĭ filial. Za sovetskuĭu vlast' . . . *1957.* No. 49170.

53214. MEIER, MARK F. The mechanics of crevasse formation. (*In:* International Union of Geodesy and

Geophysics. Association of Scientific Hydrology. Report 1957. v. 4, *pub.* 1958, p. 500–508, diagrs., tables.) 9 refs.

Discusses problem of glacier flow and fracture patterns, based on studies of crevasses on Saskatchewan Glacier in Canada and on the Greenland icecap. Preliminary results suggest that crevasses form when the maximum principal strain rate exceeds 0.01 $yr.^{-1}$; they form at a slight angle to trajectories of that strain rate, and shearing displacements occur across crevasse walls. Initiation of crevasses, their opening and extension rates are discussed and data given to allow prediction of velocity in areas where direct measurement is impossible.—From SIPRE.

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53215. MEIER, MARK F., *and others.* Preliminary study of crevasse formation, Blue Ice Valley, Greenland, 1955. Wilmette, Ill., July 1957. 80 p. illus., diagrs., maps, tables. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–1956, v. 1. SIPRE report 38.) 56 refs. *Other authors:* J. E. Conel, J. A. Hoerni, W. G. Melbourne, C. J. Pings, Jr., *and* P. T. Walker.

A quantitative study of some aspects of the geometry, mechanics, and thermodynamics of crevassing made June 26–Aug. 25, 1955, on the icecap east of Thule. Topography, meteorology, accumulation and ablation, and stratigraphy of the firn in the study area, are outlined, followed by description of the shape and structure of the crevasses; discussion of deformation measurements; comments on stress- and strain-rate environments; statement of a trial theory for the formation of a simple crevasse pattern, based on the fundamental criterion for crevasse formation: viz., a critical value of surface extension. Temperature measurements were made upon the ice body adjacent to a selected crevasse, by a total of 61 thermocouples. Conclusions summarize results of study and recommend further work; 17 tables summarize observations.

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53216. MEĬLAKH, I. G. K voprosu o proniknovenii vod Severnogo Ledovitogo okeana v Beringovo more. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 3, p. 35–40, diagrs.) 3 refs. Text in Russian. ***Title tr.:*** Penetration of the Arctic Basin waters into the Bering Sea.

In general, the currents of Bering Strait are dominated by the strong flow of Pacific waters into the Arctic Basin. A weak arctic-water current, however, is said to be noticed sometimes near the Chukotka coast of the Bering Sea, and analysis of temperature and salinity data in Provideniya Bay at 64°27′.7 N. 173°15′.3 W. in 1954–55 supported that claim. The flow of arctic waters into the Pacific, caused chiefly by north and northwest winds, attains its maximum in Sept.–Nov., and in some years masses of cold lower-salinity water from the Chukchi and even from East Siberian Sea, reach Provideniya Bay. Possibility of such a current must be taken into account in forecasting ice conditions in the northwestern part of the Bering Sea.

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53217. MEISTER, JÜRG. Der Seekrieg im finnisch-russischen Winterkrieg 1939–40. (Marine Rundschau, Apr. 1958. Jahrg. 55, Heft 2, p. 66–73.) Text in German. ***Title tr.:*** Naval warfare during the Finnish-Russian winter war 1939–40.

Contains a summarized account of the operations. Lack of any Finnish ships in the polar sea enabled the Russians to take Petsamo. ***Copy seen:*** DLC.

53218. MELANDER, AXEL LEONARD, 1878– . A monograph of the North American Empididae, pt. I. (American Entomological Society. Transactions, July–Oct. 1902. v. 28, no. 3–4, p. 195–367, plates 5–9).

Contains a discussion of this family of dipters, tables for separation of genera and species, and a systematic list of some three hundred species, about eighty described as new. At least 27 extend to Alaska, the Aleutians, and northern Canada. A catalog of North American species and an index to genera and species are added. ***Copy seen:*** DSI.

53219. MELANDER, AXEL LEONARD, 1878– . A synopsis of the dipterous groups Agromyzinae, Milichiinae, Ochthiphilinae and Geomyzinae. (New York Entomological Society. Journal, Sept. 1913. v. 21, no. 3, p. 219–73.)

Contains synopses and systematic treatment of genera and species, at least 18 new to science, including *Agromyza pollinosa* and *A. pacifica* n. ssp., native to Alaska. ***Copy seen:*** DLC.

53220. MELANDER, INGVE. A new giant *Populus tremula* in Norrbotten.

(Hereditas, 1938. bd. 24, häfte 1–2, p. 189–94, 4 illus., table.) 5 refs.

Reports discovery of a grove of giant triploid aspens (2n=57) growing 15 km. northwest of Boden in northern Sweden. The tallest, more than 20 m. in height, are 50–60 cm. in diameter at breast-height; length of stomata in diploid and triploid aspens is tabulated. Giant aspen's leaves are susceptible to rust disease but very resistant to *Polyporus*.

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MELBOURNE, WILLIAM G., *see* Meier, M. F., *and others*. Preliminary . . . crevasse formation . . . *1957*. No. 53215.

53221. MEL'CHINOV, M. S. Opyt rasseleniîa vitimskogo sobolîa v Verkhoîanskom raîone. (Akademiîa nauk SSSR. ÎAkutskiĭ filial, *Yakutsk*. Institut biologii. Trudy, 1958. vyp. 4, p. 172–86, tables, maps.) Text in Russian. ***Title tr.:*** Attempt to introduce the Vitim sable into the Verkhoyansk area.

Report on an experimental release of 201 sables during winter and spring of 1954 at four localities along the Tiryakhtyakh River (approx. 68° N. 140° E.). The flora and fauna of the new area are outlined. Details and conditions of the (3) releases, behavior during release, dispersal and settling, are described. Relation to supplied food, natural food are discussed. The released animals formed, in time, initial centers of population, but in a sparser measure than in southern Yakutia. ***Copy seen:*** DLC.

53222. MELDGAARD, JØRGEN. Grønlaendere i tre tusinde år. (Grønland, Apr. & May, 1958, nr. 4, 5, p. 121–29, 170–78, illus., maps.) Text in Danish. ***Title tr.:*** Greenlanders during three thousand years.

Contains accounts of excavations at Sermermiut near Jakobshavn in West Greenland, and (p. 170–78) in the Iglulik area in the northern part of the Foxe Basin in Canada. The work at Sermermiut was carried out in 1953, and the excavation profile is described in detail. The chronology (Sarqaq-Dorset-Thule) of the cultures was confirmed the next year by the excavations in Canada, where it was possible to divide the Dorset culture into five different phases. The Sarqaq remains are estimated to be approx. 3,700, and the oldest Dorset remains about 2,500–2,000 years old. The Dorset people seem to have disappeared about 600–700 years ago, either as a result of a change of climate or more probably because of the invasion by the Thule people. Details of the finds are given.

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MELDGAARD, JØRGEN, *see also* Geografisk tidsskrift. Nationalmuseet . . . *1957*. No. 51137.

MELDGAARD, JØRGEN, *see also* Harp, E. Arctic. *1958*. No. 51596.

MELDGAARD, JØRGEN, *see also* Larsen, H. E., *and* J. Meldgaard. Paleo-Eskimo cultures . . . *1958*. No. 52664.

MELDGAARD, JØRGEN, *see also* MacNeish, R. S. Archaeological investigations . . . 1957. *1957*. No. 53030.

53223. MELEKHOV, IVAN STEPANOVICH. Issledovaniîa byvsheĭ Severnoĭ bazy i Arkhangel'skogo stafsionara AN SSSR v oblasti lesovedeniîa i lesovodstva. (Akademiîa nauk SSSR. Izvestiîa vostochnykh filialov, 1957, no. 8, p. 163–67.) 8 refs. Text in Russian. ***Title tr.:*** Investigations of the former Northern Base and the Arkhangel'sk Station of the Academy of Sciences of the U.S.S.R. in the field of silviculture and forestry.

Reviews work of the forestry team of the Academy's Northern Base during 1938–45 in the Severnaya Dvina basin, also that of the Arkhangel'sk Station and (since 1949) its forestry section headed by the author. Forest classification, causes of forest fires, physical and mechanical properties of timber, its preservation in forest and storage have been studied; results of the work are noted.

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MELEKHOV, IVAN STEPANOVICH, *see also* Pozdniîakova, Z. V. Izuchenie prirodnykh bogatstv Sibiri . . . *1957*. No. 54123.

53224. MELIN, RAGNAR. Undersökningar vid Sveriges meteorologiska och hydrologiska institut över vattendragens isförhållanden. Stockholm, 1947. 50 p. illus. (Sweden. Meteorologiska och hydrologiska institutet. Meddelanden, ser. D, nr. 1.) Text in Swedish. Summary in English. ***Title tr.:*** Investigations of the Meteorological and Hydrological Institute of Sweden concerning ice conditions in water courses.

The effects of regulation works on the flow of water during the winter in northern Sweden are discussed, with emphasis on problems related to the lakes. The increased flow during winter

releases the heat storage at lower levels which is normally insulated from the top by the subjacent water layer. This retards the formation of ice in the winter, weakens the ice cover, and accelerates spring breakup. Traffic over the ice may be impeded by the regulated flow. Water power developments have greatly improved the ice conditions above the waterpower plants because many rapids with no or poor ice have been converted into lake-like ponds favorable to the formation of even and durable ice sheets.
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53225. MEL'KHEEV, M. N. Matochkin shar i Yugorskiĭ shar. (Geografiâ v shkole, July–Aug. 1958. god 21, no. 4, p. 53.) Text in Russian. ***Title tr.:*** Matochkin and Yugorskiy Straits.

Discusses the origin of these names. The word "shar," from the Zyryan language, means "strait;" "Matochkin" derives from the Russian word "mat' " for "mother," and "Yugorskiy" from "Yugra," the ancient Russian name of the northern region extending from the lower reaches of the Pechora to the Ob River. ***Copy seen:*** DLC.

53226. MEL'KHEEV, M. N. Ob usloviâkh obrazovaniâ i strukturnykh tipakh donnogo l'da na rekakh Vostochnoĭ Sibiri. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiâ, Jan.–Feb. 1958. t. 90, vyp 1, p. 63–66, diagrs. table.) 8 refs. Text in Russian. ***Title tr.:*** On the conditions of formation and structural forms of anchor ice in the rivers of Eastern Siberia.

"The problem is examined on the basis of long-period observations of underwater ice in rivers of the Angara basin. Stability of low air temperatures in the late fall favors intense formation of anchor ice, especially in mountains and shallows, where high turbulence and speed cause intense supercooling and prevent ice-cover formation. Flow conditions also determine the structure of anchor ice."—SIPRE. Transparent ice crystals and fine-grained crystals are described, their measurements and development indicated. These observations apply only to the rivers of East Siberia.
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53227. MELLOR M. Glacier observations in north-west Spitsbergen. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 61–66, 3 text maps, cross-sections, graphs, table.) 6 refs.

Results of observations in the Kongsfjorden region, Vestspitsbergen (79° N. 12° E.) by the Nottingham University Expedition, summer 1955. Accumulation and ablation measurements were made on Isachsenfonna and the accumulation area of Kongsbreen. Altitudes of the firn limit on Kongsbreen were noted, glacier flow measurements were made, also on Blomstrandbreen; findings are compared with H. W. Ahlmann's and others'; variations of glacier fronts of Kongsbreen and Blomstrandbreen and of Fjortende Julibreen in Krossfjorden since mid-19th century are reviewed. Annual accumulation surplus seems to have increased in recent years, the glaciers are in a strongly active state. ***Copy seen:*** DGS.

MEL'NIKOV, N. V., *see* Akademiâ nauk SSSR. Institut gornogo dela. Sovetskaâ gornaâ nauka, 1917–1957. *1957.* No. 49173.

53228. MELVILLE, EVOLYN. Discovery of the site of old Fort Yukon. (Alaska. University. Anthropological papers, May 1958. v. 6, no. 2, p. 119–21, illus.)

Describes the remains of a stockade (probably the fort built in 1847–48 by the Hudson's Bay Company) discovered in 1955 during grading operations. The site, damaged by Yukon River erosion, yielded sections of two log walls, pieces of schist, birch bark, rope, nails and a spear point. Cross sections of wood were dated by J. L. Giddings as 1847.
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53229. MELVILLE, R. *Abies amabilis*; Coniferae. (Curtis's botanical magazine, Oct. 1957. n. ser., v. 171, pt. 4, 4 p. illus., plate 306.)

Contains a description, citations, synonyms and notes on cultivation of this conifer, occurring in Southeast Alaska and British Columbia. ***Copy seen:*** DA.

MENDELEEV, DMITRIĬ IVANOVICH, 1834–1907, *see* Pinkhenson, D. M. D. I. Mendeleev . . . *1958.* No. 53998.

53230. MENGHIN, OSWALD. Vorgeschichte Amerikas. (*In:* W. D. von Barloewen, *editor.* Oldenbourgs Abriss der Weltgeschichte, Abriss der Vorgeschichte. München, Verlag R. Oldenbourg, 1957, p. 162–218, tables, maps. p. 232–34.) Refs. Text in German. ***Title tr.:*** Prehistory of America.

Includes (p. 183–87) a discussion of the circumpolar arctic and subarctic

cultures during the early neolithic and mesolithic eras (tabulated p. 216) and the microlithic artifacts of the hunting and fishing cultures of northeast Asia and North America. The Asiatic origin of the Eskimos is assumed and their two migration routes via the Bering Strait and the Aleutian Islands traced. The Yupik dialects of Siberia and southwest Alaska are considered as belonging to the early, and the Inupik dialects are attributed to the late Eskimo cultures. The different stages of North American (map p. 232) and Greenland Eskimo cultures and their typical artifacts are dealt with. Strong north Asiatic — Japanese (via the Aleutians) and Eskimo influences on northwest Indian cultures (Tlingit, Haida, etc.) are noted.

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53231. MENNER, V. V., *and* **M. E. RAABEN.** K voprosu o prirode melkikh skladok v mezozoe vostochnogo Pritiman'iâ. (Akademiiâ nauk SSSR. Izvestiiâ, ser. geologicheskaiâ, June 1958. god. 23, no. 6, p. 84–87, cross-sections, text map.) 7 refs. Text in Russian. ***Title tr.:*** On the nature of small folds in the Mesozoic of the eastern part of the Timan forelands.

Mesozoic folding and faulting in the Timan foreland in the Kedva tributary region of the Izhma valley do not require the extensive geomorphic and tectonic explanations stressed by F. N. Chernyshev, R. S. Makeev and others; neither does the Izhma faulting give reason to suspect intensive post-Mesozoic tectonic movements. Small and local folds in parts of the Timan platform may be of the same origin as those of the Kedva region and can be explained by rock fracturing and distortion.

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53232. MENOVSHCHIKOV, GEORGIĬ ALEKSEEVICH. Imena obladaniiâ v èskimosskom iâzyke. (Akademiiâ nauk SSSR. Institut iâzykoznaniiâ. Doklady i soobshcheniiâ, 1958. no. 11, p. 86–94.) 12 refs. Text in Russian. ***Title tr.:*** Possessive nouns in the Eskimo language.

Discusses the substantival and attributive-predicative meanings of Eskimo nouns with the possessive suffix "lik".

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53233. MENOVSHCHIKOV, GEORGIĬ ALEKSEEVICH. Iz istorii obrazovaniiâ chislitel'nykh v èskimosskom iâzyke. (Voprosy iâzykoznaniiâ, July–Aug. 1956. god 5, no. 4, p. 60–71.) 10 refs. Text in Russian. ***Title tr.:*** On the formation of numerals in the Eskimo language.

Gives an etymological analysis of the origin, formation and dialectal development of Eskimo numerals. The morphological and linguistic similarities between the cardinal numbers, based on the quinary (five-count) system, of the Western and Asiatic Eskimo languages attest to their formation in a common primigenial tongue; the differences are result of dialectal development after their territorial dispersion. A very early Aleut-Eskimo separation is suggested and certain structural affinities noted between the Eskimo and Chukchi-Koryak languages. ***Copy seen:*** DLC.

53234. MENOVSHCHIKOV, GEORGIĬ ALEKSEEVICH. Ukazatel'nye mestoimeniiâ èskimosskom iâzyke. (Voprosy iâzykoznaniiâ, Jan.–Feb. 1955. no. 1, p. 27–41.) 3 refs. Text in Russian. ***Title tr.:*** Demonstrative pronouns in Eskimo.

Analyzes the structure, origin and derivation of Eskimo demonstrative pronouns and suggests their formation during a past territorial and linguistic unity of the now widely dispersed Eskimo tribes (from Asia to Greenland), rather than a later parallel but independent development (cf. No. 36181).

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MENOVSHCHIKOV, GEORGIĬ ALEKSEEVICH, *see also* Hammerich, L. L. The Western Eskimo dialects. *1958.* No. 51540.

MENSCH-DECHENE, J., *see* Bargeton, D., *and others.* Échanges de chaleur de la main. *1958.* No. 49542.

53235. MEN'SHIKOV, P. N. Opyt primeneniiâ geofizicheskikh metodov razvedki pri poiskakh kimberlitovykh trubok. (Razvedka i okhrana nedr, Apr. 1957. god 23, no. 4, p. 42–49, table, graphs, diagr.) 5 refs. Text in Russian. ***Title tr.:*** Experimental use of geophysical methods of survey in searching for kimberlite pipes.

Geophysical work in locating deposits is discussed in relation to diamond pipes in the "Zarnitsa" and "Mir" deposits of Yakutia. Physical properties of rocks, especially kimberlites, served as basis for selection and evaluation of geophysical methods. Magnetic properties of kimberlite differ from those of the surrounding

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limestone, dolomites, etc. The rocks of a trap formation have magnetic properties of fluctuating intensity. Tufaceous rocks create a distinct magnetic anomaly. Aeromagnetic survey costs are approx. 1/35 that of surface work in the terrain conditions of Yakutia. Results of work at 100–600 m. altitudes are diagrammed (p. 44). Aeromagnetic survey of seven kimberlite pipe deposits is described with reference to intensity of magnetic effects and efficiency of the method. Gravimeters, gravitational variometers or gradiometers of high sensitivity are generally used for observation of magnetic anomalies of kimberlite pipes. For determination of the pipe deposit contour from aircraft in the permafrost region, additional experiments are required in use of the induction method.

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53236. MENZIES, ROBERT JAMES, 1923– . The marine borer family Limnoriidae: Crustaceae, Isopoda. (Bulletin of marine science of the Gulf and Caribbean, June 1957. v. 7, no. 2, p. 101–200, 42 illus.) 109 refs. *Pub. also as:* Contribution from; The Pacific Marine Station, Dillon Beach, Marin County, California; the Zoology Dept., Univ. of Southern California and the Scripps Institution of Oceanography, new ser. 931, and the Lamont Geological Observatory, no. 239; Biology program no. 15.

Contains a systematic and zoogeographic account of the wood- and seaweed-boring marine isopods of North and Central America. A brief review of the literature: taxonomic, distributional, ecologic, physiologic and anatomical studies, is included. The general morphology of *Limnoria* and its systematic characteristics are outlined. The family Limnoriidae is reestablished, with keys and diagnoses to 22 species, nine of which are described as new. Only one species, *Limnoria lignorum*, has a typical boreal distribution (Tromsø, northern Norway; Komandorskiye Islands; Adak in the Aleutians, and Sitka). Variations in salinity, temperature, dissolved oxygen, and food supply are considered the major factors influencing the distribution of the species. ***Copy seen:*** DLC.

MERCER, JOHN HAINSWORTH, 1922– , *see* American Geographical Society. Geographic study of mountain glaciation. *1958*. No. 49276.

MERCHANT, R. C., *see* Rindani, T. H., *and* R. C. Merchant. Effect of acetylcholine on cooled heart. *1957*. No. 54315.

53237. MERIKALLIO, EINARI. Finnish birds; their distribution and numbers. Helsinki, 1958. 181 p. illus., maps. (Societas pro Fauna et Flora Fennica. Fauna fennica, 5.)

A supplemented and improved English edition of a Finnish text of similar title (*Suomen lintujen levinneisyys ja lukkäärä*) published in 1955, and based mainly on line surveys. Some 327 species are considered and in the case of the more common ones, maps of their distribution density supplied. With a few exceptions only species are dealt with. Information offered in the text includes: limits and frequency of occurrence; locations of birds observed; breeding areas and habits; migrations; ecology; estimated number of birds in the country, etc. Arctic areas are well covered. An index of Latin names concludes the monograph.

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53238. MERKULOV, ANDREĬ. Khoziaeva Arktiki. (Grazhdanskaia aviatsiia, Sept. 1958. god 15, no. 9, p. 13–14, illus.) Text in Russian. ***Title tr.:*** The masters of the Arctic.

Praises personnel in arctic aviation, and recounts impressions from a recent re-supply mission to the drifting station North Pole–7. ***Copy seen:*** DLC.

53239. MERKULOV, ANDREĬ. Radiolokatsionnaia stantsiia "Stvor." (Sovetskiĭ morîak, Sept. 1957. god 17, no. 17, p. 21.) Text in Russian. ***Title tr.:*** The "Stvor" radar station.

Note on small-size radar for trawlers, developed by the Scientific Research Institute of the Shipbuilding Industry (Nauchno-issledovatel'skiĭ institut sudostroitel'noĭ promyshlennosti), it enables fishing in the Baltic and arctic seas to continue in spite of dense fog.

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MERPERT, N. Ĭ., *see* Gantskaia, O. A., *and* N. Ĭ. Merpert. Issledovaniia sovetskikh arkheologov . . . *1958*. No. 51079.

53240. MERRILL, WILLIAM M. Foliation, bubble trends, and dirt zones and their relation to glacier flow in part of North Ice cap, Northwest Greenland. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1766.)

Abstracts paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957. Describes data on orientation and distribution of planar and linear structures in glacier ice, obtained during field studies. ***Copy seen:*** DGS.

MESTYÁN, GYULA, *see* Szegvári, G., *and others.* Largactil hatása . . . *1957.* No. 55299.

MESTYÁN, GYULA, *see* Szegvári, G., *and others.* Die Wirkung des Chlorpromazins . . . *1958.* No. 55300.

53241. MERYMAN, HAROLD THAYER, 1921– . Ice crystal formation in tissues. (Research reviews, U.S. Office of Naval Research, Feb. 1958. p. 1–6, illus.)

An outline of factors, injurious and others, making up the freezing process of animal tissues. Crystallization of tissue water, dehydration, and the effect of rate of freezing on both, and on the tissues are studied. Duration of exposure and rate of rewarming are also discussed. ***Copy seen:*** CaMAI.

53242. MERYMAN, HAROLD THAYER, 1921– . Physical limitations of the rapid freezing methods. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 542–59, illus.) 6 refs.

Contains a discussion of heterogenous and homogenous nucleation in ice formation, recrystallization at low temperatures, freezing in cells, prevention of injury from slow or rapid freezing, applications and limitations of rapid freezing of biological material. ***Copy seen:*** DNLM.

53243. MERYMAN, HAROLD THAYER, 1921– . Tissue freezing and local cold injury. (Physiological reviews, Apr. 1957. v. 37, no. 2, p. 233–51, illus.) 91 refs.

A review of the field and its main literature with discussion of the terminology of the various kinds of cold injury; nonfreezing injury; freezing injury; experimental freezing; therapy in experimental and clinical freezing injury. Little knowledge of the fundamentals in the freezing process is considered as causing lack of effective therapy of cold injuries. ***Copy seen:*** DNLM.

53244. MESHECHOK, BORIS. Litt om mosedekkets rolle for naturlig foryngelse i granskog. (Norsk skogbruk, June 1956. årg. 2, nr. 11, p. 253–61, 377–78, 2 diagrs., 2 tables.) 17 refs. Text in Norwegian. ***Title tr.:*** Note on the role of moss cover in natural reforestation in spruce forest.

The chief factor in poor regrowth is believed to be the poor culture bed for seedlings provided by the raw humus soil cover common in these forests. Various possibilities are discussed for creating better seed bed and early growth conditions. Experiments with seed cultures are explained, and results of research on removal of moss cover are tabulated. Reports on the subject, briefly reviewed, include references to research at Pechenga on the Kola Peninsula. ***Copy seen:*** DA.

53245. MESHKOV, VLADIMIR IL'ICH. Poselok Tura, Évenkiĭskiĭ okrug. (Okhota i okhotnich'e khozĭaĭstvo, Dec. 1958. god 4, no. 12, fold. col. plate, insert between p. 32 and 33.) Text in Russian. ***Title tr.:*** The settlement of Tura in the Evenki District.

A lithograph by this noted Tungus artist is reproduced: a winter landscape of Tura illuminated by aurora. ***Copy seen:*** DLC.

53246. MESHKOVA, T. P. Vysokie urozhai pomidorov na severe. (Sad i ogorod, Mar. 1957. god 95, no. 3, p. 29–30.) Text in Russian. ***Title tr.:*** High tomato yields in the North.

Reports successful tomato-growing in hothouses by the Nar'yan-Mar Zonal Experiment Station in the Nentsy National District, with yields of 10–14 kg./sq. m. Hothouse construction, arrangement of the beds, soil preparation, manures and fertilizers, sowing and thinning the seedlings, watering, feeding, ventilation, pruning and cropping are described. The dry arctic climate of the district is characterized: a mean annual temperature of −3.3° C. and a negative temperature for eight months; the vegetation period with +10° C. min. averages 46 days a year (range: 18–51 days) and annual precipitation is 327 mm. ***Copy seen:*** DLC.

53247. MESIĀTSEV, S. Molodost' starogo goroda. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 26–27, illus., col. plate.) Text in Russian. ***Title tr.:*** The rejuvenation of an old city.

Sketch of Yakutsk: its water supply difficulties; modern houses built on reinforced concrete piles over permafrost; the underground laboratory of the Northeastern Branch of the Institute for Perma-

frost Study (Severo-vostochnyĭ filial Instituta merzlotovedeniĭa); the university active since 1956 and its 1,200 students; investigation of plants in the far North by V. P. Dadykin, chairman of the Academy of Sciences. ***Copy seen:*** DLC.

53248. METELITSA, V. I., *and others.* Issledovanie gazoobmena pri gipotermii. (Éksperimental'naĭa khirurgiĭa, Sept.–Oct. 1956. t. 1, no. 5, p. 24–31, illus.) 24 refs. Text in Russian. Summary in English. *Other authors:* L. R. Kaminskaĭa *and* E. M. Chelukhova. ***Title tr.:*** Study of gaseous exchange in hypothermia.

Account of investigations on dogs made hypothermic without breathing control. Results suggest that hypothermia coupled with deep anesthesia reduces gaseous metabolism and changes it qualitatively, probably by increasing the utilization of fats and proteins. Shivering, hiccups, etc. interfere with hypothermic effects by increasing gas metabolism and pulmonary ventilation. ***Copy seen:*** DNLM.

METZ, DELILAH, *see* Bang, G., *and others.* The effect . . . excess of vitamin A . . . rats. *1957.* No. 49513.

53249. MEYER, ARNO. Cod, arcto-Norwegian stock; German investigations. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958, v. 13, p. 145–46, illus., table.)

Contains information on German catches in recent years of cod and haddock in the waters off Bjørnøya, Spitsbergen and northwestern Norway; year classes and sizes dominant in the various areas, growth, conditions in the Barents Sea. ***Copy seen:*** DI.

53250. MEYER, ARNO. Cod, Greenland stock; German investigations. (International Council for the Study of the Sea. Annales biologiques 1955, *pub.* 1957. v. 12, p. 137–38, tables.)

Report based on German catches in East, South and West Greenland waters during 1955, including length and age composition, year classes and fishing results, climatic and ice conditions in the fishing area in 1955, hydrography, etc. ***Copy seen:*** DI.

53251. MEYER, ARNO. Cod, Greenland stock; German investigations. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 137–39, illus., table.)

Account of German catches in West, South and East Greenland with comparisons to 1955; size composition and year classes; fishes, other than cod, caught; origin of cod stocks; differences in composition of cod between the three areas; migrations; maturation; food. ***Copy seen:*** DI.

53252. MEYER, ARNO. Fischereiforschungsfahrt nach Südgrönland. (*In:* Köhlers Flotten-Kalender, 1956. Jahrg. 44, p. 51–61, illus., text map.) Text in German. ***Title tr.:*** Fishery research voyage to south Greenland.

Describes trawling expedition to Kap Farvel with the German 453 t. motor vessel *Bonn.* The fish (400 tons), mostly cod of about 70 cm. length and averaging 2.5–3 kg. in weight, were caught in 84 hauls; the fish was iced and landed in Germany. Echo sounding showed schools of capelin near the bottom from noon on, rising to 70–100 m. depth in the morning. A brief explanation is given of the currents which bring the cod to Greenland's west coast; some data on sea and air temperatures are included. ***Copy seen:*** DLC.

53253. MEYER, ARNO. Haddock, arcto-Norwegian stock; German investigations. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 151, table.)

Includes data on 1955 and 1956 catches off Bjørnøya, Spitsbergen, Finnmark, etc.; age and length composition; rate of growth in the different areas, etc. ***Copy seen:*** DI.

MEYER, ARNO, *see also* International Commission NW Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

53254. MEYER, FREDRICK G. *Valeriana* in North America and the West Indies; Valerianaceae. (St. Louis, Mo. Missouri Botanical Garden. Annals, Nov. 1951. v. 38, no. 4, p. 377–503, 48 illus. incl. 26 text maps.)

Contains an historical review, data on morphology, geographic distribution, classification and economic importance of this perennial herb. A generic description, keys to the series and species are followed by an annotated list of 31 species, 11 subspecies and seven varieties, several described as new, and extensive lists of specimens provided. *V. s.* ssp. *sitchensis* from Sitka, Alaska, and *V. c.* ssp. *capitata* from Alaska and northern Canada are included. ***Copy seen:*** DA.

53255. MEYER, G. E., *and others.* A versatile new family of elastomers. (Rubber world, July, Aug. 1957. v. 136, no. 4, 5, p. 529–36, 695–701, graphs, tables.) 33 refs. *Other authors:* W. E. Gibbs, F. J. Naples, R. M. Pierson, W. M. Saltman, R. W. Schrock, L. B. Tewksbury, *and* G. S. Trick.

New specialty rubbers were prepared by free radical addition of aliphatic mercaptans to the double bonds of diene polymers. By varying the nature of the base polymer, the mercaptan, and the extent of saturation, a wide range of compositions and physical properties was attained in the adducts. Preparation of solvent resistant polymers with improved low temperature flex properties is graphed (p. 696). Low temperature stiffening and embrittlement of adduct elastomers as a function of the extent of saturation and chain length of mercaptan, are examined and graphed (p. 695).

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53256. MEYER, JOHN STIRLING, 1924– , *and* J. HUNTER. Effects of hypothermia on local blood flow and metabolism during cerebral ischemia and hypoxia. (Journal of neurosurgery, Mar. 1957. v. 14, no. 2, p. 210–27, illus.) 20 refs.

Account of investigation on laboratory animals and man concerning the effects of cerebral hypoxia and ischemia in hypothermia. Decreased cerebral blood flow and metabolic rate, and vasoconstriction were observed, but no reduction of O_2 available to nerve cells. Hypothermia produced "a varying degree" of reversible neuronal paralysis which may be controlled by changing the body temperature. ***Copy seen:*** DNLM.

53257. MEYER, MAX WILHELM, 1853–1910. Die Rätsel der Erdpole; achte Auflage. Stuttgart, Franckh'sche Verlagshandlung, 1906. 90 p. illus., maps. (Kosmos, Gesellschaft der Naturfreunde. Die ordentl. Veröffentlichungen, 1906, Bd. 2.) Text in German. ***Title tr.:*** Mysteries of the earth's Poles; eighth edition.

Popular account of arctic (p. 5–58) and antarctic explorations with brief outline of polar problems then awaiting solution.

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53258. MEYERS, SAMUEL P. Taxonomy of marine Pyrenomycetes. (Mycologia, July–Aug. 1957. v. 49, no. 4, p. 475–528, 29 illus.) 19 refs.

Contains a critical study of marine fungi from various oceanic areas, living on a wide range of substrates: algae, vascular plants, weed and cordage. Keys are followed by a systematic annotated list of 30 genera and some 70 species, of which two and five respectively, also one variety, are described as new; five new combinations are established. Included are *Placostroma laminariae* n. comb. (on *Laminaria longicruris*, Greenland, and *L. agardhii*, Jan Mayen waters), and *Guignardia alaskana* (on *Prasiola borealis*, Alaska, Kodiak Island). A list of doubtful genera and species and a host index are appended. ***Copy seen:*** DA.

MEZHTSIEMS, V. N., *see* Pankov, V. A., *and others.* Chuma pestsov. *1957.* No. 53852.

53259. MEZHVILK, A. A. Istoriia geologicheskogo razvitiia Severnogo Kharaulakha. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Mar. 1958. god 23, no. 3, p. 78–84, map.) 14 refs. Text in Russian. ***Title tr.:*** History of the geological development of the northern Kharaulakh Mts.

Presents summary of tectonic developments in the area 71°–72°30′ N. between the Lena on the west and Laptev Sea on the east. Three major tectonic structures are distinguished: Olenek uplift, Lena tectonic depression filled with Permian, Triassic, Jurassic and Cretaceous deposits, and Kharaulakh first order anticlines divided in separate structures. A tectonic map is included and the geologic history of these structures, their extent, and effects are outlined.

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53260. MEZHVILK, A. A. Novye dannye po stratigrafii ordovikskikh i siluriĭskikh otlozheniĭ Severnogo Kharaulakha. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, sbornik stateĭ po geologii Arktiki, vyp. 5, p. 55–60, tables.) 7 refs. Text in Russian. ***Title tr.:*** New data on the stratigraphy of Ordovician and Silurian deposits of the northern Kharaulakh Mts.

Presents basic revisions in the stratigraphy of Ordovician and Silurian deposits in the Kharaulakh mountain area (71°40′–72°20′ N. 127°–130° E.) of Yakut A.S.S.R. Ordovician dolomite series and Silurian carbonate series are treated in detail and their distribution, thickness, lithologic composition and

faunal characteristics outlined. Adjusted stratigraphic division is tabulated. ***Copy seen:*** DGS.

53261. MEZHVILK, A. A. Stratigrafiîa severnogo Kharaulakha. (Sovetskaîa geologiîa, July 1958. god 1, no. 7, p. 43–61, text map.) 16 refs. Text in Russian. ***Title tr.:*** Stratigraphy of the northern Kharaulakh Mts.

Comprehensive study of the Paleozoic, Mesozoic and Cenozoic systems in a 6,000 sq. km. area north of 71° N. between the Lena River and the Laptev Sea; based on extensive field study and geologic mapping at scale 1:200,000 in 1950–1952. Cambrian, Ordovician-Silurian, Devonian, Carboniferous, Permian, Triassic, Jurassic, Cretaceous, and Paleogene deposits are described. Their locations, composition, faunal and floral characteristics are outlined. ***Copy seen:*** DLC.

53262. MEZHVILK, A. A. Tretichnye otlozheniîa Severnogo Kharaulakha. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958, t. 80, Sbornik statei po geologii Arktiki, vyp. 5, p. 61–78, tables, maps.) 14 refs. Text in Russian. ***Title tr.:*** Tertiary deposits of the northern Kharaulakh Mts.

Presents new data on the stratigraphy, tectonics and coal possibilities of Tertiary deposits in this area. These deposits (in eight localities) are treated in detail with emphasis on organic matter. Identified flora and pollen analyses are presented. Occurrence and development of brown coal and its layers are outlined.

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53263. MICHAEL, HENRY N. The neolithic age in eastern Siberia. Philadelphia, Apr. 1958. 108 p. illus., tables, maps. (American Philosophical Society. Transactions, new ser. v. 48, pt. 2.) 165 refs.

A concise and exhaustive survey of the major neolithic finds in eastern Siberia (except the Soviet Far East), based mainly on A. P. Okladnikov's excavations in the Lake Baykal area, the middle and lower Lena valley and the arctic littoral between the Khatanga and Kolyma Rivers. The stone, bone and bronze artifacts, sculptures, skeletal remains, etc., of these three regions are described in chronological order from the late paleolithic to the early iron age, with particular stress on the Isakovo, Serovo and Kitoy periods (4th–2nd millennium B.C.). The main burial and habitation sites are correlated and mapped. The differences and affinities between the Lena-arctic coast and Lake Baykal finds are analyzed and the existence in neolithic times of two distinct culture areas, north and south of present-day Yakutsk, indicated. The connections between the Paleo-Eskimo cultures and the east Siberian neolithic are outlined, the significant finds in northern North America reviewed and the problems of chronological synchronization noted.

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MICHAELSON, NEIL E., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53264. MICHÉA, JEAN P. L'art Esquimau. (Géographia, Mar. 1958. no. 78, p. 34–40, 9 illus.) Text in French. ***Title tr.:*** Eskimo art.

Discussion of Eskimo culture with consideration of the Eskimo's awareness of natural surroundings, spiritual values, his materialist concept of life, understanding of "Sila" (the universe), his artistic expression in functional and decorative objects, in songs and dances, etc. Legends form an important part of his life. His sense of humor and self-respect are basic attributes.

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53265. MICHÉA, JEAN P. L'iglou. (Géographia, Dec. 1957. no. 75, p. 53–60, illus., diagrs.) Text in French. ***Title tr.:*** The igloo.

Discusses the construction technique of the Canadian Eskimo snow house, its furnishings, lighting and heating, insulation, etc. The emergency shelter and the house with entrance passage and porch, wooden door and storage anteroom (floor plan and profile given), also the complex of several dwellings with a common entrance passage are described. The kragmar or kraggak (community hall) and the kangmak (snowhouse topped by tent, used during the spring melt) are sketched in turn. Also noted are the semi-subterranean, rectangular, stone-reinforced, wooden house used in Greenland (except Smith Sound region), Alaska and the Mackenzie delta area; the circular hut of the Bering coast, and the ancient "tounit" made of whale bones and covered with skins and earth. The comparatively recent derivation of the snow house from the circular, snow-reinforced hut is suggested. ***Copy seen:*** DGS.

53266. MICHÉA, JEAN P. Petrolio sotto il Mackenzie. (Vie del mondo, July 1958. anno 20, no. 7, p. 719–28, illus., map.) Text in Italian. ***Title tr.:*** Oil beneath the Mackenzie.

Sketches the economic resources of the Mackenzie Basin and describes oil production at Norman Wells. Operating at full capacity ten months a year, 24 hrs. a day, the wells yield currently 1,300 bbls./day. Operational difficulties arise from the subarctic climatic conditions: the permafrost layer approx. 50 m. deep, ice on the Mackenzie River impeding the use of floating derricks, flooding of wells during the spring break-up, etc. Operation Canol and record oil production during World II, construction and abandonment of the (Canol) pipe line to Whitehorse and Skagway refineries, etc., are mentioned. The area's technological development has affected adversely the native hunting economy of the Hare Indians; their economic crisis, Canadian Government and other relief activities, the difficulties of recruiting them as labor at industrial sites (involving abandonment or relocation of families) and the planned training of a skilled labor force are discussed. The Norman Wells area is considered typical for social problems concomitant to development of the far North. ***Copy seen:*** DLC.

53267. MICHÉA, JEAN P. Les ruses de chasse chez les Esquimaux. (Géographia, Nov. 1957. no. 74, p. 7–12, illus.) Text in French. ***Title tr.:*** Hunting tricks of the Eskimos.

Describes various ruses and lures used in seal, caribou and fox hunting, usually to rouse the animal's native curiosity: agitating bits of bone from the harpoon point under water, singing, knocking lightly on the kayak bottom, etc. to attract the animal. Use of salt and urine to attract caribou, and of cairns and corrals to lead them into shooting range, use of baited traps for fox hunting, etc., are described. ***Copy seen:*** DGS.

53268. MICHELSSON, BERTEL E. KaMeWa-propellern. (Tekniska föreningen i Finland. Förhandlingar, June 1950. årg. 70, nr. 6, p. 93–98, illus., diagr., graphs.) Text in Swedish. ***Title tr.:*** The KaMeWa propeller.

Describes the propeller (made by Karlstads Mekaniska Werkstad, Sweden), stressing its value where great maneuverability is required, e.g. in ice-breakers. Two Finnish ice-breaking harbor tugs, the *Porin Karhu* and the *Aura*, are equipped with this controllable pitch propeller. ***Copy seen:*** DLC.

53269. MICK, ALLAN H. Arctic and subarctic agriculture. (Biology Colloquium, 18th, 1957. p. 100–109, illus., tables.) 26 refs.

Discusses food production potential in Alaska: acreage, demand, climate and growing season characteristics, the subarctic photoperiod, and soil resources. In terms of land, Alaska can expect to develop ¼ to ½ of the overall acreage needs of the population, but farm development is slow. Long hours of daylight available for photosynthesis causes rapid growth with less physiological aging of vegetables, but raises problems of premature blooming and break-down of winter-hardening mechanisms. Effects of variations in light quality caused by differences in angle of incidence of solar rays are under study, and plant strains not sensitive to long-day length and tolerant of variations in light quality are being sought. Most Alaskan crop production occurs on subarctic brown forest soils (described) which contain high potash levels but are deficient in organic matter and nitrogen, necessitating fertilizer applications. In some places, permafrost inhibits cultivation of otherwise good lands. ***Copy seen:*** DGS.

MICK, ALLAN H., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

MICK, ALLAN H., *see also* Laughlin, W. M., *and others.* Fertilizers . . . *1958.* No. 52678.

53270. MIDDLEKAUFF, WOODROW W. The North American sawflies of the genera *Acantholyda, Cephalcia* and *Neurotoma,* Hymenoptera, Pamphiliidae. (California. University. Publications in entomology, May 20, 1958. v. 14, no. 2, p. 51–174, 105 illus., 3 plates.) 127 refs.

The nearctic species belonging to these genera are studied in an attempt to clarify taxonomic difficulties. The introductory part (p. 51–70) includes an historical review, external morphology and terminology, phylogeny and geographical distribution, bionomics, and classification. The special part contains a systematic arrangement (p. 70–160) with keys (male and female), synonyms, descriptions of 11 new species and redescriptions of 37 recognized species.

with life history notes, hosts and distributional records. Five of the species are native to Alaska and northern Canada. ***Copy seen:*** DLC.

MIEGHEM, JACQUES VAN, *see* IUGG. Symposium on polar meteorology. *1958.* No. 51947.

53271. MIELCHE, HAKON, 1904– . Ved det yderste hav. København, Steen Hasselbalch, 1958. 221 p. illus. maps. Text in Danish. ***Title tr.:*** By the farthest sea.

Popular account of the winter herring and cod fishing industry on the west and north coast of Norway. Personnel, equipment, modern means of locating fish, and the use of both old and new methods of preparing consumers' specialties are described. The work of the *G. O. Sars* and other Fishery Directorate vessels, and of Finn Devold and other investigators is explained. Cooperative effort and the strategic and economic importance of this industry are stressed. ***Copy seen:*** DLC.

53272. MIHAILOVIĆ, L., *and others.* The effects of epinephrine on the blood sugar and potassium levels in hypothermia. (Archives internationales de physiologie, May 1958. v. 66, fasc. 2, p. 177–81, tables.) 19 refs. *Other authors:* M. Draškoci *and* L. Kržalić.

Report on experiments with rabbits made hypothermic to 21°— 19° C. Intravenous injection of epinephrine to such animals did not significantly alter the blood sugar and potassium levels. ***Copy seen:*** DNLM.

53273. MIHELICH, MIRO, *and* **R. R. WELLS.** Copper mines and prospects adjacent to Landlocked Bay, Prince William Sound, Alaska. Washington, D.C., 1957. ii, 21 p. maps incl. part. fold., tables. (U.S. Bureau of Mines. Report of investigations 5320.)

Presents results of examination, mapping, and sampling of the area, 60°51′–52′ N. 146°31′–35′ W. Deposits of copper-bearing iron sulfide minerals were recorded in the eight mines examined (copper production ceased in 1938). Accessibility, property and ownership, physical features and climate, history, production statistics (1904–1916), geology, mines and prospects are treated in turn; results of laboratory investigations of samples are tabulated. Detailed diagrams are presented of each mine. ***Copy seen:*** DI.

MIHELICH, MIRO, *see also* Lorain, S. H., *and others.* Lode-tin mining at Lost River . . . *1958.* No. 52911.

53274. MIKHAĬLENKO, M. Sorokaletie Omskogo sel'skokhozâĭstvennogo instituta imeni S. M. Kirova. (Sel'skoe khozâĭstvo Sibiri, 1958, no. 3, p. 82–88, illus.) Text in Russian. ***Title tr.:*** Fortieth anniversary of the Kirov Agricultural Institute in Omsk.

Its director recounts the activities of the Institute, founded Feb. 24, 1918. It has graduated some 7000 specialists; studied many problems of local agriculture, including the utilization and melioration of northern marshes. In 1958 it had 4,810 students, and 323 scientists on its teaching staff. ***Copy seen:*** DLC.

MIKHAĬLOV, A. F., *see* Vereshchagin, V. N., *and* A. F. Mikhaĭlov. K stratigrafii . . . mela Kamchatsko-Anadyrskoĭ . . . *1957.* No. 55789.

MIKHAĬLOV, N. N., *see* Demenitskaâ, R. M., *and* N. N. Mikhaĭlov. Osnovnye rezultaty geofizicheskikh issledovaniĭ . . . *1958.* No. 50489.

53275. MIKHAĬLOV, NIKOLAĬ IVANOVICH. Sibir', fiziko-geograficheskiĭ ocherk. Moskva, Gos. izd-vo geogr. lit-ry, 1956. 382 p. illus., ports., maps (part fold.) 71 refs. Text in Russian. ***Title tr.:*** Siberia; a physical geographic outline. Second edition, revised and enlarged.

Describes the area which includes Omsk, Tyumen' and Krasnoyarsk Provinces, Yakut A.S.S.R. and the western part of Magadan Province, in chapters on: general geography; explorations; surface structure; climate; interior waters; soils, vegetation and animals; physical-geographic provinces. Soils are discussed (p. 142–277) as tundra, forest-tundra, forest-taiga, forest-steppe, steppe, and mountainous areas. Brief outline is given of the arctic seas and development of the Northern Sea Route (p. 9–11); the main rivers, Ob, Yenisey, Lena, Kolyma, etc., their spring floods, anchor ice and naleds in winter (p. 119–35, 288–93, 308–313); permafrost and fossil ice phenomena (p. 112–18); reindeer husbandry and its significance in the northern economy (p. 150–57, 161–67); ores, coal and minerals (p. 314–17, etc.); distribution of population and its changes; etc. Economic progress and prospects are discussed in conclusion. Orographic

fold. map and several schematic text maps (permafrost area, river discharge, distribution of vegetation, etc.) are given; numerous illus. (e. g. of Angarsk, Noril'sk, Olenek, etc.) enliven the text. ***Copy seen:*** DLC.

53276. MIKHAĬLOV, S. V. Nauchnaîa sessiîa po problemam kompleksnogo razvitiîa proizvoditel'nykh sil Kamchatskoĭ oblasti. (Voprosy ėkonomiki, Sept. 1957. no. 9, p. 157–60.) Text in Russian. ***Title tr.:*** Scientific conference on general development of natural resources of Kamchatka Province.

Reports work of conference at Petropavlovsk July 3–10, 1957, called by the Commission on the Problems of the North (Komissiîa po problemam Severa) of the Academy of Sciences and by local authorities. Papers on development of the fishing industry (still predominant in the Kamchatkan economy), and on utilization of local resources (coal, peat, water power, thermal energy, minerals), and on development of transportation, forestry, agriculture and animal husbandry were delivered and discussed. Plans to utilize thermal energy from Pauzhetskiye hot springs for an electric station and from Paratunskiye springs for heating in Petropavlovsk were stressed. ***Copy seen:*** DLC.

53277. MIKHAĬLOV, S. V. Rybnye i zverinye promysly sovetskogo Zapolîar'îa. (Problemy Severa, 1958. vyp. 2, p. 238–52, tables.) Text in Russian. ***Title tr.:*** Fisheries and hunting of the Soviet Arctic.

The place of arctic fisheries and animal products in the Soviet economy is discussed with details on these industries and their production in the Kara, Laptev and East Siberian Seas. The Ob-Taz, Yenisey-Pyasina, Lena, Yana, Khatanga, Kolyma and Indigirka regions are treated in turn, and data are given according to years, localities and species. Some processing data are given for 1955–1956. Research and developmental potentialities are also discussed. Hunting of marine animals appears to be negligible. ***Copy seen:*** DLC.

MIKHAĬLOV, S. V., *see also* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . îAkutskoĭ ASSR. *1958.* No. 49171.

MIKHAĬLOVA, A. F., *see* Atlasov, I. P., *and others.* O nakhodke îsirkonievogo . . . *1957.* No. 49420.

MIKHAĬLOVA, N. V., *see* Ėskin, I. A., *and* N. V. Mikhaĭlova. Fotoperiodichnost' . . . gipofiza . . . nadpochechnikov. *1958.* No. 50790.

53278. MIKHAĬLOVSKAîA, A. A. Biologiîa i promysel sel'di Onezhskogo zaliva. (Akademiîa nauk SSSR, Karelskiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîu Belogo moriîa, 1957. vyp. 1, p. 74–89, illus. tables, map.) 11 refs. Text in Russian. ***Title tr.:*** The biology and fishery of the Onega Bay herring.

Taxonomy and life cycle of this herring are outlined; discussion and data follow on migrations and catches in 1951–52, size of fry, size composition of catches, growth rate, population dynamics, stocks. ***Copy seen:*** DLC.

MIKHALEVA, E. N., *see* Konovalov, I. N., *and others.* Nekotorye novye svedeniîa o . . . stoĭkosti rasteniĭ k morozu. *1958.* No. 52391.

53279. MIKHEEV, ALEKSEĬ VASIL'EVICH. Belye kuropatki. (Okhota i okhotnich'e khoziîaĭstvo, Jan. 1957, no. 1, p. 22–24, illus.) Text in Russian. ***Title tr.:*** The willow ptarmigan.

Sketch of the distribution, reproduction, habits, food, migration of the willow ptarmigan; methods of hunting this bird, abundant in the far North but scarce in the forest zone; experiments with its acclimatization in central provinces of U.S.S.R. are noted. ***Copy seen:*** DLC.

53280. MIKHEEV, ALEKSEĬ VASIL'EVICH. K voprosu o zakonomernostîakh v razmeshchenii zimovok severnykh i îuzhnykh populîatsiĭ i vodov ptitîs. (*In:* Pribaltiĭskaîa ornitologicheskaîa konferentsiîa, 1954. Trudy, *pub.* 1957. p. 55–68, tables.) 12 refs. Text in Russian. ***Title tr.:*** Regularities in distribution of wintering places of northern and southern bird populations and species.

An analysis of wintering areas of 68 northern and 110 southern species of birds. The terms "northern" or "southern" are applied according to whether a form nests north or south of 60° N. lat. No regular behavior in distribution of their wintering places, as claimed by earlier investigators was found. Insectivorous species and those living on minute aquatic animals, generally had their wintering areas furthest south. Light as a factor in migration, in wintering and in activity is also analyzed and discussed. ***Copy seen:*** DLC.

53281. MIKHIN, V. S. Rïapushka reki Ïany. (Leningrad. Vsesoïuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khoziaĭstva. Izvestiia, 1955. t. 35, p. 129–40, illus. tables.) 14 refs. Text in Russian. ***Title tr.:*** The Siberian whitefish of the Yana River.

A study of this, the most common species (*Coregonus sardinella* Val.) of the Yana, with data on comparisons with the Lena form (identical); temperature, plankton and size of catches; size and growth; development and maturity; food; reproduction; economic value.

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53282. MIKHIN, V. S. Ryby ozera Taĭmyr i Taĭmyrskoĭ guby. (Leningrad. Vsesoïuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khoziaĭstva. Izvestiia, 1955. t. 35, p. 5–43, illus. tables.) 34 refs. Text in Russian. ***Title tr.:*** The fishes of Lake Taymyr and Taymyr Bay.

From summer expeditions of 1943–1944 and 1946–1948, the ichthyofauna of these waters was found composed of 20 species, ten of them in the lake proper (74°30′ N. 101° E.). Their distribution frequency, morphometry, growth and size, migrations, ecology, propagation, etc., are discussed. Char and whitefish make up the majority of this fauna.

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53283. MIKKELSEN, AKSEL. En moderne slaederejse. (Grønland, Apr. 1958, nr. 4, p. 146–53, illus.) Text in Danish. ***Title tr.:*** A modern sledge trip.

Describes a journey by bulldozer and sledge in Apr.–May 1957 from Mesters Vig, East Greenland, about 100 km. southwest to an area in Schuchertdalen (approx. 71°17′ N. 25°05′ W.) where Nordisk Mineselskab (The Nordic Mining Company) planned prospecting the following summer. Some 70 tons of material was transported 150 km. to build a landing strip and establish a camp.

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53284. MIKKELSEN, O. J. Arbejdernes vilkår i Grønland. (Grønland, Jan. 1957. nr. 1, p. 22–28, illus.) Text in Danish. ***Title tr.:*** Working conditions in Greenland.

Describes the agreement between the government and the Workers' Union 1956, and (briefly) previous conditions. All permanent residents in Greenland are paid according to the agreement regardless of where they were born.

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MIKLUKHO-MAKLAĬ, A. D., *see* Kaleĭskaia, M.S., *and* A. D. Miklukho-Maklaĭ. Nekotorye cherty chetvertichnoĭ istorii . . . *1958.* No. 52132.

53285. MILASHEV, V. A. K voprosu o sviazi gidroseti s razlomami i tektonicheskoĭ treshchinovatost'iu porod. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958. vyp. 7, p. 64–66, diagrs., map.) 5 refs. Text in Russian. ***Title tr.:*** The relation of river nets to fractured and tectonically crumbled rocks.

Examines and diagrams the Vilyuy River's left tributaries: Sredniy and Nizhniy Vilyuykan and Mogdy, in particular the directions of their valley curves and the directions of fractures and tectonically crumbled rocks. Comparison of these phenomena discloses their interdependence, briefly stated.

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53286. MILASHEV, V. A. Kimberlity iuzhnoĭ chasti Sredneolenekskogo raĭona. (Vsesoïuznoe mineralogicheskoe obshchestvo. Zapiski, 1958, ser. 2, chast' 87, vyp. 3, p. 315–26, illus., 2 plates, tables.) 2 refs. Text in Russian. ***Title tr.:*** Kimberlites of the south part of middle Olenek River region.

Kimberlite pipes and dikes found in 1956–57 in the Chomurdaakh River basin are characterized. Institute of Geology of the Arctic personnel, discovered 18 kimberlite pipes and 17 dikes or dike-like features in the Chomurdaakh, Ukutit and Omanoos River regions. Three bodies of kimberlites, designated "Chumur", "Spornaya" and "Nadezhnaya," are described in turn, and their petrographic and chemical properties outlined. Primary and secondary minerals and their occurrence are characterized. The age of kimberlite is discussed. The productive value of these kimberlites remains uncertain.

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53287. MILEĬKOVSKIĬ, S. A. Lunnaia periodichnost' neresta u litoral'nykh i verkhnesublitoral'nykh bespozvonochnykh Belogo moria i drugikh morei. (Akademiia nauk SSSR. Doklady, 1958. t. 123, no. 3, p. 564–67, illus.) 16 refs. Text in Russian. ***Title tr.:*** Lunar periodicity in the spawning of littoral and

upper sublittoral invertebrates of the White and other seas.

Account of investigation into the periodicity of planktonic larvae of some common littoral and upper sublittoral species. Some of the forms show indications of a lunar rhythm in ovoposition, others not. Theories concerning lunar periodicity in marine animals are discussed. ***Copy seen:*** DLC.

53288. MILEĬKOVSKIĬ, S. A. Razvitie i sezonnaîa dinamika chislennosti lichinok belomorskikh *Limapontia capitata*, Müll. i *Tergipes despectus* Johnston; Gastropoda, Opisthobranchia. (Akademiîa nauk SSSR. Doklady, 1958. t. 120, no. 6, p. 1366–69, illus.) 14 refs. Text in Russian. ***Title tr.:*** Development and seasonal variation in the number of larval White Sea *Limapontia capitata*, Müll. and *Tergipes despectus*, Johnston; Gastropoda, Opisthobranchia.

Contains descriptions of the larvae of these snails including anatomy and morphometry, development, color, metamorphosis, etc. Their distribution in the surface plankton (0–16 m.) during June-September is also described.

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53289. MILENUSHKIN, I͡U. Osnovopolozhnik sovetskogo okhotovedeniîa; k 20-letiîu so dni͡a smerti S. A. Buturlina, 1872–1938 gg. (Okhota i okhotnich'e khozi͡aĭstvo, Jan. 1958. god 4, no. 1, p. 52, port.) Text in Russian. ***Title tr.:*** The founder of Soviet hunting science; 20th anniversary of the death of S. A. Buturlin, 1872–1938.

Notes the achievements and contributions of the Soviet zoologist and ornithologist Sergeĭ Aleksandrovich Buturlin. His influence toward a scientific approach in the hunting industry, his articulate interest in the Soviet North, his work in Chukotka, the Kolyma River basin, on Kolguyev Island and Novaya Zemlya, are cited. ***Copy seen:*** DLC.

53290. MILE͡TSKIĬ, I͡A. Bud'te takimi. (Ogonëk, Jan. 1957. god 35, no. 1, p. 13, illus.) Text in Russian. ***Title tr.:*** Be like these men.

Sketches of three Soviet rank-and-file workers, one of them Viktor Borisovich Maĭskiĭ, a doctor in the Olyutorsk region of the Koryak National District on Kamchatka: the newspaper published at Tilichiki (60°25′ N. 166°05′ E.), the new hospital and its X-ray apparatus, a winter dog-sled trip in the tundra to bring a sick woman to hospital, etc.

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53291. MILIN, R., *and* **M. CIGLAR.** Die Wirkung der Dunkelheit auf den Hypophysenhinterlappen. (Anatomischer Anzeiger, 1956. Bd. 103, Suppl. p. 189–95, illus.) 11 refs. Text in German. ***Title tr.:*** The influence of darkness upon the posterior hypophysis.

Description of histological changes in the posterior hypophyseal lobe of the rat, produced by prolonged sojourn in darkness. The changes consist in accumulation of CAH-positive substance in the pituicytes. ***Copy seen:*** DNLM.

53292. MILLER, A. D., *and* **V. I͡A. DANILOV.** Solevye oreoly rasseîaniîa redkometal'nykh pegmatitov Kol'skogo poluostrova. (Geokhimiîa, 1957, no. 6, p. 529–37, illus., tables, diagrs.) 14 refs. Text in Russian. Summary in English. ***Title tr.:*** Salt-dissemination halos of rare-metal pegmatites of the Kola Peninsula.

Describes the hydrochemical method and results achieved in searching for rare-metal pegmatites by detecting the dissemination halos in waters and in the ground. "Very low concentration of element-indicators (Li, Rb, Mn) in waters and water extracts becomes available owing to the use of ion-exchange concentration adapted to field conditions and a subsequent semiquantitative spectral analysis with optimum conditions of burning. Manganese was determined with the aid of colorimetry." Sensitivity of the method is indicated, and efficiency of this method for detection of "blind" ore bodies emphasized. ***Copy seen:*** DLC.

MILLER, A. K., *see* Sweet, W. C., *and* A. K. Miller. Ordovician cephalopods from Cornwallis . . . Islands . . . *1957*. No. 55286.

53293. MILLER, DON JOHN, 1919– . Anomalous glacial history of the northeastern Gulf of Alaska region. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1613–14.) Abstract of a paper presented at the Society meeting in St. Louis, Nov. 6–8, 1958.

Relates the area's glaciation anomalies to tectonic activity: vigorous glaciation beginning by early Pliocene, possible middle Miocene time; mild glaciation during late Wisconsin; and Post-Wis-

consin advance of individual glaciers as far as 35 mi. beyond present ice fronts.
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53294. MILLER, DON JOHN, 1919– . Geology of possible petroleum provinces in Alaska. Washington, D.C., 1957. 239 p. 7 plates, 3 index maps, 6 tables. Mimeographed. (U.S. Geological Survey. Reports, open file series, no. 421.) 103 refs. *Other authors:* T. G. Payne, G. Gryc, E. H. Cobb, J. T. Dutro, Jr.

Contains discussion of the geology of Alaska as related to known and potential occurrences of petroleum, and review of petroleum exploration. Maps (prepared by T. G. Payne and J. T. Dutro, Jr.) show major tectonic elements and provinces in which geologic conditions may be favorable for commercially significant accumulations of petroleum, also locations of indications of petroleum, and test wells. Three general regions are identified: southern, 185,000 sq. mi., discussed by D. J. Miller; central, 275,000 sq. mi., by T. G. Payne; northern, 125,000 sq. mi., by G. Gryc. Sources of geologic information are listed by regions; an annotated bibliography of 109 U.S. Geological Survey reports through 1955, prepared by E. H. Cobb, is given. Appraisal of oil and gas resources based on the geology of tectonic elements is provided for each region, including known deposits. Mention is made of the Katalla field in the Gulf of Alaska province, until 1955 the only commercial producer in Alaska (154,000 bbl., 1902–1933). Known deposits and possible sources in the central region are limited. Possible sources in the northern region, especially in U.S. Naval Petroleum Reserve No. 4, have been more carefully investigated; geologic conditions favorable for oil and gas accumulations prevail in about half the area; estimated total reserves range from 30 to 100 million barrels of oil, and 370 to 900 billion cu. ft. of gas.
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53295. MILLER, DON JOHN, 1919– . The surface velocity of the Yakataga Glacier, Alaska. (Journal of glaciology, Oct. 1957. v. 3, no. 22, p. 124–30, 3 illus., 2 text maps, profiles, 2 tables.) 2 refs.

Main trunk of this glacier (60°10′ N. 142°08′ W.) descends from 1130 to 150 m. in a distance of 21 km. "A rock fall at the head of the glacier formed a moraine of distinctive shape which advanced at an average rate of 114 m./yr. from 1938 to 1954. The surface velocity of the glacier at 15 stations below the firn line was calculated from the displacement of the rock-fall moraine and other less conspicuous features . . . shown in two sets of vertical aerial photographs taken in 1948 and 1954." Average surface velocity along a medial line of the glacier ranged from about 90 m./yr. at 14 km. above the terminus to zero at 2.3 km. This technique of photogrammetric measurement of surface velocity is well suited to Alaska where many glaciers have been photographed from the air after intervals of a few years to as many as 30 yrs.—From author's abstract.
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MILLER, DON JOHN, 1919– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

MILLER, DON JOHN, 1919– , *see also* Plafker, G., *and* D. J. Miller. Glacial features . . . Malaspina . . . *1957.* No. 54017.

MILLER, DON JOHN, 1919– , *see also* Plafker, G., *and* D. J. Miller. Recent . . . glaciation . . . Malaspina . . . *1957.* No. 54018.

MILLER, DON JOHN, 1919– , *see also* Plafker, G., *and* D. J. Miller. Recent . . . glaciation . . . Malaspina . . . *1958.* No. 54019.

MILLER, DON JOHN, 1919– , *see also* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

53296. MILLER, E. WILLARD. The Hudson Bay Railway route: a geographical reconnaissance. (Journal of geography, Apr. 1958. v. 57, no. 4, p. 163–73, maps.)

Analyzes present and potential economic developments along the 510 mi. route from The Pas to Churchill in northern Manitoba. The towns, trapping, mineral resources and developments (including those in the Moak-Mystery Lake region), commercial fishing, agriculture and pulpwood are described. The railroad's importance to resource development is stressed. Hydroelectric power development is indicated, the potential in northern Manitoba is estimated at 4,500,000 hp. The port of Churchill is discussed; industries seeking low-cost hydroelectric power could send raw materials into the area by way of the port and the railway. ***Copy seen:*** DGS.

53297. MILLER, JAMES A., *Jr., and* A. MARINI. Cardiac activity in an apneic, five hundred eighty gram human fetus maintained for twenty-one hours at temperatures between 22° C and 0.1° C. (American Medical Association Journal, June 21, 1958. v. 167, no. 8, p. 976–82, illus., tables.) 15 refs.

Cardiac activity was maintained in this fetus for 21 hrs. whilst it was perfused with 300 ml. of oxygenated blood. For over 17 hrs., temperature was below 15° and for about 2½ hrs. below 1° C. ECG records showed that cardiac activity stopped when temperature reached 0.1° but reappeared spontaneously upon rewarming. Changes in QRS are also discussed. ***Copy seen:*** DNLM.

MILLER, JOHN, *see* Shapaev, V. M. O . . . khode . . . vetra. *1958.* No. 54734.

MILLER, JOHN, *see* Timofeev, V. T. Atlanticheskie vody . . . *1957.* No. 55446.

53298. MILLER, MAYNARD MALCOLM, 1921– . Alaskan glacier studies: a recent appreciation. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 79.)

Reviews work of Tarr and Martin (No. 17452) as a basis for further studies, and a summary of work prior to 1909.

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53299. MILLER, MAYNARD MALCOLM, 1921– . Juneau icefield. (Explorer's journal, July 1957. v. 35, no. 2, p. 8.)

Contains statement of field work accomplished by the author on the upper Taku Glacier during Oct.-Nov. 1953. Plans are outlined for further extension of field research and for the establishment of new field stations.

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53300. MILLER, MAYNARD MALCOLM, 1921– . Mass movement and stress relation in the Taku Glacier, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1768–69.)

Abstracts paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957. Describes studies of the glacier's movements, and flow data indicating a composite stressing condition probably related to its advance since the 1890's.

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53301. MILLER, MAYNARD MALCOLM, 1921– . Phenomena associated with the deformation of a glacier borehole. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report 1957. v. 4 *pub.* 1958, p. 437–52, illus., diagrs., tables.) 17 refs.

Stress strain analysis of the deformation of a two-in. (I.D.), 245-ft. length of jointed aluminum tubing inserted in a vertical bore-hole in the Taku Glacier, Juneau Ice field, Alaska; based on three years' data. Results are related to flow equations derived from laboratory tests, and compared with bore-hole and tunnel experiments conducted in glaciers in the Alps and Norway. Observed thermal anomalies appear to coincide with deformation anomalies. ***Copy seen:*** DGS.

53302. MILLER, MAYNARD MALCOLM, 1921– . The role of diastrophism in the regimen of glaciers in the St. Elias district, Alaska. (Journal of glaciology, Oct. 1958, v. 3, no. 24, p. 293–97, sketch maps.) 12 refs.

The effect of climate on glacier fluctuations in the district (approx. 60° N. 140° W.) is reassessed on the basis of new evidence from adjacent regions and of a review of records of excessive precipitation along the coast in the latter 1870's–1880's. Precipitation and temperature trends 1876–1902 in Southeast Alaska, global statistics, and the regional pattern of glacier fluctuations (where no earth tremors were reported) were examined. Advances of glaciers in the Yakutat area about the turn of the century were conditioned fundamentally by meteorological causes, it is suggested, earthquakes being a supplemental and generally minor factor.—From SIPRE.

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MILLER, MAYNARD MALCOLM, 1921– , *see also* Court A., *and others.* The classification of glaciers. *1957.* No. 50358.

53303. MILLER, ROBERT C. Morning and evening song of robins in different latitudes. (Condor, Mar.-Apr. 1958. v. 60, no. 2, p. 105–107, table.)

Contains observations on male robins (*Turdus migratorius*) made in the course of an automobile trip from Berkeley, California, to Fairbanks, Alaska, in June 1957, the latest at Whitehorse in Yukon Territory (60°43′ N.). Between approx. 38° N. and 61° N. in the latter half of June, the morning song of robins begins

progressively earlier and ends earlier with increase of latitude.

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53304. MILLER, ROBERT DAVID, 1922– , *and* E. DOBROVOLNY. Origin of the Pt. Campbell-Pt. Woronzof area as related to the "blue clay" that underlies Anchorage, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1907–08.)

Abstracts a paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957. A theory is offered on the common glacial origin of the blue-gray silty clay underlying Anchorage and stratified deposits forming ridges extending from Pt. Campbell on Turnagain Arm of Cook Inlet to Pt. Woronzof on Knik Arm. The ridge deposits probably originated as a delta built northward from an ice-dammed lake formed by a glacier advancing from the northwest or west; the finer-grained material from this glacier is thought to have been deposited in the lake forming the clay. ***Copy seen:*** DGS.

53305. MILLER, ROBERT DAVID, 1922– , *and* E. DOBROVOLNY. Pleistocene history of the Anchorage area, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1908.)

Abstracts a paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957. Describes glaciation sequences indicated by exposed drift: the earliest, of probable Illinoian age; Knik, of probable post-Sangamon but pre-Wisconsin age; Naptowne, of early Wisconsin age; and a later Wisconsin advance. A peat deposit correlated with interglacial weathering on the "blue clay" which accumulated during the Knik glaciation is dated at older than 38,000 radiocarbon years, and outwash deposited during the last Wisconsin at 11,600 ±300 radiocarbon years. Channels cut into the outwash and "blue clay" by erosion from waters of Matanuska and Knik Rivers and encroaching Cook Inlet waters became Knik and Turnagain Arms of the Inlet. ***Copy seen:*** DGS.

MILLER, WALTER R., *see* Willson, J. T., *and others.* Blood . . . hypothermic dog. *1958.* No. 56068.

53306. MILLMAN, PETER MACKENZIE, 1906– . A profile study of the New Quebec crater. Ottawa, Queen's Printer, 1956. p. 61–82, illus., 3 maps, incl. 1 fold. in pocket, 4 diagrs., 3 tables. (Canada. Dominion Observatory, Ottawa. Publications, v. 18, no. 4.) 21 refs.

Detailed study of the Ungava (formerly Chubb) Crater, based on examination of RCAF air-photo coverage in 1953, reports and maps. The center of the lake is at approx. 61°17′ N. 73°41′ W.; water depth is 825 ft.; elevation of lake surface is 1,700 ft. Detailed profile measurements along 16 equally spaced radii originating from a selected center are tabulated, shown graphically, and discussed in text. The crater agrees well with the standard form of explosion craters of comparable size, and is probably of meteoric origin.

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53307. MILLS, E. JAMES E. Climbs and expeditions. Traleika Glacier area, Mt. McKinley Range. (American alpine journal, 1957. v. 10, no. 2, issue 31, p. 153–56.)

"Parachute Brigade" Alaska expedition, composed of four British army officers, sponsored by the War Office and Mt. Everest Trust, supported by Royal Geographical Society, explored this glacier system May 26–July 7, 1956. The party climbed a few peaks, carried out medical and physiological research, collected geological specimens, tested army rations and equipment, made meteorological observations and a film of expedition activities. ***Copy seen:*** DGS.

53308. MILLS, E. JAMES E. The Parachute Brigade Alaska Expedition, 1956. (Alpine journal, Nov. 1957. v. 62, no. 295, p. 121–32, 3 illus., text map.)

Describes experiences of a British party of four, led by the writer, in the Mt. McKinley region, May–July 1956. Program included exploration of Traleika Glacier system and ascent of several unclimbed peaks in its vicinity, medical and physiological research, geological collecting, test of rations and equipment, meteorological observations, a film of the expedition. Mountaineering activities are described. Party was flown in by helicopter and supplied by air.

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53309. MILNE, J. A. S. Snow surveying by Ontario Hydro. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report 1957, v. 4 *pub.* 1958, p. 78–81.)

Describes snow surveys as conducted in the Province of Ontario since 1931: the

topography, snow course, type of equipment used, survey procedure, and use of the data. ***Copy seen:*** DGS.

MILNER, KELSEY C., *see* Jellison, W. L., *and* K. C. Milner. Salmonellosis . . . fur seals. *1958*. No. 52057.

53310. MILOSLAVSKAĬA, N. M. Nekotorye soobrazheniĭa o bentose vostochnogo Murmana i ego roli v zhizni pikshi. (Akademiĭa nauk SSSR. Kol'skiĭ filial. Murmanskaĭa biologicheskaĭa stant͡siia. Trudy, 1958. t. 4, p. 151–56, table.) 16 refs. Text in Russian. ***Title tr.:*** Some considerations on the benthos of eastern Murman and its role in the life of haddock.

Discusses the abundance of fish and haddock on the Murman coast in historical times, effect of the nature of the bottom; the role of benthos in determining the abundance of haddock along the coast; biomass of the benthos in this area; seasonal changes in feeding habits of haddock. ***Copy seen:*** DLC.

53311. MILOSLAVSKAĬA, N. M. Novye teplovodnye mollĭuski v faune Vostochnogo Murmana. (Zoologicheskiĭ zhurnal, June 1958. t. 37, vyp. 6, p. 939–42, illus. map.) 11 refs. Text in Russian. Summary in English. ***Title tr.:*** New warm-water molluscs in the fauna of East Murman.

Author describes the occurrence of *Propeamussium* (*Palliolum*) *vitreum* Chemnitz, and *Venus* (*Timoclea*) *ovata* Pennant, and the morphology of their shells. Earlier records, warming of arctic waters, etc. are also discussed. ***Copy seen:*** DLC.

53312. MILOSLAVSKAĬA, N. M. Osobennosti razmeshcheniĭa bentosa i vozmozhnosti ego ispol'zovaniĭa treskovymi rybami na vostochnom Murmane. (*In:* Akademiĭa nauk SSSR. Murmanskaĭa biologicheskaĭa stant͡siia. Zakonomernosti skopleniĭ . . . 1958. p. 103–125, illus., tables, maps.) 23 refs. Text in Russian. ***Title tr.:*** Peculiarities of benthos distribution and possibilities of its utilization by cod fishes on the eastern Murman.

Study based largely on field work conducted during 1953–1955, on the occurrence of the various benthonic invertebrates on different types of bottom (over 150 species and 5 main types of sea bottom); ecological aspects of the benthos studied; specific traits of coastal benthos; utilization of this benthos by the various cod-like fish, largely haddock and cod; distribution of species used as food. ***Copy seen:*** DLC.

53313. MILOSLAVSKAĬA, N. M. Temperaturnyĭ faktor v raspredelenii dvustvorchatykh mollĭuskov vostochnogo Murmana. (Akademiĭa nauk SSSR. Kol'skiĭ filial. Murmanskaĭa biologicheskaĭa stant͡siia. Trudy, 1958. t. 4, p. 140–50, tables, map.) 11 refs. Text in Russian. ***Title tr.:*** Temperature factor in the distribution of bivalve molluscs in the eastern Murman.

Account based on year-round collection during 1953–1955, combined with measurement of bottom temperatures. The distribution of 38 forms was established; both warm- and cold-water forms were found, as well as such of wide distribution. Micro-areas in the zone studied were also established. ***Copy seen:*** DLC.

MILOVANOVICH, VOISLAV, *see* Temin V. V kratere Avach-gory. *1957*. No. 55373.

MILUTINOVIĆ, P., *see* Šahović, K., *and others*. Uloga pojedinih organa . . . hypotermiji. *1956*. No. 54499.

53314. *MINERALOGIST.* Labrador stone. (Mineralogist, Dec. 1957. v. 25, no. 12, p. 474–76.)

Describes labradorite, a variety of feldspar which occurs in its highest quality in Labrador. Notes its discovery by a Moravian missionary on the Isle of St. Paul, off the coast, and later finds inland; its early popularity in Europe where it sold for $100/lb. ***Copy seen:*** DGS.

53315. MINES, ROBERT. Mental health program has big scope, responsibility. (Alaska's health, Oct. 1958. v. 15, p. 1, 2.)

An analysis of chapter 87, Alaska Session Laws, 1957, the bill establishing a mental health authority for Alaska, and discussion of the plans for a mental hospital in Alaska, psychiatrists in charge of mental health program, psychologists, research, etc. ***Copy seen:*** DNLM

53316. MINGASSON, CHRISTIAN. Observations sur l'influence hydrologique de la neige dans l'est du Canada. (Cahiers de géographie de Québec, Oct. 1957. année 2, no. 3, p. 75–86, text map, 2 tables.) 11 refs. Text in French. Summary in English. ***Title tr.:*** Observa-

tions on the hydrologic influence of snow in the Canadian East.

Study of 27 rivers east of 85° W. and south of Hudson Bay, including the Abitibi, Mattagami and Kapuskasing, tributaries of James Bay. Ratios of snow run-off during spring discharge are calculated; due to losses in marshy zones, a ratio of only 19% of the total discharge was found in northern Ontario as compared to 30% in the Laurentian region. Dates of beginnings of floods due to melting snow are calculated. In the northern region, flood period begins after Apr. 25; month of maximum flooding extends from Mar. in southern areas to June in northern. ***Copy seen:*** DLC.

53317. ***MINING ENGINEERING.*** Mesabi to the North. (Mining engineering, June 1958. v. 10, no. 6, p. 678–79, 3 text maps.)

Brief review of current (1958) iron mining activity in the Labrador Trough, particularly the Mt. Wright-Wabush L. area; several companies' plans, location of main developments are indicated.

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MINKH, A. A., *see* Busygina, M. V., *and* A. A. Minkh. Vliîanie otritsatel'no ionizirovannogo vozdukha . . . *1956.* No. 50026.

MINKINA, TS. I., *see* Nikonov, M. N., *and others.* Agrokhimicheskaîa kharakteristika torfov . . . *1956.* No. 53610.

MIN'KOVICH, L. V., *see* Sadlaev, K. A., *and* L. V. Min'kovich. Problema perebroski stoka severnykh rek . . . *1958.* No. 54490.

MINN, EEVA (KANGASMAA), *see* Indiana. University. Finland. *1955.* No. 51918.

MINN, EEVA (KANGASMAA), *see* Indiana. University. The Lapps. *1955.* No. 51920.

53318. MIRONOV, STEPAN IL'ICH, *and others.* Asfal'topodobnyĭ bitum verkhov'îa r. Markhi v IAkutii. (Akademiîa nauk SSSR. Doklady, Sept. 11, 1958. god 26, t. 122, no. 2, p. 284–85, tables.) Ref. Text in Russian. *Other authors:* V. G. Putsillo *and* S. I. Vorob'eva. ***Title tr.:*** The asphalt-like bitumen of the upper reaches of the Markha River in Yakut A.S.S.R.

On the estuary of the Sytykan, tributary to the Daladan River, in the upper Markha basin (61°15′ N. 121°10′ E.) there was found in the contact zone between Cambrian and Silurian deposits, an almost black bitumen mass evenly mixed with limestone. Using acetone and benzol in turn for oil extraction, silicagel tar and asphaltenes were separated. Analyses of substances composing the material are presented in a table. The bitumen is compared with that from the Amga region. Such bitumen has a wide regional distribution and reveals good conditions for oil formation in Middle and Upper Cambrian.

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53319. MIRONOV, STEPAN IL'ICH. Perspektivy neftenosnosti stratigraficheskogo razreza otlozheniĭ Sibiri. (*In:* Putsillo, V. G., *and others.* Nefti i bitumy Sibiri, 1958, p. 244–45.) Text in Russian. ***Title tr.:*** Prospects of oil in the stratigraphic cross-section of Siberian deposits.

Presents general conclusions of the prospecting for oil in the regions of Lake Baykal, Siberian platform, Severnaya Zemlya, Salekhard, Minusinsk, Kolpashevo, Chelyabinsk, Kopeysk, and elsewhere. The investigations were carried out by the Complex Eastern Oil-Gas Expedition (Kompleksnaîa vostochnaîa neftegazovaîa ėkspeditsiîa) during the Fifth Five-Year Plan. Predominantly Paleozoic bitumen and bituminous matter from various stratigraphic horizons have been studied and evaluated. Different types of bitumen of oil series and even paraffin hydrocarbons were found and favorable conditions indicated for discovery of oil. Further investigation of the Paleozoic deposits is urged.

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MIRONOV, STEPAN IL'ICH, *see also* Putsillo, V. G., *and* S. I. Mironov. Bitumy Turukhanskogo raîona. *1958.* No. 54174.

MIRONOV, STEPAN IL'ICH, *see also* Putsillo, V. G., *and others.* Nefti i bitumy devonskikh otlozheniĭ o-va Severnaîa Zemlîa . . . *1958.* No. 54175.

MIRONOV, STEPAN IL'ICH, *see also* Putsillo, V. G., *and others.* Nefti i bitumy Sibiri. *1958.* No. 54176.

MIRONOV, STEPAN IL'ICH, *see also* Putsillo, V. G., *and others.* Sibirskaîa platforma. *1958.* No. 54177.

53320. MIRONOVA, M. G., *and* **D. L. STEPANOV.** O vozraste mergelistogo gorizonta nizhnepermskoĭ tolshchi Pechor-

skogo basseĭna. (Akademiĭa nauk SSSR. Doklady, May 21, 1957. t. 114, no. 3, p. 623–26.) 6 refs. Text in Russian. ***Title tr.:*** On the age of the marlaceous level of the lower Permian stratum of the Pechora basin.

Age of this level was studied by investigation of fossil brachiopods (some 25 species listed), several foraminifers (*Nodosaria* cf. *clavatoides* and *N.* aff. *parva*), and ammonoids (*Neopronorites rotundatus*, *Juresanites* sp., and *Neoglaphyrites satrus*), collected by the senior author in the valley of the Vorkuta River. From content of the fauna, it was concluded that the marlaceous level really consists of two layers of lower Permian deposits: a Ural layer and a Sakmar layer. The process of accumulation seems to have been a very slow one. ***Copy seen:*** DLC

53321. MIRONOVA, N. V. Biologiĭa i promysel saĭdy. (Akademiĭa nauk SSSR. Murmanskaĭa biologicheskaĭa stantsiĭa. Trudy, 1957. t. 3, p. 114–29, illus. tables, maps.) 28 refs. Text in Russian. ***Title tr.:*** Biology and fishery of pollack.

A study of conditions in the Barents Sea based on various sources, field as well as bibliographic. Consecutive sections deal with seasonal distribution in the area, migrations, frequency, species composition of food, growth rate, world fisheries production in pollack, fishing methods; food value recommendations are made for developing this fishery in Russia.

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53322. MIRONOVA, N. V. Evropeĭskaĭa khimera na vostochnom Murmane. (Priroda, June 1958. god 47, no. 6, p. 116, illus.) Text in Russian. ***Title tr.:*** *Chimaera monstrosa* in the eastern Murman.

Description of a female specimen caught in May 1957 off the Murman coast in trawl net at a depth of 120–140 m. Farthest northern records were hitherto from Finnmark waters and Varanger Fjord. ***Copy seen:*** DLC

53323. MIRONOVA, N. V., *and others.* Itogi promysla sel'di, molvy i donnykh ryb v pribrezhnoĭ zone Murmana v 1953–54 gg. (Akademiĭa nauk SSSR. Murmanskaĭa biologicheskaĭa stantsiĭa. Trudy, 1957. t. 3, p. 90–110, illus. tables, maps.) 17 refs. Text in Russian. *Other authors:* V. V. Gerasimov *and* Iu. F. Pozdniakov. ***Title tr.:*** Results of herring, capelin, and bottom fisheries of the coastal Murman in 1953–1954.

A study of conditions in a 20–30 mile-wide belt, based on catch statistics. For herring, yields of purse- , drift- , set- , and seine-nets are analyzed and fishing intensity according to seasons and localities appraised. A similar procedure is applied to the other forms investigated. These data are supplemented by extensive information on the biology, growth, migrations, etc. of the fishes studied. All this information is utilized in explaining the variations in these fisheries during 1953–54. ***Copy seen:*** DLC.

53324. MIRONOVA, N. V. K voprosu o biologii i promysle saĭdy, *Pollachius virens* L. v Barentsevom more. (Voprosy ikhtiologii, 1957. vyp. 8, p. 155–59, maps.) 8 refs. Text in Russian. ***Title tr.:*** The biology and fishery of the pollack, *Pollachius virens*, L. in the Barents Sea.

Report based on author's investigations of the Murman coastal waters during 1949–1954 and on other sources. Seasonal as well as all-year distribution is discussed and correlated with the age of the fishes. Some data are also presented on the methods and amount of catches.

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53325. MIRONOVA, N. V. Pitanie i rost molodi treskovykh ryb v pribrezhnoĭ zone vostochnogo Murmana. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1956. 100 p. illus. tables. Over 100 refs. Text in Russian. ***Title tr.:*** Food and growth of the fry of gadoid fishes in the coastal zone of the eastern Murman.

Monograph dealing with the three economically most important gadoids of the area: the cod, haddock and pollack. Introductory sections cover the biology of the young (from hatching) according to literature, especially their food, distribution and growth. Author's contribution, based on field work done in 1949–1954, contains information on the period of appearance of the fry in the inlets, their number, their food during the period of study and for each month, food according to age of fish, species (144) serving as food, seasonal distribution of food according to species consumed, frequence of occurrence of eaten forms in fish stomachs, food (planktonic and benthic), size and rate of growth, size variations, averages, etc. ***Copy seen:*** DN–HO.

53326. MIRONOVA, N. V. Pitanie molodi treski, pikshi i saĭdy. (Vsesoĭuznoe gidrobiologicheskoe obshchestvo.

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Trudy, 1957. t. 8, p. 259–67, tables.) 12 refs. Text in Russian. ***Title tr.:*** Food of young cod, haddock and pollack.

Report based on examining stomach contents of 7846 specimens of these fish from the eastern Murman. Ages up to two years were considered, and conditions in the open sea as well as in bays were studied. Results of analyses are tabulated for three age groups of each fish; 122 (mainly crustacean and molluscan) species were found in the stomachs. ***Copy seen:*** DLC.

53327. MIRONOVA, N. V. Raspredelenie treski. (*In:* Akademiia nauk SSSR. Murmanskaia biologicheskaia stantsiia. Zakonomernosti skopleniĭ . . . 1958. p. 234–53, illus., tables) 18 refs. Text in Russian. ***Title tr.:*** Distribution of cod.

Account based mainly on analysis of commercial catches of 1953–1955. Cod migrations in the Barents Sea, seasonal distribution in the Murman coastal belt (with month-to-month details) are discussed. Distribution is considered as affected by environmental conditions, especially bottom temperature; movements in the coastal zone are outlined. ***Copy seen:*** DLC.

53328. MIRONOVA, N. V. Udel'nyĭ ves pribrezhnoĭ zony v promysle Barentsova moria. (*In:* Akademiia nauk SSSR. Murmanskaia biologicheskaia stantsiia. Zakonomernosti skopleniĭ . . . 1958. p. 131–36, tables, maps.) 4 refs. Text in Russian. ***Title tr.:*** Proportional weight of coastal zone catches in Barents Sea fisheries.

A statistical account of weight of fish-catch per unit area for the years 1953–1955 with data on annual and three-year averages; share of the coastal zone in the Barents Sea yield; comparisons with other seas. ***Copy seen:*** DLC.

MIRONOVA, N. V., *see also* Akademiia nauk SSSR. Murmanskaia biol. stantsiia. Zakonomernosti skopleniĭ . . . 1958. No. 49184.

53329. MIRONOVITCH, VALÉRY. Les pôles de la circulation atmosphérique générale et les pôles magnetiques terrestres. (Beiträge zur Physik der Atmosphäre, 1956. Bd. 29, Heft 2, p. 123–28, 3 maps, diagr.) 9 refs. Text in French. Summary in French, German, English. ***Title tr.:*** The poles of the general atmospheric circulation and the terrestrial magnetic poles.

Compares the normal wintertime elevation of the 300 mb. surface with the mean field of the geomagnetic elements, based recent data; notes that the two centers of cyclonic circulation, over the Canadian Archipelago and over Cape Chelyuskin, coincide with the two geomagnetic poles. Mentions a possible relation between geomagnetic and meteorological phenomena. ***Copy seen:*** DLC.

53330. MIROSHNIKOV, L. D., *and* **A. G. KRAVTSOV.** Materialy k stratigrafii osadkov nizhnego i srednego paleozoia Noril'skogo raĭona. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1958. vyp. 10, p. 3–21, diagrs., map.) 10 refs. Text in Russian. ***Title tr.:*** Material on the stratigraphy of lower and middle Paleozoic sediments of the Noril'sk district.

Presents faunal characteristics of Cambrian, Ordovician, Silurian, Devonian and Carboniferous deposits collected from six cross-sections. Some 300 species of brachiopods, trilobites, gastropods, graptolites, and other fossil fauna are identified, and according to them, the stratigraphic division of various formations, series and facies is worked out. ***Copy seen:*** DGS.

53331. MIROSHNIKOV, L. D., *and* **O. S. SHCHEGLOVA.** Mezozoĭskie otlozheniia severnogo Taĭmyra i ikh uglenosnost'. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik stateĭ po geologii Arktiki, vyp. 5, p. 23–40, illus., tables, fold. map.) Text in Russian. ***Title tr.:*** Mesozoic deposits of northern Taymyr and their coal capabilities.

Presents the lithologic composition, stratigraphy, faunal characteristics, tectonic activities, and coal finds of the Jurassic and Cretaceous deposits of the area from Cape Chelyuskin south to the Byrranga Mts. and from the mouth of the Nizhnyaya Taymyra eastward to Faddeya Bay (approx. 76°–77°40′ N. N. 98°–108° E.). The most promising coal-bearing deposits are at the Zhdanova River mouth and Tsyganskoye Serdtse lake, on Ugol'naya Bay and the upper Krasnoyarskaya River, and on the upper course of the Fomina River. Prospecting is reported; technical and chemical analyses are presented, with conclusion that coal can undoubtedly be extracted from the southern part of this region. ***Copy seen:*** DGS

53332. MIROSHNIKOV, L. D., *and* L. P. PIROZHNIKOV. O mestonakhozhdeniiakh iskopaemykh nasekomykh na territorii Sovetskoĭ Arktiki. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 139–46, illus., text map.) 5 refs. Text in Russian. ***Title tr.:*** On the location of fossil insects in the territory of the Soviet Arctic.

Presents a summary of such fossils in several regions: Soyana River in Arkhangel'sk province, western part of Taymyr Peninsula, Vorkuta River basin, Tunguska basin, Kolyma River basin, Khatanga River basin, and the Noril'sk region; a fuller report is given on the Ust'-Yenisey area (about 120 km. northwest of Dudinka) studied by the writers in 1953. A general characteristic of fossil insects is given and those found in the Soviet Arctic are summarized. Some Cretaceous forms of the Ust'-Yenisey area are treated in detail. The majority of fossil insects are found in Permian deposits. Their stratigraphic importance is stressed. ***Copy seen:*** DLC.

53333. MIROSHNIKOV, L. D. Stratigrafiia i tektonika paleozoia tsentral'noĭ chasti poluostrova Cheliuskina. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 3–21, 2 cross-sections, tables.) 10 refs. Text in Russian. ***Title tr.:*** Paleozoic stratigraphy and tectonics in the central part of the Chelyuskin Peninsula.

Presents the results of 1948–50 field investigation (at 77°41′ N. 104°10′ E.) on the lithology, petrographic characteristics, horizons and age of Upper Cambrian, Ordovician and Silurian deposits. A new stratigraphic division is presented in a general cross-section and each stratigraphic unit treated in detail. Caledonian intrusions of sub-alkali granitoids are distinguished and characterized. Zones, amplitudes and rhythmicity of tectonic movements are studied and the history of geologic developments summarized. ***Copy seen:*** DLC.

53334. MIRSKAIA, D. D. Shchelochnye granity raĭona oz. Niz"iavr. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 140–45, tables, text map.) Text in Russian. ***Title tr.:*** Alkaline granites of the Lake Niz'yavr district.

Presents description of an alkaline granite massif which occupies a 11 km.^{2} area north of Iokan'ga River and south of Lake Niz'yavr (approx. 67°55′ N. 37°35′ E.). Component minerals of the alkaline granites are: microcline, quartz, plagioclase, biotite and alkalic hornblende. The included accessory and secondary minerals are lamprophyllite, fluorite, orthite, sphene, apatite, zircon, magnetite, ilmenite, hematite, muscovite, and others. Their occurrence is briefly characterized. Texture features of these granites, their zonal structure and chemical composition and data of microscopic and spectral analyses are also summarized. ***Copy seen:*** DLC.

MISHUSTINA, I. E., *see* Korenĭako, A. I., *and others.* Rasprostranenie aktinomitsetov-antagonistov . . . *1955.* No. 52408.

MITAMURA, TAKAAKI, *see* Suzuki, T., *and others.* Effect of hypothermia . . . secretion of 17-hydroxycorticosteroids. *1957.* No. 55249.

53335. MITCHELL, HAROLD HANSON, 1886– . Laboratory studies. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 108–129, illus., tables.) 46 refs.

The section on nutrition in cold environment (p. 109–123) deals with energy requirements and the elements of this increased demand; dietary effect on cold resistance, and on performance; effect of high-carbohydrate versus high-fat diet in cold-tolerance; diet and shivering; the role of vitamins. ***Copy seen:*** DNLM.

53336. MITCHELL, HAROLD HANSON, 1886– , *and* M. EDMAN. Nutrition and resistance to climatic stress, with particular reference to man. Chicago, 1949. 3, 112 p. tables. (U.S. Quartermaster Food and Container Institute for the Armed Forces. Research reports.) About 700 refs. Rev. ed.: No. 30834.

Comprehensive review of the effects of climate upon nutrition and the role of diet in resistance to climatic stress. Its first part (p. 3–16) deals with diet in cold environment, viz. the physiological effects of cold (cold-stimulus to metabolism, tolerable low temperature, sweat

secretion, evacuation, pathology of cold); effect of cold on nutrient requirements; animal and human experiments; effects of diet on cold-tolerance as established in animal and human experiments; thermal balance in man as affected by specific dynamic influence of food. Subsequent sections deal with diet in hot climate and at high altitude. ***Copy seen:*** DNLM.

53337. MITCHELL, JOHN MURRAY, 1928– . The feasibility of artificial fog dispersal in Alaska. Washington, D.C., U.S. Weather Bureau, July 2, 1957. 48 p. 9 diagrs., 12 tables. 22 refs.

Preliminary report: climatological analysis of characteristics of fog and ice fog at Elmendorf, Eielson, and Ladd Air Force Bases; brief general survey of fog dispersal methods; selection of "best method" of fog dispersal at each base. At Elmendorf, evidence indicates that nearly all winter fogs may be dispersed at the runway by ground seeding with dry ice or silver iodide smoke. At Eielson and Ladd, conditions of wind and stability during ice fog often favor dispersal by means of horizontal axis fans to ventilate the runway.

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53338. MITCHELL, JOHN MURRAY, 1928– . Visual range in the polar regions with particular reference to the Alaskan Arctic. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, pub. 1958. p. 195–211, illus., diagrs.) 14 refs.

Principal factors determining visual range in the polar atmosphere are discussed briefly, and the phenomena of arctic haze and ice fog are described in detail. Principal emphasis is placed on ice fog, primarily man-produced, and one of the chief operational problems at many arctic, particularly Alaskan, air bases. The causes of ice fog, frequency, and visual range in ice fog are discussed. Dense arctic sea smoke along tidal flats in the colder season is also considered. Possible remedial measures are outlined for ice fog and sea smoke.

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53339. MITCHELL, JOHN MURRAY, 1928– . The weather and climate of Alaska. (Weatherwise, Oct. 1958. v. 11, no. 5, p. 151–60, 6 text maps, graph, 2 tables.)

Non-technical description, emphasizing contrasts of geography, topography, and weather. Three broad climatic zones are suggested: southeastern and southern; interior; western and northern Alaska including the Aleutians. Each zone's climate is described in turn, with mention of such phenomena as local mountain winds at Fort Greely, steam fog at Anchorage, ice fog at Fairbanks, and extreme effects of blowing snow along the Arctic Slope. The aurora is regularly observed; "looming" of distant objects occurs, as does the "whiteout."

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MITCHELL, JOHN MURRAY, 1928– *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

53340. MITCHELL, R. M., *and* M. F. A. WOODRUFF. The effects of local hypothermia in increasing tolerance of the kidney to ischemia. (Transplantation bulletin, Jan. 1957. v. 4, no. 1, p. 15–17.) 4 refs.

Account of experiments on sheep with one kidney made ischemic for two hours and hypothermic to a varying degree and the other subsequently removed. Daily observations followed on volume, specific gravity, urea and protein content of the urine, blood urea and serum sodium and potassium. Macro- and microscopical changes in the kidney are also discussed.

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53341. MITICH, G. B. Ksenolity kvart͡sitov i selektivnost' granitiza͡tsii v ю̂go-zapadnoĭ chasti Aldanskogo kristallicheskogo massiva. (Akademiя̂ nauk SSSR. Izvestiя̂, ser. geologicheskai͡â, Dec. 1958. god 23, no. 12, p. 94–100, map.) 10 refs. Text in Russian. ***Title tr.:*** Quartzite xenoliths and granitization selectivity in the southwestern part of the Aldan crystalline massif.

Outlines granitization in Archean quartzites-xenoliths in the basins of the Aldan and its tributaries, Yarogu, Amedichi, Ungra and Kuskandra, based mainly on published material. Quartzite-xenoliths are characterized and their distribution in the 8,000 sq. km. area shown on map. Granitization processes, intensity, selectivity, and their effects are discussed; transformation of quartzite-xenoliths through selective granitization into quartzite "skeletons" is noted.

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MITTEN, WILLIAM, 1819–1906, *see* Hooker, J. D. An account . . . plants . . . Walker . . . *1861*. No. 51803.

MIXON, BASEL M., *Jr.*, *see* Riley, P. A., *and others.* Antifibrillary drugs . . . hypothermia . . . dog. *1957.* No. 54314.

53342. MIZEROV, B. V. K voprosu o neodnokratnom oledenenii severo-vostoka Zapadno-Sibirskoĭ ravniny. (Akademiĭa nauk SSSR. Zapadno-Sibirskiĭ filial. Gorno-geologicheskiĭ institut. Trudy, 1956. vyp. 15, Voprosy geologii Zapadno Sibirskoĭ nizmennosti, p. 175–89, maps.) 14 refs. Text in Russian. ***Title tr.:*** On the question of repeated glaciation in the Northeast of the West Siberian plain.

Presents results of investigation on glaciation and Quaternary deposits in the basin of the Dubches, Yeloguy and Taz Rivers (approx. 61°–64° N. 84°–92° E.). The lithologic and mineralogic composition, stratigraphy and regional distribution of these deposits are characterized. A paleogeographic review of this region is given. Diverse views are considered and evaluated; centers of glaciation and their extent and character are discussed; and reasons are presented for assuming that there were two glaciations.

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53343. MLADOVA, T. A. Vliĭanie ponizhennoĭ temperatury na ammonifitsiruiushchuiu mikrofloru dernovo-lesnykh pochv Iakutii. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. Izvestiĭa, 1958, no. 9, p. 100–108, tables.) 14 refs. Text in Russian. ***Title tr.:*** Influence of reduced temperature on the ammonifying micro-flora of turf-forest soils in Yakutia.

Reports results of laboratory studies at the Academy of Sciences' Yakut Branch. Soil samples from Yakutsk District, with 30 and 50% moisture content were kept at +28° and +5° C. for periods up to 45 and 75 days, and bacteria counts were made. Development of ammonifying (*Pseudomonas*, *Mycobacterium*, etc.) and spore-forming (*Bac. mycoides*, *Bac. cereus*, *Bac. megatherium*, etc.) bacteria was negatively affected by reduced temperature, while increase of moisture had positive effect on growth of bacteria at +28° and did not affect growth at +5° C. Conclusion is reached that reduced temperature slows down the process of decomposition and synthesis in the soil. ***Copy seen:*** DLC.

53344. MO, RAGNVALD, 1898– . Dalbygg og utfjerding; folkeminne frå Salten, 4. Oslo, 1957. 145 p. (Norsk folkeminnelag. Skrifter, 79.) Text in Norwegian. ***Title tr.:*** Valley settlements and equipment; folklore from Salten, 4.

Describes the living conditions and facilities, customs and occupations in Nordland province, northern Norway, as recalled from memory or written records. In the 18th–19th centuries, the region was largely self-sufficient, agriculture and fishing were the main occupations, life was hard, hunger common, and conditions were worse among the Lapps who were considered inferior. Superstitions and beliefs, medical practices and standards of conduct, home and community life, etc. are recounted. ***Copy seen:*** DLC.

53345. MO OCH DOMSJÖ AKTIEBOLAG. Sweden's forest bounty; a book about Mo och Domsjö aktiebolag. Stockholm, 1946. 102 p. illus. diagr., map.

History and present activities of this lumber company which owns large forest areas in Norrland northeast from Lycksele (64°35′ N. 18°40′ E.) and Åsele (64°10′ N. 17°10′ E.) to the coast. The company originally exploited its virgin forests, but later turned to forest development and management, and is a pioneer and leader in the reforestation and forest cultivation program now under way in Norrland. It produces sawed lumber, wallboard, sulphite and sulphate wood pulp, mechanical pulp, woodworking materials and chemical products. Its mills, etc. are located on the coast.

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53346. MOBERG, ARVID. Ett besök på Vitön. (Polarboken 1958, p. 68–77, illus.) Text in Swedish. ***Title tr.:*** A visit to Kvitøya.

Describes stop on the island (80° N. 32°30′ E.) during the Norsk Polarinstitutt summer 1957 Spitsbergen expedition aboard the *Sjøvern*. Due to the high air temperature that year and reduction of the ice cover, many relics of the Andrée balloon expedition of 1897 were found on its last campsite. The finds (described briefly) later cleaned in Oslo, were sent to the Andrée Museum at Gränna, Sweden. ***Copy seen:*** SPRI.

53347. MOE, OLAF. Utbyggingen av kringkastingsnettet i Norge. (Teknisk ukeblad, June 23, 1955. årg. 102, nr. 25, p. 517–28, text maps, diagr.) Text in Norwegian. ***Title tr.:*** Improving the broadcasting net in Norway.

Outlines plan to improve reception con-

ditions, by construction of several transmitting stations and modification of others. On the basis of a survey of conditions in 1952, construction needs are indicated for each part of the country. For the northern part, small automatic transmitters with directive antennas in the 87.5–100 mc/s band are proposed, combined with transmission via the electric power and telephone nets.

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53348. MØLLER, E. SCHELDE. Grønlands Hus. (Grønland, Jan. 1957. nr. 1, p. 34–39.) Text in Danish. ***Title tr.:*** Greenland House.

Contains suggestions for an administrative, cultural, social, etc. center in Copenhagen. ***Copy seen:*** DLC.

53349. MØLLER, H. HOLTEN. Opførelsen af radio- og vejrstationen Nord i Nordøstgrønland 1952–53. (Ingeniøren, July 1954. årg. 63, p. 634–37, illus.) Text in Danish. ***Title tr.:*** Construction of the radio and meteorological station Nord, in northeast Greenland 1952–53.

Construction of this station (approx. 81°36′ N. 16°41′ W.) on the north coast was supplied by air, initially by parachute drops, from U.S. aircraft stationed at Thule; 350,000 lbs. of machinery and provisions were delivered before a landing strip, able to receive heavy transport planes, was ready; 214 landings brought the remaining 1,400 t. The station has an airfield, 17 permanent buildings, and four radio transmitters; it follows the air navigation frequencies and transmits regular meteorological observations.

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53350. MØLLER, JENS TYGE. Et tidevandsfaenomen i lille målestok. (Geografisk tidsskrift 1958. bd. 57, p. 38–50, illus., maps.) 5 refs. Text in Danish. ***Title tr.:*** A small-scale tidal phenomenon.

The influence of tides on the formation of coastal ditches and on the shape of river-mouth slopes in southern Jylland, Denmark, is discussed on the basis of "model-scale" observations of long (over 100 m.) waves caused by capsizing icebergs in Igdlorssuit Sund, between Upernavik Ø and Ubekendt Ejland, in 1957–58. Photographs of the interaction between incoming and outgoing waters are reproduced, and observations of the direction and movement of waves and currents are reported in detail.

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53351. MØLLER, JØRGEN KISBYE, 1915– . Den danske myndighedslov. Bør myndighedsloven udvides til også at omfatte Grønland? (Atuagagdliutit: Grønlandsposten, Mar. 3, 1958. Ukiut 98-iat, nr. 5, p. 8–9, 18.) Text in Danish. ***Title tr.:*** The Danish age of majority law. Should the age of majority law be extended to cover Greenland?

Outlines the main points in this new Danish law, which may be extended to Greenland without specific approval by Parliament. Practically no judicial distinction between Greenlanders and other Danes in Greenland would remain.

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53352. MÖLLHOFF-MYLIUS, INGRID. Milzveränderungen bei Unterkühlungsversuchen. (Zeitschrift für die gesamte experimentelle Medizin, 1957. Bd. 128, Heft 5, p. 437–45, illus.) 39 refs. Text in German. ***Title tr.:*** Changes in the spleen during experimental hypothermia.

Account of histological investigation of the spleen from rats made hypothermic to 34°–14° C. with the aid of a drug (Megaphen). Regression of red pulp, reduction in the number of reticulocytes and lymphocytes, transformation of germinative into reactive centers, etc. were observed. Comparisons were made with spleens of hibernating and poisoned animals. ***Copy seen:*** DNLM.

53353. MOGILEVSKIĬ, D. A. Zimnie operativnye aėrodromy. (*In:* U.S.S.R. Armiia. Upravlenie Voenno-vozdushnykh Sil. Sbornik materialov po stroitel'stvu . . . aėrodromov. Moskva, 1942. vyp. 1, p. 31–35.) Text in Russian. ***Title tr.:*** Winter airfields.

"Methods of selecting airfield sites for winter operations are discussed. Frozen marshlands, meadows and fields under cultivation can be converted to airfields readily by clearing obstacles; in permafrost regions, the site must be free of 'naled' or icings. The filling of ditches and the elimination of mounds are recommended procedures if the fields are to be used in summer and fall. Optimum flight operative conditions are obtained on fields covered with a 12- to 15-cm. layer of snow. A minimum of 8 cm. of snow is required before initial preparations."—SIPRE. ***Copy seen:*** DLC.

53354. MOHR, ERNA. Elefantenrobben. (Kosmos, Aug. 1957. Jahrg. 53, Heft 8, p. 399–405, 16 illus.) Text in German. ***Title tr.:*** Elephant seals.

A well illustrated account of the southern and northern species (*Macrorhinus leoninus, M. angustirostris*), with data on size and weight; anatomy, with sexual differences; habits; development, growth, propagation; geographic distribution; migrations; conservation measures; taxonomy of the group. ***Copy seen:*** DLC.

53355. MOHR, ERNA. Die Klappmütze. (Kosmos, Dec. 1955. Jahrg. 51, Heft 12, p. 546–51, 9 illus.) Text in German. ***Title tr.:*** The hooded seal.

Information is presented on taxonomic position, morphology and size, color and haircover, development, geographic distribution, animals in captivity, use of the "hood" for frightening enemies, its anatomy and functioning, intelligence. Excellent photos. ***Copy seen:*** DLC.

53356. MOHR, JOHN L., *and others.* An arctic Alaskan kelp bed. (Arctic, 1957. v. 10, no. 1, p. 45–52, illus., text map.) 28 refs. *Other authors:* E. Y. Dawson *and* N. J. Wilimovsky.

Reports the discovery of a kelp bed near Point Barrow and describes its composition, both red and brown algae and associated fauna: a few polychaetous annelids, arthropods and six fishes, one, *Enophrys diceraus* new to arctic waters. Kelp beds are rare in arctic Alaskan waters and limited in species and in number of individuals. The general poverty of marine algae is thought due to the prevalence of sediments north of Alaska and to silting effects by sea ice in winter. ***Copy seen:*** DLC.

MOHR, JOHN L., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53357. MOISEEV, PETR ALEKSEEVICH. K poznaniiû semeĭstva Scorpaenidae dal'nevostochnykh morei. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniiâ morei SSSR, 1937. vyp. 23, p. 113–38, illus., tables.) 59 refs. Text in Russian. Summary in English. ***Title tr.:*** Contribution on the family Scorpaenidae of the Far Eastern seas.

Brief descriptions of, and keys to 29 species from the northern Pacific, including the Bering and Okhotsk Seas. Synonyms, morphometry, distribution, color, size, etc. are discussed. It is concluded that the number of species of this family markedly decreases in the North, a characteristic also noted on the American side of the Pacific. ***Copy seen:*** DLC.

53358. MOISEEV, PETR ALEKSEEVICH. Nekotorye zakonomernosti raspredeleniiâ donnykh ryb v dalnevostochnykh moriâkh; tezisy doklada. (Akademiiâ nauk SSSR. Okeanograficheskaiâ komissiiâ. Trudy, 1958. t. 3, p. 122–23.) Text in Russian. ***Title tr.:*** Some regularities in distribution of bottom fishes in the Far Eastern seas; conclusions of a paper.

The Bering, Okhotsk, and Japanese Seas are considered, 800 species studied, ten of them with economic potentialities. Similarities and differences in species composition with the North Atlantic, as well as traits peculiar to the area (great depth, narrow shelf) are noted, eco- and biological aspects considered. Supplemented by G. K. Izhevskiĭ, q.v.

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53359. MOKROUSOV, V. P., *and* **O. N. TOLSTIKHIN.** Nekotorye voprosy geologicheskogo stroeniiâ i neftenosnosti iûzhnoĭ Kamchatki. (Sovetskaiâ geologiiâ, Nov. 1958. no. 11, p. 16–25, table, map.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** Some questions of the geological structure and oil-bearing properties of southern Kamchatka

Outlines the stratigraphy and tectonics of Kamchatka Peninsula south of the Plotnikova River and presents a geologic map of the region. Hot springs in the Savan River region are studied, and data given on their temperature, chemical and mineralogic composition. Rocks with oil possibilities are described; the best prospects for oil are considered to be in the region between the Bol'shaya and Golygina Rivers.

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MOLCHANOV, PAVEL ALEKSANDROVICH, 1893– , *see* Dolgin, I. M., *and* V. V. Frolov. Dvadt͡sat' pi͡at' let . . . *1957.* No. 50592.

MOLDAVANT͡SEV, IÛ. E, *see* Ivanova, A. M., *and others.* Geologicheskoe stroenie . . . *1957.* No. 52013.

MOLDOVEANU, G., *see* Bruckner, I., *and others.* The influence . . . hypothermia on anaphylactic shock. *1957.* No. 49956.

53360. MOLIN, KURT. Movement of isoporic zero lines for horizontal magnetic intensity in Sweden. (Arkiv för geofysik, *pub.* 1953. bd. 1, nr. 17, p. 473–82, 2 text maps, 3 tables.) 18 refs

The secular change in horizontal intensity is examined on the basis of repeated observations 1825–1934 at 55 stations, including Bodø (67°17′ N. 14°25′ E.) in Norway, and Haparanda (65°50′ N. 24°10′ E.), and the corresponding isoporic zero-lines, moving in a southwesterly direction, are charted.

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53361. MOLLESTAD, SVERRE. Fiskeflåten 1954. (Fiskets gang, Dec. 2, 1954. årg. 40, nr. 48, p. 581–85, 7 tables, 2 graphs.) Text in Norwegian. ***Title tr.:*** The fishing fleet 1954.

The more than 35,000 Norwegian fishing vessels in 1954 are classed according to construction, means of propulsion, age, length, tonnage, and motor capacity. Differences in age and propulsion groups of 1953 and 1954 are compared. The number of open motor boats increased in northern Norway where 40% of the fleet is registered. ***Copy seen:*** DLC.

53362. MOLLESTAD, SVERRE. Mannskapene og farkostene på vintersildfisket 1954. (Fiskets gang, Nov. 4, 11, 1954. årg. 40, nr. 44, p. 535–38, nr. 45, p. 549–50, tables, graphs.) Text in Norwegian. ***Title tr.:*** Personnel and craft in the winter herring fishery 1954.

Reports from the ships used for this study, constitute a census of the fishing industry, and are adapted to punched card use. More than 2,000 vessels are represented and 22,000 men. Home provinces of the ships and of men according to age class are tabulated and discussed. Two thirds of the ships were under 70 ft. long. Nordland in northern Norway was well represented by ships and both Nordland and Troms by men. Decrease in men from southern provinces is notable.

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MOLLISON, P. L., *see* Jones, N. C. H., *and others.* Factors . . . viability erythrocytes stored . . . frozen. *1957.* No. 52100.

53363. MOLNAR, GEORGE WILLIAM, 1914– . Comparisons of relative cooling rates of aqueous and adipose tissues. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 113.)

Report on experiments with equal size cylinders of beef tongue, liver and suet exposed to 0° C. Relative cooling rate of the aqueous tissues was about 1.5 times that of the fat tissue in still air and 1.3 times at low wind.

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MOLNAR, GEORGE WILLIAM, 1914– , *see also* Wissler, E. H., *and* G. W. Molnar. Analysis of cooling . . . changing air temperature. *1958.* No. 56089.

MONAKHOV, FEDOR IVANOVICH, *see Vokrug sveta.* Postup' uragana. *1958.* No. 55860.

53364. MONK, DON. The east ridge of Mt. Logan. (Canadian alpine journal, 1958. v. 41, p. 17–23, illus.)

Describes first ascent of east peak of Mt. Logan (19,850 ft.), July 19, 1957, by the five members of the 1957 Logan Expedition, the fourth party to reach the summit plateau. Party assembled in Yakutat, Southeast Alaska, flew to the base of this mountain in Yukon Territory (approx. 60°40′ N. 140°30′ W.) spent some 30 days climbing.

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MONSON, MILDRED, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53365. MONSON, RALPH. Excavation, steel, concrete work carries plant job through winter. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 48–52, illus.)

Describes the winter construction of a large manufacturing plant at Rochester, Minn. A ripper pulled by a tractor ripped the ground, frozen at times to four ft. Trenching for sewer and water lines was done by a hoe in frozen ground of less than two ft. depth. Ready-mix concrete was placed in the forms at 70° F. and covered with enclosures made of boards and canvas; the enclosures were heated by torches inserted in a short, corrugated metal pipe. Oil-burning heaters were installed in a few places where torch-heat was inadequate.

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53366. MONTALBETTI, R. A fast auroral camera. (Canadian journal of physics, Mar. 1957. v. 35, no. 3, p. 280–83, illus.) 2 refs.

Describes hand-operated/automatic (remote-controlled) 16 mm. camera designed for frame speeds of one/ten sec. to 16/sec., and using an f/0.71 coated lens; combined with a spheroidal mirror, its angle of view (10°) is widened to 150°. The shutter mechanism is specially constructed for low-temperature operation (−40° C.). A number of short movies of auroras were taken at Fort Churchill,

Manitoba, in Jan.-Mar. 1956; by over-developing Tri-X film D–19 developer, a speed rate of five frames per sec. gives satisfactory results. ***Copy seen:*** DLC.

53367. MONTALBETTI, R. Rotational temperatures measured in aurorae at Churchill, Manitoba. (Canadian journal of physics, Aug. 1957. v. 35, no. 8, p. 831–36, graphs, table.) 9 refs.

Analyzes auroral spectra showing the 0–0 N_2+ band, obtained in late 1954 and 1956. Rotational temperatures of 230°–480° K. were deduced; comparison with similar observations at Saskatoon (52.1° N.) showed no latitude effects. A vertical temperature gradient of 6° K./km. was indicated. ***Copy seen:*** DLC.

53368. MONTREUIL, PAUL L. J. *Corynosoma magdaleni* sp. nov. Acanthocephala, a parasite of the gray seal in eastern Canada. (Canadian journal of zoology, Apr. 1958. v. 36, no. 2, p. 205–215, illus., table.) 9 refs.

Description of this species of intestinal worms from five gray seals and one harbor seal, the latter apparently an accidental host. Morphology and anatomy, type material, habitat, sex ratio, incidence of infection, etc. are discussed. Juveniles were found in halibut and sculpin. ***Copy seen:*** DLC.

53369. MONTREUIL, PAUL L. J., *and* K. RONALD. A preliminary note on the nematode parasites of seals in the Gulf of the St. Lawrence. (Canadian journal of zoology, June 1957. v. 35, no. 3, p. 495.)

The authors have found that not only the stomach, but also the intestinal tract is the site of infection with nematodes (Anisakinae), where they may pass their early development. The need for reassessment of available data and observations is stressed. ***Copy seen:*** DSI.

MOODIE, A. E., *see* East, W. G., *and* A. E. Moodie. The changing world. *1956.* No. 50673.

53370. MOODY, PAUL A. Serological evidence on the relationships of the musk ox. (Journal of mammalogy, Nov. 1958. v. 39, no. 4, p. 554–59, illus., table.) 25 refs.

Report on precipitin tests with anti-musk ox, anti-goat and anti-beef sera. All tests indicated that the musk ox is serologically similar to sheep and goats and "markedly dissimilar" to cattle and bison. This supports the practice of those taxonomists who consider the musk ox as related to sheep and goats.

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53371. MOOK, CONRAD P. Estimating the variance of density at constant height from constant pressure data. (U.S. Weather Bureau. Monthly weather review, Aug. 1958. v. 86, no. 8, p. 309–311, 3 tables, graph.) 7 refs.

Presents a method for utilizing atmospheric statistics originally developed for constant pressure surfaces. Data of average temperature and height for constant pressure surfaces and their standard deviations, from Goose Bay, Labrador, Jan. 1952, are used to estimate the vertical distribution of the standard deviation of percentage atmospheric density at constant height. These data may also provide curves of percentage density variability vs. altitude from which the percentage variability may be interpolated at any desired altitude.

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53372. MOOR, GEORGIĬ GEORGIEVICH, 1907–1958. Évkolit iz shchelochnykh porod severnoĭ okrainy Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958. vyp. 8, p. 34–37, tables.) 6 refs. Text in Russian. ***Title tr.:*** Eucolite from an alkali stratum at the northern limits of the Siberian platform.

Presents chemical composition of eucolite previously found in an alkali intrusion of Odikhincha massif, in the lower Kotuy region (approx. 70°–72° N. 100°–105° E.). This mineral, from the group of zirconium silicates, was reported together with mesodialyte in veins of melanocratic syenites. Chemical and spectrochemical analyses of eucolite are presented. Sensitive content of nickel and sodium is discussed and occurrence of rare and scattered elements indicated.

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53373. MOOR, GEORGIĬ GEORGIEVICH, 1907–1958. Kimberlitopodobnye porody s ksenolitami gneĭsov arkheĭa iz severnoĭ okrainy Sibirskoĭ platformy. (Akademiĭa nauk SSSR. Doklady. Aug. 21, 1957. god 25, t. 115, no. 6, p. 1173–76.) Text in Russian. ***Title tr.:*** Kimberlite-like rocks with xenoliths of Archean gneisses from the northern edges of the Siberian platform.

Describes veins of alnoite-like rocks with content of xenolite hypersthene

gneisses and anorthosites of Archean age, found between the mouths of Kindyn and Potokuy Rivers and near the mouth of the Ėgelyakh—all tributaries of the lower Kotuy (approx. 68° N. 102° E.). The formation, structure, types and mineral composition of these veins are described. Characteristics of xenolite, pyroxene, phlogopite, hypersthene, gabbro-diorite, and nephelite are given. Occurrence of melilite basalts is reported considered, by chemical composition, most closely associated with kimberlites. Discovery of kimberlite itself is anticipated. ***Copy seen:*** DLC.

53374. MOOR, GEORGIĬ GEORGIEVICH, 1907–1958. O nakhozhdenii lovchorrita na severnoĭ okraine Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bŭlleten', 1957. vyp. 6, p. 29–32, tables.) 2 refs. Text in Russian. ***Title tr.:*** The discovery of lovchorrite in the northern border region of the Siberian platform.

Describes briefly rare earth minerals found in syenite veins in the Odikhincha massif in the lower Kotuy basin (approx. 70° N. 102° E.). Mineral composition of melanocratic syenites is characterized. Chemical analyses of the Odikhincha massif lovchorrite are compared with those from the Khibiny massif where lovchorrite was first discovered. Components of other rare elements are given. ***Copy seen:*** DGS.

53375. MOOR, GEORGIĬ GEORGIEVICH, 1907–1958. O pektolite iz intruzivnogo massiva Odikhincha nizhnego techeniĭa reki Kotuĭa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bŭlleten', 1958. vyp. 10, p. 16–19, tables.) 4 refs. Text in Russian. ***Title tr.:*** Pectolite from the Odikhincha intrusive massif in the lower course of the Kotuy River.

This relatively rare mineral was found by the author in 1955 in melanocratic syenite veins of the Odikhincha alkali massif (approx. 70° N.) in Krasnoyarskiy Kray. Pectolite, a hydrosilicate of calcium and sodium of the wollastonite group, is described. Chemical analyses are presented, optical constants indicated. Comparison is made with pectolites of the Khibiny massif and north Caucasus. ***Copy seen:*** DGS.

53376. MOOR, GEORGIĬ GEORGIEVICH, 1907–1958. O vozraste ul'traosnovnykh i shchelochnykh porod severa Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bŭlleten', 1958. vyp. 8, p. 18–23, table.) 5 refs. Text in Russian. ***Title tr.:*** On the age of ultrabasic and alkali strata in the northern Siberian platform.

Presents results of absolute age determination by the argon method, of alkaline, ultrabasic and trap formations in the lower Kotuy and Maymecha basins (approx. 67°–70° N. 100°–102° E.). Age hypotheses hitherto held, are revised on the basis of presented analyses, done under supervision of Ė. K. Gerling in 1956, the first of such analyses for formations in the northern Siberian platform. ***Copy seen:*** DGS.

53377. MOOR, GEORGIĬ GEORGIEVICH, 1907–1958. Predvaritel'nye itogi tematicheskikh rabot na mezhdurech'e Kotuĭa i Maĭmechi v 1957 godu. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bŭlleten', 1957. vpy. 6, p. 39–42.) Text in Russian. ***Title tr.:*** Preliminary results of topical work in the Kotuy-Maymecha interfluve in 1957.

Reports geologic-petrographic field studies on the Bor-Yuryakh intrusive massif and collection of geologic material from the Odikhincha, Changit and Gulinskiy intrusive massifs, all lying between the Kotuy and Maymecha, right tributaries of the Khatanga (approx. 68°–70° N. 98°–102° E.). Structure of the Bor-Yuryakh intrusive massif is described and mineralogic-petrographic characteristics given. Olivinites, phlogopites, syenites and other component rocks are briefly outlined and compared with rocks of other intrusions of this region. ***Copy seen:*** DGS.

53378. MOOR, GEORGIĬ GEORGIEVICH, 1907–1958. Zhil'nye shchelochnye bazal'toidy iz severnoĭ okrainy Sibirskoĭ platformy, Noril'skiĭ raĭon. (Akademiĭa nauk SSSR. Doklady, Sept. 21, 1957. t. 116, no. 3, p. 478–80, 2 tables.) 2 refs. Text in Russian. ***Title tr.:*** Vein alkaline basaltoides from the northern border of the Siberian platform, Noril'sk region.

Alkaline basaltoides found east of the lower Yenisey in Krasnoyarskiy Kray (70° N.) consist of phlogopite 72%, istonites 13%, annite 13%, and siderophyllite 2%. Chemical components of basaltoides from Noril'sk, alnoite from the northern Taymyr River and uachitite are

tabulated. A possible genetic connection of the alkaline and ultra-basic complexes with trappean rock formations is pointed out; they probably originated from the same magmatic focus.

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53379. MOORBATH, S., *and others.* Age of zircon from the Kunait syenite complex, southwest Greenland. (Geological magazine, Mar.–Apr. 1958. v. 95, no. 2, p. 49–52, table.) 12 refs. *Other authors:* S. R. Taylor *and* B. G. J. Upton.

Contains results of study of the age of zircons from a pegmatite vein within the Kunait syenite complex, located near Ivigtut; field collection was made in summer 1956 as part of a program of geologic age and isotope studies in the Dept. of Geology and Mineralogy, Oxford University. The lead-alpha method was used; experimental data indicate a Cambrian age for the Kunait complex and for the nearby Gardar formation. Relation of this age determination to the general geology of the area is briefly discussed.

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53380. MOORE, ALEXANDER MAZYCK, 1917– . Measuring streamflow under ice conditions. Ann Arbor, Mich., 1957. 12 p. illus. (American Society of Civil Engineers. Proceedings, v. 83, paper no. 1162.) 3 refs.

"The effects of ice formation on stage-discharge relation are discussed on the basis of investigations and manuals of the U.S. Geological Survey and personal observations, and the current methods used in determining stream flow under ice are summarized. The characteristics of surface, frazil, and anchor ice and their effects on stream flow are described, and typical rises in gage-height records due to each type of ice are graphed. The causes of the siphon action produced by a fast ice cover are discussed. Factors influencing the accuracy of ice-affected records are examined, and present and old records are evaluated."—SIPRE.

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53381. MOORE, EDWARD WARREN, 1906– . Report on recent analyses of Alaskan waters to Subcommittee on Water Supply, Committee on Sanitary Engineering and Environment. (National Research Council. Bulletin of sanitary engineering and environment, 1952, p. 559–60, table.)

Reports that determinations of color, oxygen consumed and turbidity are to be included in routine analyses of Alaskan waters. The differences between the waters of northern and central Alaska and those of southern Alaska are noted and the new information on color, analyzed and discussed.

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MOORE, G. A., *see* Smith, R. L., *and others.* Mechanical properties of high-purity iron-carbon alloys . . . *1952.* No. 55000.

53382. MOORE, GEORGE A. Catalogue des Hémiptères de la province de Québec. (Naturaliste canadien, Sept.–Oct. 1950. v. 77, no. 9–10, p. 233–71.) 43 refs. Text in French. ***Title tr.:*** Catalog of Hemiptera of the province of Quebec.

Lists 560 species and varieties of Heteroptera and 432 species and varieties of Homoptera known from Quebec with their localities, some species native to the northern part of the province. The literature and other records used in compilation are indicated.

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53383. MOORE, R. C. Forecasting of disturbed HF communication conditions. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 2, *pub.* 1957, p. 147–56, map, graphs.)

"The National Bureau of Standards operates forecasting centers at Fort Belvoir, Va. and Anchorage, Alaska for the North Atlantic and North Pacific radio paths, respectively. Four types of forecast are issued: long term for periods 1–7 and 8–25 days later; medium term for the next 24 hrs.; and short term for the next 6 hrs. (Fort Belvoir) or 9 hrs. (Anchorage). Predictions are based on the 27-day recurrence tendency in solar-terrestrial effects, ionospheric responses to specific types of solar activity, the normal persistence tendency of ionospheric conditions, and detailed knowledge of current geomagnetic, ionospheric, and radio transmission conditions. Geomagnetic responses to solar phenomena are discussed in some detail."—Author's abstract. ***Copy seen:*** DLC.

53384. MOORE, R. K. Aurora and magnetic storms; the nature of ionospheric disturbances and their effect on radio communication. (QST, June 1951. v. 35, no. 6, p. 14–19, +, illus., graphs.) 14 refs.

Describes the influence of geomagnetic storms on wire- and wireless communica-

tions, with a special view to amateur long-distance communications in the 50 and 144-mc bands. Various types of auroras are described briefly: yearly average number and monthly variations at given latitudes 52°–60° N. are graphed, and the best time to establish long-distance "auroral" communications, is indicated.
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53385. MOORE, TERRIS, 1908– . The arctic pilot. (*In:* N. D. van Sickle. Modern airmanship. New York, 1957. p. 748–96, illus.) 6 refs.

Preparatory and in-flight precautions and procedures are outlined, with special attention to landing and take-off outside regular airports and airstrips. Modification and preparation of an aircraft for arctic use are described; cabin heating and windshield defrosting are important, as are reduction of engine cooling, and heating of the carburetor air intake. Where heated hangars are unavailable, aircraft must be parked so that the landing gear does not freeze to the ground; engine and oil must be preheated to a safe extent before starting is attempted. Other precautions are noted, e.g. tying down parked aircraft, preparation of snow runways, removal of ice on wings, elevators, stabilizers, and ailerons. Special in-flight problems created by extreme cold, ice fog, white-out, and carburetor icing are discussed, and emergency measures to reduce their effects are indicated. Directions for landing and take-off on river bars, beaches, tidal flats, roads, frozen lakes and rivers, winter tundra, ice packs and ice islands, are given. Emergency equipment and search-and-rescue operations are discussed; a good LF/MF radio transmitter and a reel of antenna wire are claimed the most essential emergency equipment; the importance of staying close to the aircraft while waiting for rescue, is emphasized; construction of shelters, protection against insects and animals, and means and procedures of emergency signalling are explained.
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53386. MOORREES, COENRAAD F. A. The Aleut dentition; a correlative study of dental characteristics in an Eskimoid people. Cambridge, Harvard University Press, 1957. x, 196 p. illus., tables, maps. Approx. 250 refs.

Report by the odontologist of the Peabody Museum, Harvard University Expedition, which spent three months of the summer 1948 studying historical, medical and other problems of the Aleuts. A total of 156 (of all ages) was found, living in two villages: Nikolski on Umnak, and Atka on Atka Island. Consecutive sections of this monograph deal with the history, environment and appearance of the Aleuts; objectives of dental studies in anthropology; material and methods; the Aleut diet (in collaboration with Tomi K. Hibbett); morphological characteristics of the dentition: shovel-shaped incisors, cusp numbers, carabelli's cusp, taurodontism, etc.; torus mandibularis and exostoses; gingival pigmentation; odontometry of Aleut teeth (with Kalevi Koski); emergence of teeth; tooth position and occlusion; teeth and mouth diseases. Appended are comparative odontometric data of various populations of the world. ***Copy seen:*** DLC.

MORACHEVSKIĬ, V. G., *see* Voskresenskiĭ, A. I., *and others.* Primenenie tverdoĭ uglekisloty . . . *1957.* No. 55893.

MORALES, GEORGE, *see* Morales, P., *and others.* Alterations in renal function during hypothermia . . . *1957.* No. 53387.

53387. MORALES, PABLO, *and others.* Alterations in renal function during hypothermia in man. (Annals of surgery, Apr. 1957. v. 145, no. 4, p. 488–99, illus., tables.) 28 refs. *Other authors:* W. Carbery, A. Morello, *and* G. Morales.

Account of investigation on 11 mental patients with thiopental or thiopental-spinal anesthesia under normothermic or hypothermic conditions. Glomerular filtration rate, renal plasma flow, maximal tubular excretory capacity (Tm PAH), renal vascular resistance, urinary flow, sodium and potassium excretion were recorded and compared in all groups.
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53388. MORALEVICH, Ю. Pervyĭ v mire atomokhod. (Pioner, Aug. 1957. god 34, no. 8, p. 68–69, illus.) Text in Russian. ***Title tr.:*** The first atomic vessel in the world.

Describes construction in Leningrad shipyards, and the equipment of the atom-powered ice-breaker *Lenin:* its engines, radiation insulation, size (134 x 30 m.), speed (35 km/h.), etc.
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MORAVETZ, R. L., *see* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

53389. MORDINOV, A. E. Îâkutskiĭ gosudarstvennyĭ universitet i ego zadachi. (Yakutsk. Universitet. Uchenye zapiski, 1957, vyp. 1, Seriîâ estestvennykh nauk, p. 7–16.) 3 refs. Text in Russian. ***Title tr.:*** The Yakut State University and its tasks.

Outlines the purposes and functions of the university founded at Yakutsk in 1956, and of its departments of the social (gumanitarnyĭ), technical, natural and agricultural sciences, and their divisions. The University is discussed as a mark of the progress achieved in Yakutia and a means for further development. The author, a Yakut scientist, is the first rector of the University.

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MORELAND, W. B., *see* Wexler, H., *and* W. B. Moreland. Winds and temperature . . . arctic stratosphere. *1958.* No. 56009.

MORELLO, ALDO, *see* Morales, P., *and others.* Alterations in renal function during hypothermia . . . *1957.* No. 53387.

53390. MORENUS, RICHARD. DEW line; Distant Early Warning, the miracle of America's first line of defense. New York, Rand McNally, 1957. 184 p. plates.

Describes planning and construction of the 3,000-mile radar chain extending from Pt. Barrow to Baffin Island. Construction was started (1952) along the north Alaskan coast, undertaken by the Bell System as primary contractor and Western Electric as sub-contractor. This part of the chain was completed by 1953; the second phase, across the northern coast of Canada, was started in 1955 by the same company. Preliminary construction equipment and supplies were flown in by military and commercial aircraft. Organization of the airlift, problems of airdrop, freight handling, etc. are discussed. In June/July 1955, two 60-vessel fleets, one out of Norfolk, Va., other from Seattle, carried additional supplies and heavy equipment into the eastern and western Arctic for delivery at radar sites along the Canadian archipelago. The achievements of HMCS *Labrador*, leader of the eastern convoy, are stressed. Personnel, housing at construction sites, local native labor, etc. are discussed. A brief description is given of the floating and airborne radar stations forming the remainder of the 10,000-mile distant early warning chain. Radar screens and observation posts south of the DEW Line are briefly dealt with, and the ability of U.S. and Canadian forces to ward off an attack from the north, is discussed. ***Copy seen:*** DLC.

MORETON, R. W., *see* Simpson, C. J. W., *and others.* North ice . . . *1957.* No. 54901.

53391. MORIN, G. Données expérimentales récentes relatives à l'hypothermie provoquée et à son action sur le système nerveux central. (Marseille chirurgical, Oct.-Dec. 1956. année 8, no. 5, p. 551–67, tables.) 2 refs. Text in French. ***Title tr.:*** Recent experimental data on induced hypothermia and its action upon the central nervous system.

Contains information on the resistance of the homeotherm to temperature lowering; degrees of hypothermia; effect of lowered temperature on organ activity and physiology in general; effects upon the nervous system and its parts; reversibility of nervous effects; electrocorticographic studies, etc.

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53392. MORONG, THOMAS, 1827–1894. Notes on North American Haloragеae. (Torrey Botanical Club. Bulletin, Aug. 8, 1891. v. 18, no. 8, p. 229–46.)

Contains keys to genera and species, and critical notes on 28 species (in four genera), one described as new. Three of these aquatic herbs occur in the North: *Hippuris vulgaris*, common in arctic Alaska and Canada; *H. tetraphylla*, from Alaska to Hudson Bay; and *Myriophyllum spicatum*, in Canada to Newfoundland. ***Copy seen:*** DLC.

53393. MORONG, THOMAS, 1827–1894. Studies in the Typhaceae, II; *Sparganium.* (Torrey Botanical Club. Bulletin, Mar. 2, 1888. v. 15, no. 3, p. 73–81, plate 79.)

Contains a key and critical notes on six species and some varieties of this genus (bur-reeds) of the cat-tail family; one species and a variety described as new. *S. hyperboreum*, from the southern coast of Hudson Bay, is included. Pt. 1 of this paper does not contain arctic species. ***Copy seen:*** DLC.

53394. MOROZOV, A. Barguzinskiĭ sobol' v Khanty-Mansiĭskom okruge. (Okhota i okhotnich'e khozîâĭstvo, Jan.

1957, no. 1, p. 26.) Text in Russian. ***Title tr.:*** The Barguzin sable in the Khanty-Mansi National District.

Due to conservation measures (protection of the local strain on the left bank of the Ob River and acclimatization of the Barguzin sable on the right bank) the stock, almost totally depleted 40 years ago in this District, has now recovered. The sable catch has risen from 307 pelts in 1940, to 4,165 in 1955.

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53395. MOROZOV, A. I. Osobennosti razmeshcheniîa shchelochnykh granitov v predelakh poluostrova i istoriîa ikh issledovaniîa. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 7–15, fold. map.) Text in Russian. ***Title tr.:*** Distribution features of alkaline granites in the range of the Peninsula and the history of their investigation.

Presents map and review of alkaline granite distribution in 13 districts of Kola Peninsula and discusses their types, structure, texture, zonal variety, metasomatism, and other features. Alkaline granites were first identified here by B. A. Popov in 1899; 25 years later A. A. Polkanov found them in the Gremyakha tundra; and in 1928 B. M. Kupletskiĭ and O. A. Vorob'eva discovered the largest, Zapadnyye Keyvy, intrusion (67°30′–68° N. 35°25′–37°15′ E.), and initiated the systematic study of these granites. This study during the periods 1928–1934, 1934–1941 and 1945–1952 is reviewed in a summary account of the scientists, their work, and their main results.

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53396. MOROZOV, A. I. Shchelochnye granity Srednego Ponoîa. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 66–85, illus., tables, text maps.) Text in Russian. ***Title tr.:*** Alkaline granites in the middle course of the Ponoy River.

Reviews geologic and stratigraphic characteristics of the area (approx. 66°55′–67°15′ N. 37°55′–38°45′ E.) and describes microcline granite, biotite, amphibolic-biotite gneiss and amphibolite, metabasite, gabbro-anorthosite and other rocks in which alkaline granites are injected. Two independent alkaline granite massifs are treated in detail. Appearance and extent of these massifs are described. Variety, fracturing mode and occurrence of alkaline granites in quartz and pegmatite veins are outlined. Features of texture and structure, predominant minerals, and chemical and physical properties are examined and data presented in tables and diagrams. Aspects of genesis are summarized. ***Copy seen:*** DLC.

53397. MOROZOV, A. I., *and* **A. M. SHUKEVICH.** Shchelochnye granity zapadnoĭ chasti Kol'skogo poluostrova. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 190–96, table.) Text in Russian. ***Title tr.:*** Alkaline granites in the western part of Kola Peninsula.

Alkaline granites have a limited distribution in western Kola and occur in blanket- and cross-veins, 150-200 m. maximum thickness. Three groups are distinguished: granites spatially connected with granulated formation; those extending in the contact zones between granulites and surrounding gneiss and gneissose-granites, and those spaced in the stratum of oligoclase-granites. Each group is briefly characterized; its location and appearance outlined. Subalkaline microcline granites, alkaline granites and alkaline syenites are more precisely treated. Their geologic position, component minerals, color, texture, and other properties are summarized.

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53398. MOROZOV, A. I. Sravnitel'naîa petrograficheskaîa kharakteristika shchelochnykh granitov Kol'skogo poluostrova. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 225–59, tables.) Text in Russian. ***Title tr.:*** Comparative petrographic characteristics of alkaline granites of the Kola Peninsula.

Presents a short review of alkaline granite massifs in the western part of the central watershed of the Peninsula and outlines their petrographic varieties. Two basic groups of the granites are distinguished: the aegirite-arfvedsonites, distributed over some 300 km.², about 85% of the entire alkaline granite area; and the aegirite-augite-hastingsites. These groups are treated in turn and in detail. Component and accessory minerals, optical constants and chemical composition are outlined. Sub-groups also are established, among the aegirite-arfvedsonite granites: astrophyllite and astrophyllite-magnetite, enigmatite, orthite-cyrtolite, and pegmatoid alkaline granites; the aegirite-augite-hastingsites are divided into: melanocratic, leucocratic, and aplitic, magnetite granites. ***Copy seen:*** DLC.

53399. MOROZOV, O. S. Proizvodstvennaîa spet͡sializat͡siîa kolkhozov ĪAkutii. (Akademiîa nauk SSSR. ĪAkutskīĭ filial, *Yakutsk*. Trudy, seriîa ėkonomicheskaîa, 1957. vyp. 1, Materialy po ėkonomike sel'skogo khozîaĭstva ĪAkutii, p. 4–20, tables, maps.) Text in Russian. ***Title tr.:*** Production specialization of the collective farms in Yakutia.

Agriculture of Yakut A.S.S.R. is divided into five main classes: stock raising/farming; stock raising/trade; trade/reindeer breeding; reindeer breeding/trade; reindeer breeding for transport/beginnings of farming. Map shows distribution of these classes, also of two related but subsidiary economic activities; dairying/market-gardening, and fishery. The reindeer/trade and the fishery zones extend to the north coast, stock-raising/trade to Nizhne-Kolymsk in northeastern Yakutia. Each class (or zone) is characterized in turn with (percentage) data on workers, stock, finances. The predominant class, prevailing in central Yakutia, is stock-raising/farming, and it is considered in three sections, as: mainly livestock, mainly farming, and mixed. Kolkhozes of this region are indicated on map (p. 13) according to their specialization.

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53400. MOROZOV, O. S. Zemel'nye fondy i zemlepol'zovateli t͡sentral'noĭ ĪAkutii. (Akademiîa nauk SSSR. ĪAkutskīĭ filial, *Yakutsk*. Trudy, seriîa ėkonomicheskaîa, 1957. vyp. 1, Materialy po ėkonomike sel'skogo khozîaĭstva ĪAkutii, p. 30–49, tables, maps.) 6 refs. Text in Russian. ***Title tr.:*** Lands and land use of Central Yakutia.

This region, roughly the Lena River system basin, 60–65° N. 111°–135° E., 816,600 km.² in area, has 97% of the arable and 54% of the grasslands of all Yakut A.S.S.R. At present 88.2% is in forest reserves; 9% is used for agriculture by collective and state farms, factory workers, and others. Land use is analyzed in tables. On the basis of relief, climate, soils, vegetation and permafrost occurrence, central Yakutia is divided as: the Lena-Aldan plateau, central Lena region, Vilyuy basin, southwestern Lena region, and the Lena-Vilyuy interfluve. These are characterized in turn. The economic life of collective farms is discussed and various difficulties are outlined; reappraisal and improvement of land use is recommended.

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53401. MOROZOV, PETR STEPANOVICH. V more studennom; iz zapisok severomort͡sa. (Sovetskiĭ morîak, Sept. 1958. god 18, no. 17, p. 15–17, illus.) Text in Russian. ***Title tr.:*** On the cold sea; from the diary of a northern sailor.

Sketches by the commander of the Soviet cruiser *Maksim Gor'kiĭ*, of operations in the Barents Sea in the early days of Soviet-German fighting in World War II: heavy seas, unpreparedness, vessels in poor condition, etc.; fighting off the German submarines; rescue of a sinking destroyer on Cape Kanin Nos, etc. Author's characteristic is given by E. ĪUnga in introduction.

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53402. MOROZOV, SAVVA TIMOFEEVICH, 1911– . Zoloto Kolymy. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 22–23, illus., ports, 2 col. plates.) Text in Russian. ***Title tr.:*** Gold from Kolyma.

Story of the discovery of gold at Bezymyannyy Creek by ĪU. A. Bilibin's expedition in 1928, as told by one of the party, the geologist, S. D. Rakovskiĭ; the auto-road from Magadan to the gold fields; new settlements; the Matrosova gold mine yielding several grams per ton ore, its workers and equipment; transportation of the gold. Illus. include photo of Nagayeva Bay harbor, entrance to Magadan. ***Copy seen:*** DLC.

MORRIS, GEORGE C., *see* Moyer, J. H., *and others*. Hypothermia, 1; effect on renal . . . dog and man . . . *1957*. No. 53429.

MORRIS, GEORGE C., *see* Moyer, J. H., *and others*. Hypothermia 3; the effect . . . renal . . . ischemia. *1957*. No. 53431.

MORRIS, J. A., *see* Orville, H. T., *and* J. A. Morris. Stand by for climate control. *1958*. No. 53785.

MORRIS, Q. L., *see* Railsback, H. E., *and* Q. L. Morris. Low temperature properties of 80% cis-polybutadiene. *1958*. No. 54206.

53403. MORRIS, RAY F. Biology and control of the purple-backed cabbageworm in Newfoundland. (Journal of economic entomology, June 1958. v. 51, no. 3, p. 281–84, 7 illus., table.) 6 refs. Contrib. no. 3705, Entom. Div., Sci. ser., Canadian Dept. Agriculture.

Contains data on *Evergestis pallidata*,

reported in Newfoundland in 1943 (also in Northwest Territories) and now considered a major pest of cruciferous crops. Only one generation was observed; it is unusually free of natural enemies. Satisfactory control was obtained with DDT either as spray or dust. ***Copy seen:*** DA.

53404. MORRIS, ROBERT HAMILTON, 1921– . Reconnaissance study of the Marsh anticline, northern Alaska. Washington, D.C., 1957. 6 p., fold. map. Mimeographed. (U.S. Geological Survey. Reports, open file series, no. 405.) 3 refs.

Preliminary geologic study of a part of Naval Petroleum Reserve No. 4, along lower Marsh Creek (approx. 69°55′ N. 144°55′ W.), field checked in July 1953. Previous work in the area, location, topography and drainage are indicated; followed by discussion of the Tertiary sandstones and shales, and the Quaternary upland gravels and Recent alluvium. Strata are described, presence of fossils is noted. Correlation of the section with the Sagavanirktok formation (Tertiary) further west is suggested. Remarks on the upland gravels (Pleistocene?) lying unconformably on the Tertiary strata, and the Recent alluvial deposits are included, followed by structural comments on the Marsh anticline.

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53405. MORRIS, T. R., *and* **S. FOX.** Artificial light and sexual maturity in the fowl. (Nature, *London*, Nov. 29, 1958. v. 182, no. 4648, p. 1522–23, table.) 2 refs.

Account of experiments with chicks hatched on Dec. 4th (latitude 51°27′ N.) part of them given supplementary illumination, the others, serving as controls, remaining under natural conditions. The results of the two illuminated groups show "that sexual maturity is affected by changes in day-length and not by the absolute day-length." ***Copy seen:*** DLC.

53406. MORRIS, T. R., *and* **S. FOX.** Light and sexual maturity in the domestic fowl. (Nature, *London*, May 24, 1958. v. 181, no. 4621, p. 1453, illus., table.) 4 refs.

Account of experiments (initiated in 1954) involving additional, artificial illumination. It is concluded "that the rate at which a pullet approaches sexual maturity is increased by increasing lengths of day and decreased by decreasing lengths of day." The practical aspects of the findings are discussed.

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MORRISON, CHARLES C., *see* American Geographical Society. Geographic study of mountain glaciation. *1958.* No. 49276.

MORRISON, J. F. *see* Wyndham, C. H., *and* J. F. Morrison. Adjustment to cold of Bushmen . . . *1958.* No. 56130.

53407. MORRISON, PETER REED' 1919– , *and* **W. J. TIETZ.** Cooling and thermal conductivity in three small Alaskan mammals. (Journal of mammalogy, Feb. 1957. v. 38, no. 1, p. 78–86, illus., tables.) 6 refs.

Description of a method for evaluating the insulating layer in dead animals and of the results obtained with it. Though there was considerable discrepancy between individual measurements, the mean compared well with results from fur-covered metal casts and from O_2-consumption of living animals. The effects of posture, fur position and air movement were also noted. ***Copy seen:*** DI.

53408. MORRISON, S. D. Nutrition and climatic stress. (Nature, *London*, June 14, 1958. v. 181, no. 4624, p. 1644–45.)

Reports a symposium on this problem held by the Nutrition Society Apr. 26, 1958 at Ayr, Scotland, with summary of papers presented. They dealt with need of a physiological index of climate, feeding of expeditions in cold climates, indoor and outdoor conditions during the British North Greenland Expedition 1952–54, energy exchange, etc. Climatic effects on domestic animals (cows) were also considered. ***Copy seen:*** DLC.

MORROW, ANDREW G., *see* Lombardo, T. A., *and others*. Myocardial failure in experimental hypothermia. *1957.* No. 52906.

53409. *MORSKOĬ FLOT.* Atomnyĭ ledokol "Lenin." (Morskoĭ flot, Nov. 1958. god 18, no. 11, p. 4–5, illus.) Text in Russian. ***Title tr.:*** Atom-powered ice-breaker *Lenin*.

The ship has a 16,000-ton displacement, 134 m. length and 27.6 m. width. Three atomic reactors of 90,000 kw. capacity have 3,017 tons of total weight with heavy insulation. The power developed by three units working on three shafts will be about 44,000 hp. at a speed of 18

knots in open sea and 2 knots through ice 2.4 m. thick. The hull at the water line has a special reinforcing belt with strong plating capable of withstanding heavy ice pressure. The ship has three decks and two platforms, one of which is used for helicopter landing. Forward tanks can be filled with water by a centrifugal pump at a rate of 4,000 ton/hr. for crushing heavy ice. Radar and other electronic instruments are used for navigation and coordinated control of various equipment. ***Copy seen:*** DLC.

53410. *MORSKOĬ FLOT.* Za rentabel'nuĭû rabotu arkticheskikh portov. (Morskoĭ flot, Aug. 1958. god 18, no. 8, p. 32.) Text in Russian. ***Title tr.:*** Profitableness of arctic ports.

Reports on economic conferences at Dikson and Tiksi to discuss means of increasing the ports' profits from commercial shipping by rationalization, improved organization, mechanization, etc. ***Copy seen:*** DLC.

53411. MOSEGAARD, HANS. En gammel nordbo-brønd. (Grønland, Nov. 1958. nr. 11, p. 415–18, illus.) Text in Danish. ***Title tr.:*** An old Norse well.

Offers impressions of the plant-breeding station at Upernaviarssuk in the Julianehåb region, which the author visited as gardening adviser. While there he found an old well assumed to have been used by the Norsemen. ***Copy seen:*** DLC.

53412. MOSEVICH, M. V. Ob uchastii bakteriĭ v sozdanii zimnikh zamornykh usloviĭ v rechnykh vodoemakh Ob'-Irtyshskogo basseĭna. (Mikrobiologiîa, 1944. t. 13, vyp. 2–3, p. 89–96, illus., tables.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** On the share of bacteria in creating winter-mortality conditions in the rivers of the Ob-Irtysh basin.

Number and composition of microflora were found to be similar in areas of winter mass mortality of fishes and in areas free from it. Furthermore, due to low temperatures, numbers and activity of bacteria decline in the winter. Biochemical changes taking place in the bottom were found not to affect perceptibly the water layers above it. ***Copy seen:*** DLC.

53413. MOSEVICH, N. A., *and* P. V. SOKOLOV. Gidrokhimicheskaîa kharakteristika nekotorykh rek Kol'skogo poluostrova s uchetom geologii ikh basseĭnov. (Leningrad. Vsesoîuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khoziîaĭstva. Izvestiîa, 1939. t. 21, p. 322–50, tables.) 11 refs. Text in Russian. Summary in English. ***Title tr.:*** The hydrochemical character of some rivers of the Kola Peninsula with an account of the geology of their basins.

A study of the chemistry of 18 rivers in the southern part of the peninsula made in connection with an investigation on the ecology and distribution of the clam *Margaritana margaritifera.* The amount of HCO_3^-, Ca^+, Mg^+ in the water was studied, as well as that of alkali, metals, general mineralization, etc., and brought into relation with the geology of the basins. Rivers with basins constituted chiefly by rocks of the Imandra-Varzuga suite, mostly split diabase, are more mineralized than those with granites and gneisses; the latter are rich in alkali metal ions; highest mineralization was found in the Kichesara River. The degree of mineralization was also referred to the high- and low-water conditions. ***Copy seen:*** DLC.

MOSHINSKAÎA, V. I., *see* Chernetsov, V. N., *and* V. I. Moshinskaîa. V poiskakh drevneĭ rodiny . . . *1954.* No. 50211.

MOSINGER, B., *see* Braun, T., *and* B. Mosinger. Effect of hypothermia on death by starvation. *1958.* No. 49897.

53414. MOSKALENKO, B. K. Muksun reki Anabary. (Leningrad. Vsesoîuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khoziîaĭstva. Izvestiîa, 1955. t. 35, p. 44–60, illus. tables.) 8 refs. Text in Russian. ***Title tr.:*** The whitefish of the Anabar River.

A study of the species *Coregonus muksun* in this river of northwest Yakut A.S.S.R., with data on seasonal distribution and migrations, shoaling, development and growth, sexual cycle and period of maturity, the young; food, fat content of the fish, size, weight and age groups. ***Copy seen:*** DNLM.

53415. MOSKVA. VSESOÎUZNAÎA SEL'SKOKHOZIÎAĬSTVENNAÎA VYSTAVKA, 1954– . Pavil'ion rybnoe i prudovoe khoziîaĭstvo; putevoditel'. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1955. 32 p. illus. Text in Russian. ***Title, etc. tr.:*** All-Union Agricultural Exhibition, Moscow, 1954; fisheries and pisciculture pavilion, a guide. By A. P. Anokhin; V. M. Shparlinskiĭ, editor.

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Contains an introductory sketch of Soviet fisheries and their recent development, followed by descriptions of the exhibits. Fishing, methods and gear, preservation and processing, by-products and their utilization, whaling, its mechanization, modernization and research, pond-fish farming, etc., are illustrated by dioramas, pictures, photographs, or, as in the case of gear, by exhibits of the actual objects. Arctic fisheries are included. ***Copy seen:*** DLC.

53416. MOSKVITIN, A. I. Stratigraficheskaîa skhema chetvertichnogo perioda v SSSR i ee printsipial'noe i kratkoe faktícheskoe obosnovanie. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Trudy, 1957. t. 13, p. 21–23, table.) Text in Russian. ***Title tr.:*** Stratigraphic division of the Quaternary period in the U.S.S.R. and précis of its main bases.

Presents in tabular form with introductory statement, a new stratigraphic division of the Quaternary for all U.S.S.R. based on the last 40 years' investigations. The German division adopted 30 years ago has been substantially changed as a result of Russian conditions, terminology and new approaches or discoveries. The main innovations are summarized and indicated in the table, which shows periods, ages, series, horizons, zones and facies. ***Copy seen:*** DLC.

MOSS, ALFRED ERNEST, 1913– , *see* Gustafson, J. K., *and* A. E. Moss. O papel do geólogo . . . *1953.* No. 51451.

53417. MOSS, EDWARD L. A fragment of human skeleton from North Latitude 81°42′. (Royal Dublin Society. Scientific proceedings, 1877. n.s., v. 1, p. 67–71, illus.) ref.

Description of a fragment of human femur found near the winter base of Nares expedition in Discovery Harbour, northeast Ellesmere. A reconstruction of the size of the whole bone and its bearer is attempted. Vertebrae and a skull of a musk ox were found within 200 yards. The human bone is considered "very old." ***Copy seen:*** DLC.

53418. MOSS, EDWARD L. Observations on arctic sea-water and ice. (Royal Society of London. Proceedings, 1878. v. 27, p. 544–59, tables.) Refs. in text.

Discusses the sampling of sea-water, study of coastal floe-ice, and of dust distribution in ice, carried out during the British Arctic Expedition 1875–76. Observations were made aboard the *Alert* en route north from Kap Farvel to, and in winter quarters on northeast Ellesmere, 82°27′ N. 61°42′ W. Data on specific gravity and chlorine content of the sea-water are tabulated with date and location, depth, and temperature. Various kinds of ice in Lincoln Sea, from which some water samples were derived, are characterized. ***Copy seen:*** DLC.

53419. MOSS, EDWARD L. On glaciation by sea ice. (Royal Irish Academy, *Dublin.* Proceedings, Aug. 1877. ser. 2, Science, v. 3, no. 1, p. 50–51.)

Two overturned ice masses, exposing the surface which had rested against the bottom, were observed near the *Alert*'s winter quarters at Floeberg Beach, northeast Ellesmere, 82°27′ N. during the 1875–76 British Arctic Expedition. Well marked, parallel grooves and scratches could be seen across the surface of the ice and that of stones imbedded in and protruding from the ice.

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53420. MOSS, RICHARD J. On the chemical composition of the coal discovered by the Arctic Expedition of 1875–6. (Royal Dublin Society. Proceedings, new ser., May 1878, v. 1, p. 61–62, tables.) 3 refs.

Contains tabulated results of analysis of coal sample from a 25 ft.-thick seam found near Discovery Harbour (81°43′ N. 64°04′ W.) northeast Ellesmere Island. It has characteristics of good quality bituminous and composition similar to Bay of Fundy, Nova Scotia coal; in ash analysis, potash is high.

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53421. MOSSMAN, ARCHIE S. Hooded mergansers at Afognak Island, Alaska. (Condor, Sept.–Oct. 1957. v. 59, no. 5, p. 341.)

Report from the Alaska Dept. of Fish and Game research station at Kitoi Bay on Afognak Island, the area covered by Sitka spruce, *Picea sitchensis.* A female hooded merganser was seen on Nov. 10, 13, 17, and 20, apparently the same individual. This constitutes an extension of the known range of this bird from Haines in Southeast Alaska where it is known to breed. ***Copy seen:*** DLC.

53422. MOSSMAN, ARCHIE S., *and* **W. K. CLARK.** Winter records of bats in Alaska. (Journal of mammalogy, Nov. 1958. v. 39, no. 4, p. 585.)

Two records of small bats, probably *Myotis* observed on Afognak Island in November and March. The possibility of this species overwintering in Alaska, is voiced. ***Copy seen:*** DI.

MOSTARDA, G., *see* Amantea, L., *and* G. Mostarda. Osservazioni sulla termometria dei vari organi . . . *1957.* No. 49269.

MOTOVA, M. A., *see* Vlodavetŝ, V. V., *and others.* . . . Sravnitel'naîa otsenka bakteriologicheskogo . . . *1958.* No. 55849.

53423. MOTYCHKO, V. F. Olivinity i slŭdity massiva Odikhincha. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ bŭlleten', 1958. vyp. 10, p. 25–31, tables.) 2 refs. Text in Russian. ***Title tr.:*** Olivinites and micas of the Odikhincha massif.

Presents mineralogic and petrographic characteristics of olivinites and micas in material collected by the author, 1956–57, from cross-sections of the Kotuy valley in the ultrabasic and alkalic Odikhincha massif. Various forms of olivinite occurrence are reviewed, with olivine as the predominant mineral. Replacement of olivine through contact-metasomatism mainly by magnesium mica-phlogopite and diopsite or nepheline is noted. Chemical and spectral analyses of olivinite and phlogopite are presented. Physical properties of newly formed phlogopite are outlined.

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53424. MOUNT, L. E. Change in oxygen consumption of the new-born pig with a fall in environmental temperature. (Nature, *London,* Aug. 23, 1958. v. 182, no. 4634, p. 536–37, tables.) 3 refs.

Report on experiment with pigs several hours to six days old, exposed to temperatures of 23° to 3° C. The animals showed a vigorous response to lowered temperature, raising their heat production by some 50% within the experimental range of ambient temperatures. Different results by other authors are noted.

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53425. MOURIER, G. L. Fiskerirådets virksomhed 1930–1954. København, Lützhøft, 1954. 118 p. Text in Danish. ***Title tr.:*** Activities of the Fisheries Council 1930–1954.

Study of organization and administration with little reference to specific conditions and events on the fishing grounds. Danish effort towards increase of fisheries, based primarily in Greenland waters, following World War I, and subsequent organization of the Council, are summarized. The enabling act of 1930 covered economy, research, propaganda, education, financing, supply and manning of trawlers, quality standards, and exports. Fishery developments are related through the 1930's, during the German occupation, and the postwar period. In 1954 fisheries were transferred to the Ministry of Trade.

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53426. MOURIQUAND, GEORGES, *and others.* L'hypothermie d'origine physique, sèche ou mouillée, et l'hypothermie par chlorpromazine dans leurs rapports avec la température et l'indice chronologique vestibulaire. (Académie des Sciences, *Paris.* Comptes rendus, July 29, 1957. t. 245, no. 5, p. 476–79) 9 refs. Text in French. *Other authors:* V. Édel *and* R. Chighizola. ***Title tr.:*** Hypothermia of physical origin, dry or wet, and hypothermia through chlorpromazine, and their relations with temperature and vestibular chronological index.

Account of experiments with rats and pigeons. Hypothermia produced by physical means showed a parallel lowering of body temperature and of vestibular chronaxy. That produced by chlorpromazine showed an elevation of chronaxy while the temperature fell, indicating different action upon the nervous centers.

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53427. MOURIQUAND, GEORGES, *and others.* L'hypothermie dans ses relations avec l'indice chronologique vestibulaire. (Académie des Sciences, Paris. Comptes rendus. Jan. 1957. t. 244, no. 3, p. 284–87.) 9 refs. Text in French. *Other authors:* V. Édel *and* R. Chighizola. ***Title tr.:*** Hypothermia in its relations to the vestibular chronologic index.

Account of experiments with pigeons and rats exposed to −17° C., and a fixed humidity. The pigeons preserved their weight and body temperature but vestibular chronaxy was lowered even after brief exposure; rats in addition became hypothermic and some lost weight.

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53428. MOWLL, J. U. Prospects for nuclear power in Canadian mineral

industries. (Canadian geographer, 1958. no. 11, p. 34–42, map.) 6 refs.

Considers mining areas, mostly in the North, where nuclear power might be installed, its advantages and disadvantages; also the availability and cost of other energy sources. Areas inaccessible by surface transport and lacking local power sources are likeliest localities; of such is most of the interior of the Canadian Shield, e.g., Coppermine. In areas accessible to bulk shipments of coal or oil but short of hydro power, comparative costs are the determining factor. Mines of the Yukon (e.g. Keno Hill with the highest power costs in Canada), Belcher Islands, and the Ungava Bay region might benefit from nuclear power, but not, e.g. Inuvik, receiving oil from Norman Wells by cheap water transport, nor Pine Point developments with a proposed hydro plant at Fort Smith. Map shows distribution of power costs in mineral industries throughout Canada.

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53429. MOYER, JOHN HENRY, 1917– , *and others.* Hypothermia, 1; effect on renal hemodynamics and on excretion of water and electrolytes in dog and man. (Annals of surgery, Jan. 1957. v. 145, no. 1, p. 26–40, illus., tables.) 8 refs. *Other authors:* G. C. Morris, *Jr., and* M. E. DeBakey.

Account of investigation on 39 dogs and 11 human subjects, with temperature reduced to 27° C. Mean blood pressure decreased to ±75 percent of controls, and was associated with a reduction in glomerular filtration rate and renal blood flow. No significant changes in urine or sodium excretion were noted. There was no essential difference in responses between man and dog. ***Copy seen:*** DNLM.

53430. MOYER, JOHN HENRY, 1917– , *and others.* Hypothermia 2; the effect of agents which depress the sympathetic nervous system on the hypothermic induction time and on renal functional alterations due to hypothermia. (Annals of surgery, July 1957. v. 146, no. 1, p. 12–25, illus., tables.) 21 refs. *Other authors:* L. Greenfield, C. Heider *and* C. Handley.

Four sympatholytic agents were compared in their capacity to facilitate hypothermia, and in their renal effects on dogs: chlorpromazine, Hydergine, Dibenzyline and mecamylamine. Chlorpromazine was most effective in producing quickly hypothermia and in preventing shivering. None of the agents prevented depression in renal function associated with hypothermia. ***Copy seen:*** DLC.

53431. MOYER, JOHN HENRY, 1917– , *and others.* Hypothermia 3; the effect of hypothermia on renal damage resulting from ischemia. (Annals of surgery, Aug. 1957. v. 146, no. 2, p. 152–66, illus., tables.) 6 refs. *Other authors:* C. Heider, G. C. Morris, *Jr., and* C. Handley.

A study of the effects of hypothermia upon renal damage in dogs, resulting from unilateral renal arterial occlusion alone or in combination with aortic occlusion. Temperature in most cases was lowered to 80° F. and clearance determinations were used as indications of kidney function impairment. Hypothermia was found to offer excellent protection to the kidney when its circulation was occluded for three hours or more.

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53432. MOZESON, D. L., *and* N. A. UTENKOV. K voprosu ob izuchennosti fiziko-geograficheskikh uslovii Severo-Vostoka SSSR i zadachakh dal'neishikh issledovanii. (Problemy Severa, 1958, vyp. 2, p. 91–115, illus., tables, map.) 99 refs. Text in Russian. ***Title tr.:*** Status of studies of physical geographic conditions of the Northeast of the U.S.S.R. and the tasks of further explorations.

Brief survey of results of recent explorations north of 60° N. between the Lena River and Bering Sea (eastern Yakut A.S.S.R. and Magadan Province). Four geomorphic regions are distinguished in the area: the Yana-Chukotka mountainous region, comprising the Verkhoyansk, Suntar-Khayata, Cherskogo, Dzhugdzhur, Okhota-Kolyma, Omolon-Yablonskiy, Chukotka, Polousnyy and Alazeya Ranges or plateaus and the Chauna and Tauy valleys; the Koryak-Kamchatka mountainous region; the East Siberian plain; the Anadyr'-Penzha depression. For each in turn, the main information on their orography, mineral resources, climate, hydrology, vegetation and fauna is given from published and unpublished reports of the Geologic-Prospecting Administration of Dal'stroi, Main Administration of the Northern Sea Route, and of other scientific and economic organizations. The existence of 953 glaciers and snow-fields with a total area of 600 km.^{2} is known from investigation of the glaciation, chiefly in Suntar-Khayata (208 glaciers),

Cherskogo Range (205) and Koryak Plateau (461). The lowest mean monthly temperatures are observed at Oymyakon (63° N. 142°45′ E.), Verkhoyansk ranging second. The large accumulations of snow cause devastating spring floods but the rivers dry up in summer. There are rich gold deposits in a 1,000 km. zone from the right tributaries of upper Kolyma to the Adycha River (right tributary of the Yana); tin deposits are noted (p. 95). Objectives in further systematic exploration are discussed. ***Copy seen:*** DLC.

53433. MOZESON, D. L. Nauchnaîa sessiîa Komissii po problemam Severa AN SSSR na Kamchatke. (Akademiîa nauk SSSR. Izvestiîa, ser. geograficheskaîa, Jan.–Feb. 1958, no. 1, p. 173–74.) Text in Russian. ***Title tr.:*** The scientific session of the Academy of Sciences U.S.S.R. Commission on the Problems of the North held in Kamchatka.

Reports the meeting at Petropavlovsk, July 3–9, 1957. Some 500 were present, from scientific organizations of Kamchatka, Vladivostok, Magadan, Sakhalin and other regions; 56 scientific reports were presented. The main topics discussed were: minerals and raw materials; fishery; sources of energy, transportation; rural economy, forestry. An independent geological institution was recommended to be set up for Kamchatka. ***Copy seen:*** DLC.

53434. MOZESON, D. L. Okhrana prirody Severa. (Problemy Severa, 1958. vyp. 2, p. 222–25.) Text in Russian. ***Title tr.:*** Protection of nature in the North.

Warns against over-exploitation of arctic animal resources, e.g. salmon; draws attention to the law (1956) which prohibits killing polar bears, walrus and reindeer. Protection of forests, especially those close to the tundra, from over-exploitation and from fires is also recommended. ***Copy seen:*** DLC.

53435. MOZESON, D. L. Razvitie proizvoditel'nykh sil Kamchatskoĭ oblasti; vyezdnaîa nauchnaîa sessiîa Komissii po problemam Severa. (Akademiîa nauk SSSR. Vestnik, Dec. 1957. god 27, no. 12, p. 94–96.) Text in Russian. ***Title tr.:*** Development of the natural resources of Kamchatka Province; itinerant scientific session of the Commission on Problems of the North.

Account of the session held at Petropavlovsk, July 3–9, 1957 and attended by over 500 representatives of scientific and industrial organizations concerned with the economic development of Kamchatka Province. Situation and prospects in fisheries, forestry, agriculture, stock breeding and mining were discussed; need to develop local coal (estimated resources: 552 million tons), peat (8 billion tons), water power (potential capacity: 12–20 million kw.) and timber were stressed. Fisheries production is to be increased to 7 million cwt. a year; arable land is to be doubled from 9,000 hectares to 18–20,000 hectares) reindeer herds are to be built up from 140,000 to 172,000. The Session asked the Academy of Sciences to organize, beginning with 1958, the Complex Scientific Expedition for the systematic exploration of Kamchatka Province. ***Copy seen:*** DLC.

MOZESON, D. L., *see also* Shcherbakov, D. I., *and* D. L. Mozeson. Perspektivy razvitiîa proizvoditel'nykh sil Kamchatki. *1958.* No. 54757.

53436. MROZIŃSKI, STANISŁAW, *and* **M. WAŚNIOWSKA.** Obraz elektrokardiograficzny w okresowej hipotermii doświadczalnej. (Acta physiologica polonica, 1956. v. 7, fasc. 4, p. 393–404, illus., table.) 42 refs. Text in Polish. Summary in English. ***Title tr.:*** ECG picture in periodic, experimental hypothermia.

Account of observations upon repeated hypothermia (20° C.) in rabbits, with records made at normal, at 35°, 30°, 25°, 20° C. and one hour after cooling. The ECG is analyzed and causes of variations in it and of occasional death discussed. Changes observed during cooling were found to regress upon return to normal temperature.

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MÜHLBOCK, OTTO, *see* Van Nie, R., *and* O. Mühlbock. The viability . . . tumors stored . . . frozen . . . *1958.* No. 55729.

MÜLDENER, B., *see* Thorn, W., *and others.* Beitrag zum Stoffwechsel von Leber . . . *1957.* No. 55420.

MÜLDENER, B., *see* Thorn, W., *and others.* Stoffwechselvorgänge . . . *1957.* No. 55421.

MÜLLER, GERHARD FRIEDRICH, 1705–1783, *see* Lomonosov, M. V. Proėkt Lomonosova i ėkspeditsiîa Chichagova. *1854.* No. 52907.

53437. MÜLLER-OLSEN, CARL, *and* M. SIMAK. X-ray photography employed in germination analysis of Scots pine, *Pinus silvestris* L. Stockholm, 1955. 19 p. illus., map, tables, graph. (Stockholm. Statens skogsforskningsinstitut. Meddelanden, bd. 44, nr. 6.) 11 refs. Summary in Swedish.

Experiments were carried out with 1953 seeds of pine in Sweden, with several arctic localities represented. Seed quality determined by X-ray photography was correlated with results in germinator. Procedures and controls are discussed. It is concluded that germination in nature can be predetermined by X-ray photography for practical purposes.

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53438. MÜNTZING, ARNE. Apomictic and sexual seed formation in *Poa*. (Hereditas, 1933. bd. 17, häfte 2, p. 131–54, 21 illus., 4 tables.) 30 refs.

Contains results of cytogenetic study of *Poa alpina* and *P. pratensis* both derived from Norrbotten province (Luleå and North Bedåkra). Thirteen different chromosome numbers were determined in *P. alpina*, ranging from 22 to 38; eleven of them are aneuploid. In at least three Swedish biotypes, the seed formation is apomictic. The chromosome numbers of eight biotopes of *P. pratensis* have been found, seven have aneuploid numbers, ranging from ±64 to ±85. One biotope has 2n=49 (heptaploid). In at least four biotopes the seed formation is apomictic.

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53439. MÜNTZING, ARNE. Cytogenetic studies on hybrids between two *Phleum* species. (Hereditas, 1935. bd. 20, häfte 1–2, p. 103–136, 51 illus., 11 tables.) 18 refs.

Includes chromosome numbers determination of a series of timothy grass (*Phleum*) types. In *P. alpinum*, two biotypes from northern Sweden (Pajala and Pello) were tetraploid (2n=28), a third, from Switzerland, however, proved to be diploid (2n=14). Besides a majority of hexaploid *pratense* and diploid *nodosum*, some individuals were found to have 2n=35 or 36. ***Copy seen:*** DLC.

53440. MÜNTZING, ARNE. The cytological basis of polymorphism in *Poa alpina*. (Hereditas, 1954. bd. 40, häfte 3–4, p. 459–516, 28 illus., 7 tables.) 34 refs.

This grass from northern Sweden (including Lapland and Norrbotten) and Greenland was studied with regard to chromosome number, morphology and degree of constancy caused by apomictic seed formation or vivipary. In the seed-forming types from north Sweden, 18 different chromosome numbers were found, ranging from 32 to 50, the numbers 33 and 38 predominating and a third maximum at 44. The material from Greenland shows similar range of chromosome numbers. The progenies raised were mainly uniform but comprised a low proportion of deviating plants. Enormous morphological diversity is revealed between the various progenies. The material from north Sweden could be divided into 19 morphological groups and a number of specific biotypes. The average degree of apomixis and the average chromosome number in *P. alpina* are lower in Switzerland and Poland than in Scandinavia. New biotypes are not only produced through occasional fertilization but probably also through mutation without change in chromosome numbers.

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53441. MÜNTZING, ARNE. Further studies on apomixis and sexuality in *Poa*. (Hereditas, 1940. bd. 26, häfte 1–2, p. 115–90, 33 illus., 13 tables.) 33 refs.

Contains results of cytogenetic studies of *Poa alpina* and *P. pratensis* based partly on material from Korpilombolo and Pajala in northern Sweden and from Tromsø, Norway. Of eight different apomictic strains of *P. alpina*, four were constant in morphology and chromosome number (33, 38, and 35). Meiosis in apomicts was found to be irregular. Selection for high and low chromosome numbers in sexual *P. alpina* was undertaken: it gave some offspring with chromosome numbers ranging from 25 to 64, and a stable but still sexual strain with 22 chromosomes. Another case of secondary balance was met in a sexual polyhaploid of *P. pratensis* having 2n=36. Crosses between a sexual and an apomictic *P. alpina* strain were undertaken; the chromosome numbers of the parent were 24 and 38. In F_1 the chromosome numbers ranged from 25 to 43. The F_1 plants had good fertility and were quite sexual. All F_2 plants tested were found to be sexual.

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53442. MUIR, DALTON. The National Film Board Expedition to Eureka, 1956.

(Arctic circular, Aug. 1958. v. 11, no. 1, p. 10–11.)

Describes experiences, during summer 1956, of a two-man party based at Eureka, Ellesmere Island, while making two films of the Queen Elizabeth Islands and their waters. One film deals with physical features, and the other shows the biology of the area from an ecological point of view. ***Copy seen:*** CaMAI.

MUIR, F. H., *see* Fleming, P. R., *and* F. H. Muir. Electrocardiographic changes in induced hypothermia in man. *1957.* No. 50925.

MUIRHEAD, C. W., *see* Burtt, B. L., *and* C. W. Muirhead. *Cassiope lycopodioides . . . 1957.* No. 50021.

53443. MUKHACHEVA, V. A. Ikrinki i mal'ki ryb Onezhskogo zaliva Belogo morîa. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîû Belogo morîa, 1957. vyp. 1, p. 222–29, illus., table, maps.) 13 refs. Text in Russian. ***Title tr.:*** Eggs and fry of fish from the Onega Bay, White Sea.

Description of material collected in the summer of 1951. Six species are considered, including herring, flounder and capelin. Morphology and anatomy; developmental stages and distribution are discussed. ***Copy seen:*** DLC.

MUKHERJEE, NALIN RANJAN, 1919– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53444. MUKHOPAD, A. Okhotnich'e khozîaĭstvo Évenkii. (Okhota i okhotnich'e khozîaĭstvo, Mar. 1957, no. 3, p. 20–22, illus.) Text in Russian. ***Title tr.:*** The hunting industry in Evenki Land.

The Evenki (Tungus) National District, covering 740,000 sq. km., abounds in sable, squirrel, muskrat, ermine, arctic fox and other fur-bearers; but their catch lags behind that of 1940, and only a third of the territory is utilized by hunters. Lack of instructions, remoteness of hunting areas, difficulties of transportation, and other causes of this lag are discussed, and measures for their elimination proposed. Development of silver and blue fox farming is mentioned.

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53445. MULIKOVSKAIÂ, E. P., *and* **N. TOLSTIKHIN.** O soderzhanii germaniîa v vode nekotorykh istochnikov Kamchatki. (Geokhimiîa, 1958, no. 4, p. 392–95, table.) 2 refs. Text in Russian. Summary in English. ***Title tr.:*** On the germanium content in the water of some springs of Kamchatka Peninsula.

Presents tabulated data on nine hot-springs, the germanium ranging from 1 to 25 γ/l. and the maximum found in a spring called "Akademiîa nauk SSSR." Besides germanium, considerable amounts of boric acid and arsenic were detected. Tables include names of springs, temperature, pH content and chemical formulae of the water. Origin and variation of germanium in hot springs and its interdependence with rise of the water temperature are discussed.

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53446. MULLER, ERNEST HATHAWAY, 1923– , *and* **H. W. COULTER.** Incipient glacier development within Katmai caldera, Alaska. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 13–17, 3 illus.) 7 refs.

Results of observations in 1953 at Mt. Katmai (58°16′ N. 154°59′ W.). Ice cliffs produced by beheading of the glaciers in the 1912 eruption have thinned and shrunk away from the rim of the caldera, except in the southwest. There, an ice fall descends part way down the crater wall. Two small glaciers have formed within the caldera on large masses of slumped wall-rock below the north and south rims, approx. 1,525 m. above sea level. Elsewhere crater walls are sheer and permanent snowbanks cannot accumulate. The lake, rising more than five m./yr. deters glacier development in the caldera. ***Copy seen:*** DGS.

53447. MULLER, ERNEST HATHAWAY, 1923– , *and* **H. W. COULTER.** The Knife Creek glaciers of Katmai National Monument, Alaska. (Journal of glaciology, Oct. 1957. v. 3, no. 22, p. 116–22, 3 illus., 2 text maps, table.) 7 refs.

A group of previously unmapped glaciers on the slopes of Trident and Katmai Volcanoes (approx. 58°15′ N. 155° W.) was studied in summer 1953 for information on the abnormal regimen produced by the 1912 eruption of Mt. Katmai in which five sq. mi. of the summit above regional snow line was destroyed, and the beheaded glaciers were buried under pumice and ash. Field data indicate that the terminus of Fourth Glacier has been essentially stationary

since the 1912 eruption. Upper portions have thinned, exposing the rim of the caldera which 40 yrs. ago was partly ringed with fringing ice cliffs. Permafrost has developed to within a few feet of the surface of the pumice mantle. Under prevailing climatic conditions Fourth Glacier may be preserved in its present static condition for an indefinite period.—From authors' abstract.

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MULLER, ERNEST HATHAWAY, 1923– , *see also* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958*. No. 50694.

53448. MULLER, JAN ENGLEBERT, 1917– . Kluane Lake map-area Yukon Territory. 115 G and F E½. Ottawa, Queen's Printer, 1958. 9 p. fold. map in pocket. (Canada. Geological Survey, Paper 58–9.)

Presents preliminary map, scale 1:253,440, and brief account of the area 61°–62° N. 138°–141° W., based on field work of 1950–1953 and 1956–1957. The area is divided into two distinct geological regions by the Shakwak valley: to the northeast, part of the metamorphic and intrusive complex called the Yukon Plateau; to the southwest, a structurally complex assemblage of sedimentary, volcanic, and intrusive rocks that form the St. Elias Mts. Rocks of the Yukon Plateau contain no fossils; cannot be correlated with rocks of the St. Elias Mts.; the latter are from Devonian to Tertiary in age. Extent of glaciation and presence of a layer of white ash and pumice are noted. Main structural feature is the Shakwak lineament, a tectonic hingeline separating the two portions of the area. Gold is recovered; nickel has been mined; coal has been observed. Map shows distribution of geologic features.

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53449. MULLER, JAN ENGLEBERT, 1917– . Tectonics of the Shakwak lineament, southwest Yukon and eastern Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1619–20.)

Contains abstract of a paper presented at the Society meeting in St. Louis, Nov. 6–8, 1958. Describes geologic history of a major tectonic lineament separating the Yukon Plateau, a geanticline, and the St. Elias and Alaska Ranges, a geosyncline. ***Copy seen:*** DGS.

MULLIGAN, J. J., *see* Lorain, S. H., *and others*. Lode-tin mining at Lost River . . . *1958*. No. 52911.

MULLIGAN, ROBERT, *see* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957*. No. 50087.

53450. MULLOCK, P. J. Use of sound-recording equipment by small expeditions. (Polar record, Jan. 1957. v. 8, no. 55, p. 322–28.)

Contains a general description of various types and features of commercial tape recorders, tape, microphones, and a brief discussion of editing. Equipment used in 1955–56 by the Gough Island (South Atlantic) Scientific Survey included a "Vortexion" semi-portable and a Boosey and Hawkes portable recorder; "Scotchboy" tape; a ribbon- and moving-coil microphone; and a paraboloid reflector. Recordings were made of Tristan Islanders' speech, folk songs, native dance music, and of birds and seals.

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53451. MUNCK, EBBE, 1905– . Bestigning af Grønlands Mont Blanc; da Dannebrog blev hejst over Gunbjørns tinde. (Grønland, Sept. 1957. nr. 9, p. 340–46, illus., port.) Text in Danish. ***Title tr.:*** Ascent of Greenland's Mont Blanc; when the Danish flag was hoisted over Gunnbjørns summit.

Describes (in this first of three articles) the discovery of Gunnbjørns Fjaeld (68°55′ N. 29°59′ W.) in East Greenland by Watkins in 1930 and the attempts of several parties to reach and climb the mountain in 1934. ***Copy seen:*** DLC.

53452. MUNCK, EBBE, 1905– . Den eventyrlige rejse gennem Knud Rasmussens land. (Grønland, Nov. 1957. nr. 11, p. 415–20, illus.) Text in Danish. ***Title tr.:*** The adventurous journey through Knud Rasmussens Land. In conclusion to No. 53453; see also No. 3441, 10320.

Contains account of the first ascent of Gunnbjørns Fjaeld in 1935 by Courtauld and Wager's six-man party including the writer. The mountain was approached from Christian den IV's brae. The height was measured as 3,733 m.

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53453. MUNCK, EBBE, 1905– . Verdens mest erfarne bjergbestigere mod Grønlands saga-fjeld. (Grønland, Oct. 1957. nr. 10, p. 370–76, illus.) Text in Danish. ***Title tr.:*** The world's most

experienced mountain climbers toward Greenland's saga mountain.

Recounts preparations for an expedition led by Courtauld and Wager in 1935 to climb Gunnbjørns Fjaeld. The voyage and difficulties encountered in the pack ice off the East Greenland coast are described. The climbing team of six started from Irminger Fjord, approx. 68° N. 31° W. ***Copy seen:*** DLC.

53454. MUNDINE, J. E. Field operations for mapping Alaska's Brooks Range. (Surveying and mapping, July–Sept. 1957. v. 17, no. 3, p. 270–74, illus.)

The U.S. Geological Survey field operations in Northern Alaska during the summer of 1956 are described. Maps are included showing arcs of horizontal control, lines of vertical control, and location of base camps. The project, May 24–July 20, lost an average of 13 days at each camp due to bad weather conditions; its field costs were approx. $2.25 per sq. mi.; 1,654 linear mi. of photo-trig traverse were established which contained 352 stations. Two-way radio communication was maintained between every camp and field unit, also with the Fairbanks headquarters using 25-watt transceivers at Fairbanks and each base camp, and 3-watt transceivers with each field engineer.
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MUNGER, ELMER, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53455. MUNOZ, JOAQUIN, 1918– , *and* L. F. SCHUCHARDT. Effect of *H. pertussis* on sensitivity of mice to cold stress. (Society for Experimental Biology and Medicine. Proceedings, Jan. 1957. v. 94, no. 1, p. 186–90, tables.) 19 refs.

Account of comparative investigation on the sensitivity of adrenalectomized and pertussis-treated mice to cold exposure. Injection of 2 billion of these bacteria into female mice increased their susceptibility to cold stress; this susceptibility was greater than that of adrenalectomized animals. Cortisone and hydrocortisone protected the pertussis-treated group from cold to a lesser degree than the other group. Pertussis, in addition to affecting adrenal function is believed also to influence other functions concerned with protection against cold-effects. ***Copy seen:*** DNLM.

53456. MURAI, GOROW. On the relation between natural snow crystal forms and the upper-air conditions. (Teion kagaku, 1956. ser. A, v. 15, p. 13–32, illus., tables, maps.) 34 refs. Text in Japanese. Summary in English.

The relation between snow crystal types, cloud form, and the temperature and humidity of the snow-generating level is examined on the basis of radiosonde measurements at Sapporo, Japan during the winter of 1955–56. Needle crystals occurred most frequently at a temperature of −8° C. in the generating level, dendrites at −14° to −16° C., plates at −18° to −20° C., columns at −23° to −25° C., and spatial plates at −20° to −24° C. The relative humidity at which the crystals were observed ranged from 81–120%. Dendrites, spatial dendrites, and irregular crystals were mainly produced in convective clouds, while columns, needles and spatial plates formed in stratiform clouds. ***Copy seen:*** DWB.

53457. MURAVIN, ЮU., *and* A. ZENЮA-KIN. Komandory. (Smena, Feb. 1958. god 35, no. 3, p. 7–8, illus.) Text in Russian. ***Title tr.:*** Commander Islands.

Photographs and sketches: the village of Nikol'skoye on Bering Island, center of the Aleut National District (rayon), its house of culture, high school, library, hospital, semi-weekly newspaper, fur-farming combine, meteorological station; fur seal rookeries on Cape Severnyy.
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MURCRAY, WALLACE, *see* Romick, G., *and* W. Murcray. Atmospheric ozone . . . *1957.* No. 54379.

53458. MURGATROYD, D., *and others.* Reaction to hot and cold noxious stimuli in normal dogs and dogs with hypothalamic lesions. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 92.) *Other authors:* H. T. Hammel, H. Sharma *and* J. D. Hardy.

The reaction of experimental animals to ice water indicated that nociception was reduced in comparison to normal controls. The nociceptive threshold in normal dogs is somewhere between 0° and 4° C. This, and their lack of reaction at 0° suggests that dogs tolerate low temperatures in their extremities with less discomfort than man whose nociceptive temperature (in the hand) is +18° C.
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53459. MURGATROYD, R. J., *and* R. M. GOODY. Sources and sinks of radiative energy from 30 to 90 km.

(Royal Meteorological Society. Quarterly journal, July 1958. v. 84, no. 361, p. 225–34, graphs, tables.) 27 refs.

The absorption of solar radiation and the exchange of long-wave terrestrial radiation are computed for the 30 to 90 km. region for all latitudes, using the climatological mean temperatures given in No. 53460. Over most of the earth's surface, there is a close approach to radiative equilibrium at the levels considered. In the polar regions, however, there is a significant departure from radiative equilibrium with excess heating during the summer and excess cooling during the winter.—From authors' abstract. ***Copy seen:*** DGS.

53460. MURGATROYD, R. J. Winds and temperatures between 20 km. and 100 km., a review. (Royal Meteorological Society. Quarterly journal, Oct. 1957. v. 83, no. 358, p. 417–58, 9 diagrs., 7 tables.) 186 refs.

Outline and synthesis of information published before 1957, as background for measurements of the IGY. Work on temperatures and winds of the troposphere and stratosphere during the past 20 years is traced. Theoretical considerations are treated, particularly temperature distribution and its control by the radiation field. Other physical factors likely to affect the wind field are considered. Experimental methods and available measurements are summarized. Basic theoretical assumptions are stated; measurements from balloons, observations of the drift of smoke from shells and rockets, anomalous sound-propagation phenomena, measurements from high-altitude rockets, from searchlights, from visual, photographic and radio observations of meteors, reports from noctilucent clouds, studies of radio propagation, the airglow and the aurora are reviewed, and summarized in diagrams. Temperature and zonal wind observations are combined, compared with calculated results, and the combination is used to suggest a standard atmosphere whose temperature, zonal wind, and pressure characteristics are illustrated in tables and diagrams. Measurements shown are extended (where possible) into arctic and subarctic areas, in some cases to the North Pole.

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53461. MURINA, V. V. Glubokovodnye sipunkulidy roda Phascolion Théel severo-zapadnoĭ chasti Tikhogo okeana, sobrannye ėkspeditsiiami na sudne "Vitiaz'" v 1950–1955 godakh. (Zoologicheskiĭ zhurnal, Dec. 1957. t. 36, vyp. 12, p. 1777–91, illus. tables, map.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** Deep-water sipunculids, gen. *Phascolion* Théel of the northwestern Pacific collected by the *Vitiaz'* expeditions in 1950–1955.

Description of two species of these worms; one of them new: *Phascolion pacificum*, sp. n. Diagnosis, morphology and anatomy, variations, occurrence, etc. are discussed. ***Copy seen:*** DLC.

53462. MURINA, V. V. K sistematike dvukh blizkikh vidov glubokovodnykh sipunkulid roda Golfingia po materialam ėkspeditsiĭ na "Vitiaze" v 1949–1955 godu. (Zoologicheskiĭ zhurnal, Nov. 1958. t. 37, vyp. 11, p. 1624–34.) 24 refs. Text in Russian. Summary in English. ***Title tr.:*** The taxonomy of two closely related species of deep-water sipunculids of the genus *Golfingia* from materials of the *Vitiaz'* expeditions 1949–55.

Descriptions of two common species of these worms: *Golfingia improvisa* Théel and *G. minuta* Kef. both new to the Bering and Okhotsk Seas. Anatomy and geographical distribution are also discussed. The maximal depth of their vertical distribution in these areas was 5,390 m. ***Copy seen:*** DLC.

53463. MURMANSK. POLIARNYĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT MORSKOGO RYBNOGO KHOZIAĬSTVA I OKEANOGRAFII. Sel'di Severo-Evropeĭskogo basseĭna i smezhnykh moreĭ. Moskva, Pishchepromizdat, 1956. 243 p. illus., tables, maps. (*Its:* Trudy, vyp. 9). Text in Russian. ***Title tr.:*** Herring of the North-European basin and the adjacent seas.

A collection of nine papers on the biology and life cycle of the Atlantic-Scandinavian herring, their environment, food and migrations, and principles for a rational management of the White Sea herring fishery. The papers are described in this Bibliography under the authors' names, viz. (titles tr.):

MARTI, IU. IU. Main stages in the life cycle of Atlantic Scandinavian herring.

ALEKSEEV, A. P., *and* B. V. ISTOSHIN. A scheme of constant currents of the Norway and Greenland Seas.

ABRAMOVA, V. D. Plankton as indicator of waters of different origin in the North Atlantic seas.

PAVSHTIKS, E. A. Seasonal changes in plankton, and feeding migrations of herring.

RUDAKOVA, V. A. Materials on the feeding of Atlantic-Scandinavian herring.

LIÂMIN, K. A. Investigations into the biological cycle of summer-spawning herring of Iceland.

NAUMOV, V. M. Oogenesis and ecology of the sexual cycle of the Murman herring *Clupea h. harengus*, L.

VIL'SON, A. P. Tagging experiments of herring in the Kandalaksha Bay during 1953–1954.

TAMBOVTSEV, B. M. Biological basis of White Sea herring fisheries.

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53464. MURMANSKAIÂ OBLAST'. STATISTICHESKOE UPRAVLENIE. Narodnoe khozâĭstvo Murmanskoĭ oblasti; statisticheskiĭ sbornik. Murmansk, 1957. 94 p. tables. Text in Russian. ***Title tr.:*** The economy of Murmansk Province; a statistical handbook.

Murmansk Province, founded on May 28, 1938 to comprise Kola Peninsula and some territory south and west of Kandalakshskaya Bay, 114,800 km.^{2} in area, is divided into eight districts with 474,000 population at the beginning of 1956 (168,000 in the city of Murmansk). Data on its economic development and conditions to 1956 are presented in sections: general information; industry; agriculture; capital construction; municipal economy; transportation and communication; workers, numbers, their training; commerce and public road service; education, science and art (kul'tura); health service. Industrial production, increased 199-fold from 1913 to 1956 (p. 21), is outlined in detail for fisheries, timber, electric power and light industry, but mostly omitted for the mining, chemical and metallurgical industries. Data of collective and state farms are given and causes of their decline in number are explained (p. 34); land under cultivation increased from 3,600 hectares in 1940 to 6,015 in 1956; reindeer herds, over 70 thousand in 1940, decreased to 53 thousand in 1950, and recovered to over 69 thousand by 1956; data on distribution of land, livestock and reindeer between state, collective and subsidiary farms and individual owners are given, p. 35–38. Schools increased from 47 in 1927/28 to 294 in 1956/57, but scientific institutions decreased from 15 in 1940 to 10 in 1956.

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53465. MUROMTSEV, A. M. Skhema obshcheĭ tsirkuliâtsii vod Tikhogo okeana. (Akademiiâ nauk SSSR. Izvestiiâ, ser. geograficheskaiâ, July–Aug. 1958, no. 4, p. 24–32, 7 text maps.) 8 refs. Text in Russian. ***Title tr.:*** Scheme of the general circulation of water in the Pacific Ocean.

Outlines and diagrams the circulation at 50, 150, 200, 600, 2,000 and 2,500 m. depths based on combined study of temperature, salinity and oxygen distribution at different depths. Variation of ocean currents at 50- and 150-m. depths are noted along the coasts of Alaska, Kamchatka and, partly, in the Okhotsk and Bering Seas, where cyclonic winds prevail.

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53466. MURRAY, M. D. Ecology of the louse *Lepidophtirus macrorhini* Enderlein 1904 on the elephant seal *Mirounga leonina* L. (Nature, London, Aug. 9, 1958. v. 182, no. 4632, p. 404–405) 4 refs.

Report on laboratory and field observations. These lice were found to force their way into the skin and create burrows (occasionally half an inch deep) where they also reproduce. Pups were most heavily infested. The physiology of the parasites, especially respiration is also discussed. ***Copy seen:*** DLC.

53467. MURSKIĬ, L. I., *and* V. I. SOBOLEVA. Vosstanovlenie vysshei nervnoĭ deâtel'nosti u sobak, ozhivlennykh posle 30-minutnoĭ klinicheskoĭ smerti v usloviâkh gipotermii. (Biûlleten' èksperimental'noĭ biologii i mediſsiny, Aug. 1957. t. 44. god 22, no. 8, p. 43–46, tables.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** Restoration of higher nervous activity in dogs resuscitated after 30-minutes' clinical death under conditions of hypothermia.

Account of experiments on four animals with developed conditioned reflexes. Complete recovery of these reflexes was observed after 30-minutes' clinical death caused by loss of blood under conditions of hypothermia. During recovery disturbances in relationship between fundamental processes took place.

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53468. MUSACCHIA, XAVIER JOSEPH, 1923– , *and others.* A comparison of liver and muscle lipids in arctic

fishes. (Copeia, Apr. 5, 1957. no. 1, p. 10–12, table.) 17 refs. *Other authors:* B. J. Sullivan *and* C. G. Wilber.

Contains a study of the chemical composition of tissue fatty acids, cholesterol and phospholipid in four Alaskan fishes: *Dallia pectoralis* (fresh water near Bethel), *Mallotus catervarius, Boreogadus saida,* and *Myoxocephalus quadricornis:* the last three, marine fishes obtained near Point Barrow. "Evidence is presented which indicates a high level of fat turnover in liver and muscle of the spawning capelin, *Mallotus catervarius.* There is an apparent seasonal variation in the liver lipid content of the tomcod, *Boreogadus saida,* especially higher liver total lipid content in the 'summer' tomcod."

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53469. MUSACCHIA, XAVIER JOSEPH, 1923– , *and* M. R. CLARK. Effects of elevated temperatures on tissue chemistry of the arctic sculpin *Myoxocephalus quadricornis.* (Physiological zoology, Jan. 1957. v. 30, no. 1, p. 12–17, tables.) 25 refs.

The effects of a 20° C. environment on total fatty acids and total cholesterol, cholesterol esters and phospholipids of the liver and skeletal muscle were studied. The first two increased markedly while the phospholipid in the muscle decreased. The latter phenomenon is attributed to reduced activity of this fish in the relatively warm environment. Specimens used were collected in shallow waters near Barrow, North Alaska.

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53470. MUSACCHIA, XAVIER JOSEPH, 1923– . Observations on a newborn litter of *Citellus undulatus.* (Journal of mammalogy, Nov. 1958. v. 39, no. 4, p. 594–95, table.)

Includes information on approximate gestation period and date of birth, weight increase during first month of life, pelage pattern, opening of eyes, etc. Observations on the ground squirrels were made at the Arctic Research Laboratory, Point Barrow. ***Copy seen:*** DI.

MUSACCHIA, XAVIER JOSEPH, 1923– , *see also* Brumleve, S. J., *and* X. J. Musacchia. Liver coenzyme A and total fatty acids in turtles . . . *1957.* No. 49964.

53471. MUSICH, N. I., *and* A. D. KORNIENKO. Osobennosti sistemy zemledeliĭa v ĬAkutii. (Zemledelie, Apr. 1957. god 5, no. 4, p. 1–7.) Text in Russian. ***Title tr.:*** Features of agricultural methods in Yakutia.

The decidedly continental climate (winter temperature down to −68.7° C. and up to 38° in summer, 190–220 mm. annual precipitation and dry summers, poor soils over permafrost throughout all Yakutia) prescribes special methods in agriculture. Problems of crop rotation, soil cultivation, manuring, fertilizing and vegetable growing are briefly discussed. The advance of agriculture is handicapped by cultivation of small scattered parcels of land; their consolidation into 20–25 hectare lots, leaving 50–200 m. strips for protective forest shelter-belts, is advocated. ***Copy seen:*** DLC.

53472. MUSIENKO, L. N. Molod' kambal (Pleuronectidae) dal'nevostochnykh morei, 2; rasprostranenie, vozrast i rost. (Akademiĭa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 20, p. 312–46, illus., tables, maps.) 5 refs. Text in Russian. ***Title tr.:*** Young plaice (fam. Pleuronectidae) of the Far Eastern seas, 2; distribution, age and growth.

With No. 41511, a study of these fishes in the Bering and Okhotsk Seas. Nature of the shallow bottoms, temperatures above them, and the distribution of the young and adult of eight species are discussed. Analysis follows of the size and growth of 16 species. For those available in sufficient numbers, seasonal size charts, reconstructions of growth rate, regional size differences, etc. are presented. ***Copy seen:*** DLC.

MUSTARD, J. NEIL, *see* Clendenning, T. G., *and* J. N. Mustard. Notes . . . winter concreting . . . *1957.* No. 50293.

53473. MYERS, BETTY J. Ascaroid parasites of harp seals, *Phoca groenlandica* Erxleben, from the Magdalen Islands, Quebec. (Canadian journal of zoology, Apr. 1957. v. 35, no. 2, p. 291–92.)

Notes on three species of these worms, found in stomachs of 195 adult animals examined. Sex and age composition of the parasites, rate of infection, etc. are determined. ***Copy seen:*** DSI.

53474. MYERS, BETTY J. Nematode parasites of seals in the Eastern Canadian Arctic. (Canadian journal of zoology, Apr. 1957. v. 35, no. 2, p. 291.) Notes on three species of ascaroid nematodes found in the stomachs of seals between

1949 and 1955. Locality, date and host are given. ***Copy seen:*** DSI.

MYERS, EARL C., *see* USQM Food & Container Institute. Low temperature test . . . containers . . . *1954*. No. 55654.

53475. MYRES, M. T. The British Columbia nest records scheme, 1957 season. (Murrelet, Sept.-Dec. 1957. v. 38, no. 3, p. 32–36.)

Includes with the 1957 season report, a list (by species) of all records on file, Nov. 1, 1957, among them 39 for Yukon Territory and 133 for Alaska for the years 1956 and 1957. A contributors list is added. ***Copy seen:*** DSI.

53476. NA PROMYSLAKH V BARENTSOVOM MORE; iz opyta raboty morîakov Arkhangel'skogo tralovogo flota, tresta "Sevryba." Moskva, Profizdat, 1956. 131 p. illus. Text in Russian. ***Title tr.:*** With the fisheries on the Barents Sea; experiences with the seamen of the Arkhangel'sk trawler fleet of the "Sevryba" trust.

Collection of articles, nine of them (*) abstracted in this Bibliography under their authors' names, viz. (titles translated):

*PODOPLEKIN, D. Innovators of the fishing industry.

*OVCHINNIKOV, V. The capron trawl.

*ZAPNIVETRENKO, I. For high catches.

*ZELÎANIN, B. A little streamlining.

Volotkin, N. ÎA. A trawl without a quarter-rope (p. 77–82).

*ARANOVICH, B. Navigating fishing vessels.

*SOSNIN, A. Some advice to fishing-boat skippers.

Shun'gin, A. A tank for washing fish with streaming water (p. 100–104).

*SUROVTSEV, A. Not all reserves are exhausted.

*TARKOV, V. Striving for quality.

Kotov, B. Factory brand "RT" (p. 120–24).

*SHESTAKOV, G. A good preparation for the trip is a guarantee of success.

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53477. NABOKO, SOF'ÎA IVANOVNA. Sluchaĭ gazovogo flormetasomatoza pri aktivnom vulkanizme. (Geokhimiîa, 1957, no. 5, p. 385–88, tables.) 3 refs. Text in Russian. Summary in English. ***Title tr.:*** A case of gaseous fluorometasomatism in active volcanism.

Reports on fluorometasomatism in basalts and andesite basalts under influence of gases at 200–300° temperature in Klyuchevskaya, Kosheleva and other volcanoes of Kamchatka Peninsula: Si and Fe are driven out of the rocks and replaced by F, Cl and H_2O; the basalts are regenerated and aggregated to fluoric minerals like ralstonite, fluorite and others. ***Copy seen:*** DLC.

53478. NADËZHIN, V. M. Rol' gidrologicheskikh faktorov v produktivnoste Belogo morîa. (Voprosy ikhtiologii, 1958. vyp. 10, p. 52–59, illus. maps.) 10 refs. Text in Russian. ***Title tr.:*** Role of hydrological factors in the productivity of the White Sea.

Account of vertical and horizontal distribution of temperature during the year, salinity, water movements (including currents), hydrochemistry, etc. These conditions are rather adverse, and, together with fishing during the spawning season, are considered responsible for poor recent catches.

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53479. NADËZHIN, V. M. Usloviîa obitaniîa organizmov v Belom more i puti povysheniîa ego produktivnosti. (Akademiîa nauk SSSR. Murmanskaîa biologicheskaîa stantsiîa. Trudy, 1957. t. 3, p. 184–89.) 8 refs. Text in Russian. ***Title tr.:*** Ecological conditions of the organisms in the White Sea and ways of raising its productivity.

Author analyzes the climatic, hydrographic and fresh-water factors as well as regional peculiarities of this sea, and its suitability as habitat of forms from warmer waters. Having reached a negative conclusion due to the severity of living conditions, he proposes a series of conservation measures aimed at raising the productivity of this sea.

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53480. NADËZHIN, V. M. Vliîanie gidrologicheskikh usloviĭ na kontsentratsiĭ nekotorykh belomorskikh sel'deĭ. (Akademiîa nauk SSSR. Doklady, 1958. t. 120, no. 5, p. 1133–35, illus. map.) 8 refs. Text in Russian. ***Title tr.:*** Effect of hydrological conditions upon concentrations of some White-Sea herring.

Author reviews temperature conditions in the Kandalaksha and Onega Bays and herring distribution. In general he found these fish to accumulate in the warmest layers: during the winter in midwater or close to the bottom, in the summer in

upper layers. Temperature also was found to affect horizontal distribution. ***Copy seen:*** DLC.

53481. NAESS, ØYVIND. Hvalfangerselskapet Globus A/S 1925–1950; et kapitel av den moderne hvalfangsts historie. Larvik, 1951. 214 p. illus. Text in Norwegian. ***Title tr.:*** The Globus Whaling Company, Inc., 1925–1950; a chapter in modern whaling history.

Anniversary volume of this organization with headquarters at Sandefjord, Norway: a record of recent whaling activities mostly in the Southern Hemisphere, but with account of earlier arctic ventures in the first chapter. Pioneers and present-day leaders of the industry, technical developments in catch and processing, vessels and their equipment, economic aspects and functions of Globus are dealt with. ***Copy seen:*** DLC.

53482. NAGASHIMA, KAZUO. The world-wide variation of cosmic ray intensity by the electro-magnetic field. (Journal of geomagnetism and geoelectricity, Dec. 1953. v. 5, no. 4, p. 141–67, diagrs., 4 tables.) 39 refs.

The altitude and latitude variations in cosmic ray intensity are analyzed. To explain these variations, an electric field hypothesis is introduced which is said to be more valid than the magnetic field hypothesis suggested earlier by S. Chapman. Both the ionizing component and the neutron component are considered in the theoretical discussion. The latitude dependence of each of the components is graphed. ***Copy seen:*** DLC.

NAÎANOV, F. V., *see* Krotov, M. A. Rodnaîa Îakutiîa . . . *1957*. No. 52522.

53483. NAÏDIN, D. P. Voprosy opredeleniîa klimaticheskikh usloviĭ proshlykh geologicheskikh periodov metodom izotopnoĭ paleotermometrii. (Sovetskaîa geologiîa, July 1958. god 1, no. 7, p. 15–34, tables, diagrs.) 29 refs. Text in Russian. Summary in English. ***Title tr.:*** Problems of determination of climatic conditions in the past geologic periods by means of the isotopic paleothermometric method.

Reports the results of American and Russian investigations in determination of sea temperatures in the past geological periods by stating the isotopic composition of oxygen in the calcite of fossil organisms. The method of isotopic paleothermometry is based on evenly balanced distribution of heavy isotopes of oxygen between the oxygen of water and calcite precipitated from it. The accomplishments with this method in solution of geologic problems are summarized, and its possibilities indicated for problems also of paleobiology, lithology, stratigraphy and permafrost. Noted among others is its use on saline and fresh-water samples from Greenland, silicate rocks from Greenland and Labrador, and belemnite fossils from the Siberian platform. Further tasks are mentioned. American literature (C. Emiliani, S. Epstein, W. W. Rubey, H. C. Urey) is extensively cited.

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53484. NAÏMUSHIN, I. Zrimye cherty kommunizma. (Sovetskiĭ morîak. Apr. 1956. god 16, no. 8, p. 2–3, illus.) Text in Russian. ***Title tr.:*** Visible features of communism.

Popular account of building the Bratsk hydroelectrical station on the Angara, by the man in charge, following a sketch of electrification in the U.S.S.R. since 1917; difficulties of construction in an almost uninhabited area, its success, and importance of the station for the industrialization of the Angara basin is stressed.

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53485. NAIR, N. BALAKRISHNAN, *and* **H. LEIVESTAD.** Effect of low temperature on the vertical distribution of two wood-boring crustaceans. (Nature, London, Sept. 20, 1958. v. 182, no. 4638, p. 814–15, illus.) 4 refs.

Account of experiments with *Limnoria lignorum* and *Chelura terebrans* exposed in their burrows to cold. Exposure to −8° C. killed 50% of the first species in eight hrs., the second in about four hrs. Following thawing, these crustaceans leave the burrows and become migrant. This behavior may explain the secondary migration observed in *Limnoria* during February under natural conditions.

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53486. NAISH, G. P. B., *and* **R. A. SKELTON.** Explorers' ships, II. (Geographical magazine, Jan. 1957. v. 29, no. 9, p. 436–46, 15 illus.)

Deals (p. 441–46) with the ice-strengthened *Erebus* and *Terror* used for arctic and antarctic voyages 1836–1848 and lost on the last Franklin Expedition; the *Hecla* and *Griper* used by Parry in 1819–20 and on three later voyages; also mentions (no descriptions) the *Enterprise*,

Investigator, *Resolute*, *Assistance* and *Fox* participating in the Franklin Search. Nordenskiöld's *Vega* which completed the Northeast Passage in 1878–1879, Nansen's *Fram* launched in 1892, and Amundsen's *Gjöa*, first to complete the Northwest Passage, 1903–1906, are noted, also the R.C.M.P. *St. Roch* which completed the Passage in both directions 1940–1942, 1944. ***Copy seen:*** DLC.

53487. NAMIAS, JEROME, 1910– , *and others.* Application of numerical methods to extended forecasting practices in the U.S. Weather Bureau. (*In:* Monthly weather review, Dec. 1958. v. 86, no. 12, p. 467–76, 7 text maps, 4 diagrs., table.) 9 refs. *Other authors:* C. R. Dunn, A. F. Krueger, *and* B. M. Lewis.

Contains substance of paper presented before the Scandinavian-American Meteorological Meeting in Bergen, June, 1958. Three new procedures for applying numerical methods to 2–7 day forecasting are described: trend, summation, and basic current methods. These are used to compute a prognostic 500 mb. mean contour pattern; north polar charts compare predicted and observed pressure at 500 mb. and at sea level. Possible use of these procedures for extended temperature and precipitation forecasts is considered. ***Copy seen:*** DWB.

53488. NAMIAS, JEROME, 1910– . Characteristics of the general circulation over the Northern Hemisphere during the abnormal winter 1946–47. (U.S. Weather Bureau. Monthly weather review, Aug. 1947. v. 75, no. 8, p. 145–52, 6 text maps, 5 diagrs.) 4 refs.

Describes circulation and associated weather anomalies, based on study of monthly mean charts of pressure and departure from normal for the period Dec.-Mar. Unusual pressure distribution both at sea level and aloft, was characteristic of several arctic areas. Reasons for the abnormal circulation and its persistence are discussed and illustrated by pressure and wind speed profiles, and examples of anomalies. ***Copy seen:*** DWB.

53489. NAMIAS, JEROME, 1910– . The general circulation of the lower troposphere over arctic regions and its relation to the circulation elsewhere. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958. p. 45–61, maps, graphs.) 20 refs.

Mean height charts for sea level and 700 mb. surfaces for the area north of 40° N. are presented for January, April, July, and November of the eight-year period 1948–1955. The resulting values are discussed and compared with earlier estimates. While there are significant differences, large-scale aspects of the circulation have not altered during this century. The major differences shown by these as compared with earlier charts appear to be: an increase of a few mb. in sea-level and mid-tropospheric pressures in Jan. April and Nov. over the Davis Strait - Baffinland - Greenland area; a decrease in the sea-level and upper-level pressures of 1–4 mb. in the center of the Arctic Basin for each of the four months; and a greater tendency during the non-summer months for the Aleutian Low to be split into two cells with the corresponding emergence of an additional trough in the planetary circulation.

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53490. NAMIAS, JEROME, 1910– . Synoptic and climatological problems associated with the general circulation of the Arctic. (American Geophysical Union. Transactions, Feb. 1958. v. 39, no. 1, p. 40–51, text maps, diagrs.) 21 refs. Paper presented at the International Union of Geodesy and Geophysics, Association of Meteorology, Eleventh General Assembly, Toronto, Sept. 3–14, 1957.

Notes increased accumulation and improved analysis of data over ten years, making possible a better picture of normal characteristics of the general circulation over arctic regions. Maps showing approximate long term normals for Jan., April, July, and Oct. are presented; interrelation of prevailing circulations with the nature of the underlying surface, with the season, and with the type of synoptic development is noted. Large climatic fluctuations are described and illustrated. Day-to-day variations over the Arctic and the associated prediction problems seem similar to those of temperate regions and are amenable to present numerical methods. Longer period fluctuations present a more difficult problem.—From author's abstract.

Copy seen: DLC.

53491. NANCARROW, W. C. Control of underground water at the Port Radium mine. (Canadian mining and metallurgical bulletin, Jan. 1957. v. 50, no. 537, p. 28–35, illus.) *Also pub.* in Canadian Institute of Mining and Metallurgy, Transactions, 1957. v. 60, p. 24–31.

Reviews development of uranium mining near Port Radium (66°05′ N. 118°02′ W.) in Mackenzie District, the geology of the area, and mining methods; describes water conditions, methods of water control (grouting, etc.). Organization of equipment, training of personnel, and value of preventive measures are stressed. ***Copy seen:*** DGS.

53492. NANNFELDT, JOHAN AXEL, 1904– , *and* B. LINDEBERG. Taxonomic studies on the ovariicolous species of *Cintractia* on Swedish Caricoideae, I, introduction; some general considerations; *Cintractia subinclusa* and similar echinosporous species. (Svensk botanisk tidskrift, Dec. 1957. bd. 51, no. 3, p. 493–520.) 41 refs.

Contains a general discussion of the Swedish smut flora with special attention to sedge smuts. *Carex* sp. (43) including some from Greenland, Scandinavia and Alaska, "which have not as yet been found smutted in Sweden" are listed. A key to echinosporous species of *Cintractia* and an annotated list of four species, with synonyms, descriptions, critical notes and data on Swedish, Scandinavian and general distribution are given. *C. subinclusa* (on *C. vescicaria*, Troms, Norway), *C. inclusa* (on C. *rostrata*, Norrbotten and Lycksele Lappmark, Sweden), and *C. fischeri* (on *C. canescens*, Norrbotten and Swedish Lapland), are included. *C. americana* n. sp. is described as occurring on *C. rostrata* in Alaska, and on *C. rhynchophysa* in Yukon Territory. ***Copy seen:*** DA.

NANNFELDT, JOHAN AXEL, 1904 , *see also* Jørstad, I., *and* J. A. Nannfeldt. Additions . . . *Enumeratio* . . . *1958.* No. 52079.

NANNFELDT, JOHAN AXEL, 1904– , *see also* Pilát, A., *and* J. A. Nannfeldt. Notulae ad cognitionem Hymenomycetum . . . *1954.* No. 53992.

NAPLES, F. J., *see* Meyer, G. E., *and others.* A versatile new family of elastomers. *1957.* No. 53255.

NARDONE, ROLAND MARIO, 1928– , *see* St. John, R., *and* R. M. Nardone. Eosinophil levels . . . turtle . . . cold and epinephrine. *1957.* No. 54507.

53493. NARDOV, V. V. K voprosu o mekhanizme rosta kristallov almaza. (Leningrad. Universitet. Vestnik, 1958. god 13, no. 18, ser. geologii i geografii, vyp. 3, p. 88–90, illus.) 4 refs. Text in Russian. Summary in English. ***Title tr.:*** The mechanics of the growth of diamond crystals.

From study of diamonds collected in the Vilyuy basin by Amakinskaîa Expedition, the author finds small, stretched, protruding points or knobs on rounded diamond surfaces apparently stratified as if they grew in layers parallel to the surface. These growths differ from the usual octahedral form of diamond crystal. ***Copy seen:*** DLC.

53494. *NARODNOE OBRAZOVANIE.* TSyfry i fakty. (Narodnoe obrazovanie, Apr. 1954, no. 4, p. 74–79.) Text in Russian. ***Title tr.:*** Facts and figures.

Includes (p. 75–76) comparative statistical data on the number of schools in 1927 and 1954 (900:1,500, including high schools 15:89), and increase of students during the last four years in junior-high and high schools of Arkhangel'skaya Oblast'. The opening (p. 78) of a state-supported elementary (four-year) boarding-school for Nenets children on Nakhodka Bay (67°20′ N. 72°10′ E.) in the Yamal-Nenets National District is noted. Also mentioned (p. 79) is a report on the methods of teaching Russian to Yakut children, delivered at a pedagogical meeting in Yakutsk by a teacher from a junior high school of Nyurba. ***Copy seen:*** DLC.

53495. NARUP, KAJ. Hvad tjener de grønlandske erhververe? (Atuagagdliutit: Grønlandsposten, May 23, 1957. Ukiut 97-iat, nr. 10, p. 8–9, illus.) Text in Danish. ***Title tr.:*** What do the Greenland bread-winners earn?

It is argued that individual fishermen cannot make a profit from cod and catfish fishing at current prices; detailed cost data are given. ***Copy seen:*** DLC.

53496. NARUP, KAJ. En virkelig erhvervs-havn for Grønland. (Atuagagdliutit. Grønlandsposten, May 9, 1957. Ukiut 97-iat, nr. 9, p. 5, 20, illus.) Text in Danish. ***Title tr:.*** A real commercial port for Greenland.

Suggests building a fishing port with cranes, factories and cold storage plants at Godthåb, the cost, estimated at 30 million D. kr., to be financed by a long-term loan and by tariffs on tobacco, spirits and candy. ***Copy seen:*** DLC.

NARYSHKIN, V. V., *see* Chard, C. S. Northern Asia. 1957. No. 50173.

NARYSHKIN, V. V., *see* Okladnikov, A. P., *and* V. V. Naryshkin. Neue Ergebnisse über alte Kulturen . . . 1956. No. 53734.

NASIMOVICH, A. A., *see* Bannikov, A. G. Sneg i dikie kopytnye. 1958. No. 49522.

53497. NASONOV, D. N., *and* **I. P. SUZDAL'SKAÎA.** Vliîanie temperatury na vozbudimost' nerva krysy. (Fiziologicheskiĭ zhurnal SSSR. June 1956. t. 42, no. 6, p. 464–69, illus. tables.) 3 refs. Text in Russian. ***Title tr.:*** Influence of temperature upon the excitability of the rat nerve.

Account of experiments within a temperature range of 30° to 5° C. Cooling of the nerve caused a fall in threshold of both long and short impulses. Warming had an opposite effect. Results are compared with those in cold-blooded animals (frog). ***Copy seen:*** DNLM.

53498. NASONOV, D. N., *and* **I. P. SUZDAL'SKAÎA.** Vliîanie temperatury na vozbudimost' nerva lîagushki. (Fiziologicheskiĭ zhurnal SSSR. Apr. 1956. t. 42, no. 4, p. 415–25, illus. tables) 12 refs. Text in Russian. ***Title tr.:*** Influence of temperature upon the excitability of the frog nerve.

Account of experiments within a temperature range of 5° to 20° C. In summer frogs, cooling caused a fall of threshold in long impulses and a rise in short ones. In winter frogs, cooling brought about a fall in both cases. Poisoning with monoiodoacetate changes the pattern of excitability of summer frogs into a winter pattern. ***Copy seen:*** DNLM.

53499. NATHAN, HARRY LOUIS, *Baron*, **1889–** . World aviation and geography. (Geography, Jan. 1957. v. 42, pt. 1, no. 195, p. 1–12, 2 text maps.) 3 refs.

Includes (p. 8–12) review of the role of aviation in development of northern Asia, Europe and North America. In the U.S.S.R., arctic aviation is largely directed by Glavsemorput in operation of the Northern Sea Route, but use of aircraft is noted also for photographic and geologic surveys, sealing, fishing and trapping expeditions, wolf-hunting, servicing expeditions, etc. In northern Canada, extensive landing facilities (82 in the Northwest in 1952) and air freight services are noted. Military bases (Thule in Greenland described), use of aircraft in construction of the DEW Line, transpolar commercial air routes, etc., indicate aviation's role in the North. ***Copy seen:*** DGS.

NATIONAL ACADEMY OF SCIENCES, *see* USQM Food & Container Institute. Low temperature test . . . containers . . . *1954*. No. 55654.

NATIONAL ACADEMY OF SCIENCES —NATIONAL RESEARCH COUNCIL, *see* Arctic sea ice conference. *1958*. No. 49364.

NATIONAL RESEARCH COUNCIL, *see* USQM Food & Container Institute. Low temperature test . . . containers . . . *1954*. No. 55654.

NATIONAL RESEARCH COUNCIL. COMMITTEE ON STRATIGRAPHY, *see* Reeside, J. B., *and others*. Correlation of the Triassic formation . . . *1957*. No. 54267.

53500. NATIONAL RESEARCH COUNCIL OF CANADA. Review of the National Research Council, 1957, 1958. Ottawa, Queen's Printer, 1957, 1958. 2 v.: 289, 237 p., illus., tables. (*Its:* N.R.C. no. 4371, 4784.) refs.

Describes work of the Council during the calendar years 1956 and 1957, including some later work. Reports of divisions, sections, and the associate committees, details on research grants, and a roster of scientific staff are presented. Annual, since 1946, each volume includes research on or in the Canadian Arctic, e.g. by the Division of Pure Physics, in cosmic rays, and in low temperature and solid state physics; Division of Building Research (several projects); Division of Mechanical Engineering, in the low temperature laboratory; Division of Radio and Electrical Engineering in upper atmosphere research; Associate Committee on Geodesy and Geophysics, Associate Committee on Soil and Snow Mechanics, the Joint Committee on Oceanography, and the Joint Committee on the Institute of Parasitology. The Muskeg Research Conferences (3rd and 4th) in Vancouver, Feb. 1957, and Ottawa, Mar. 1958 are mentioned. Publications of each division and committee are listed. ***Copies seen:*** DGS.

NATIONAL RESEARCH COUNCIL OF CANADA, *see also Oil in Canada*. Northern . . . muskeg . . . *1958*. No. 53714.

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53501. NATIONAL RESEARCH COUNCIL OF CANADA. ASSOCIATE COMMITTEE ON SOIL AND SNOW MECHANICS. Permafrost, a digest of current information. Ottawa, Aug. 1957. 48, 3 p. text map, diagrs., typescript. (*Its:* Technical memorandum, no. 49.) 12 refs. Prepared by Directorate of Engineer Development, Army Headquarters, Ottawa, 1949, revised.

Describes characteristics and destructive action of permafrost; discusses engineering problems, factors affecting foundations, roads, bridges, airports and runways, dam and reservoir construction, under permafrost conditions. About half of Canada's area is underlain by permafrost. Its recognition on a prospective construction site is prerequisite to construction practice and methods. Vegetation, topography and geology are considered as indicators of permafrost, and field identification tests are suggested. Choice of a site depends on identification of the soil type (chiefly), water content, and depth of the active layer. Structures resting on clean gravel or sandy strata are not damaged by settling or heaving action; but alternate layers of sand and silt, or a thick stratum of silt create foundation problems. Types (12) of locations for investigation for road construction are listed. In bridge and other large foundations, construction must be based on unit bearing power and figures applicable to the active layer in a thawed condition. Airport site selection involves the same primary considerations, but more difficult problems and greater emphasis on requirements of surface drainage, sub-drainage, and sub-soils, where the strip is to be in all-year use. Location on high ground is also recommended. Water stored in a reservoir will thaw the underlying and adjacent ground; this lowering of the permafrost table may impair the stability of a dam or reservoir. A glossary of 18 terms commonly used, is appended; numerous diagrams illustrate effects of permafrost and solutions to problems. ***Copy seen:*** DWB.

53502. NATIONAL RESEARCH COUNCIL OF CANADA. ASSOCIATE COMMITTEE ON SOIL AND SNOW MECHANICS. Proceedings of the third muskeg research conference, February 20 and 21, 1957. Ottawa, July 1957. 65, 3 p., text map., diagrs. (*Its:* Technical memorandum, no. 47.) refs.

The conference, held at Vancouver, B.C., consisted of a symposium on problems of access over organic terrain. Progress reports from several muskeg research centers, and eight papers were presented and discussed. Five of the papers dealt with arctic Canada or arctic conditions, viz.:

Thomson, J. G. Winter roads over muskeg (p. 18–27). A discussion of economic aspects, engineering problems, and methods of road preparation and construction, citing experience with roads built in connection with the Quebec, North Shore and Labrador Railway, and others for the pulp and paper industry in northern Ontario.

Nowlan, B. C. Route establishment over muskeg in winter (p. 28–32). Extracts from a diary of an operation delivering materials from railhead 400 miles to a site on the south shore of Hudson Bay.

Thomson, S. Some aspects of muskeg as it affects the Northwest Highway System (p. 42–49). Considers new construction over organic terrain, maintenance of roads through muskeg country, the effect of muskegs on costs.

Hemstock, R. A. Access over muskeg (p. 50–54). Reviews progress toward quick and cheap access required for geophysical prospecting; test vehicles, etc.

Radforth, N. W. Problems of access as pertaining to off-the-road vehicles (p. 55–61). Analysis of organic terrain, and discussion of importance of terrain in designating a type vehicle for off-road movement. ***Copy seen:*** DGS.

53503. NATIONAL RESEARCH COUNCIL OF CANADA. DIVISION OF BUILDING RESEARCH. List of publications. Ottawa, Mar. 1958. 24 p.

Lists, with price, over 300 publications, including bibliographies and translations related to building research work; approx. 25% of the papers pertain to low temperature construction, permafrost investigations, soil studies in northern Canada, etc. Author and subject indexes are added. ***Copy seen:*** DLC.

53504. *NATURALISTE CANADIEN.* *Fulix marila nearctica,* Stejneger, le morillon à tête noire d'Amérique. (Naturaliste canadien, Aug.-Sept. 1930. v. 57, no. 8–9, p. 180–81.) 3 refs. Text in French. ***Title tr.:*** *Fulix marila nearctica,* Stejneger, the American black-headed duck.

Contains descriptions and notes on the

biology and ecology of the scaup duck in Alaska and the Aleutian Islands.

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53505. ***NATUREN.*** Norsk Polarinstitutt's ekspedisjoner 1948 og 1949. (Naturen, 1949. årg. 73, nr. 9, p. 276–78.) Text in Norwegian. ***Title tr.:*** Norsk Polarinstitutt's expeditions 1948 and 1949.

Brief survey of the field parties in Svalbard, where two radio stations were established, Bjørnøya, Jan Mayen, and East Greenland; work was carried out in hydrography, geology, harbor studies, ornithology, botany, mensuration, and aerial photography. The Institute cooperated with the British in an antarctic expedition. ***Copy seen:*** DGS.

53506. ***NATUREN.*** Vitenskapelig feltarbeid i Norge 1957. (Naturen, 1957. årg. 81, nr. 4, p. 242–54). Text in Norwegian. ***Title tr.:*** Scientific fieldwork in Norway 1957.

Organizations and field studies sponsored are listed; seven Norwegian organizations were active in arctic and related areas. Work was done in hydrography, precise leveling, aerial photography and triangulation, also in gravimetry, geology, geography, mineralogy, petrography, and glaciology; archeological investigations of medieval iron and stone age sites, cultural studies of north Norwegian fishing harbors, Lappish social conditions and reindeer husbandry, and work in marine zoology was carried out. Norsk Polarinstitutt parties operated on Vestspitsbergen, Nordaustlandet, Hopen, and the Norwegian mainland. ***Copy seen:*** DGS.

53507. NAUGLE, J. B. National air defense demands reliable multiplexing circuits. (Electronic industries and telectech, Dec. 1957. v. 16, no. 12, p. 08–011, illus., diagrs.)

Commercial single-sideband equipment was chosen for the micro-wave installations in DEW Line, White Alice (Alaska) and Texas Towers networks. A typical set is the Lenkurt Type 45 B x 2, which by frequency division multiplexing, provides up to 240 voice channels. Independent plug-in units have 12/24 channels each; spare equipment includes complete units and power supplies. Intermediate points in the networks have equipment for compatible relaying of channel groups at the carrier frequency. ***Copy seen:*** DLC.

53508. ***NAUKA I ZHIZN'.*** Flagman arkticheskogo flota. (Nauka i zhizn', Nov. 1957. god 24, no. 11, p. 22, illus.) Text in Russian. ***Title tr.:*** Flagship of the arctic fleet.

Photographs of the atom-powered icebreaker under construction in a Leningrad shipyard, and note on her specifications. ***Copy seen:*** DLC.

53509. ***NAUKA I ZHIZN'.*** V Murmanske. (Nauka i zhizn', Apr. 1957. god 24, no. 4, p. 10, illus.) Text in Russian. ***Title tr.:*** In Murmansk.

Photograph of two scientists at the Northern Scientific Station of the Institute of Atmospheric Physics in Murmansk filming reflections (signals) of auroras on the radar screen.

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NAUMOV, A. N., *see* Strelkov, S. A., *and others.* O vozmozhnoĭ tektonicheskoĭ prichine . . . *1957.* No. 55196.

53510. NAUMOV, D. V. Stroenie i sistematicheskoe polozhenie *Monobrachium parasitum* Mereschk.; Hydrozoa. (Akademiîa nauk SSSR. Doklady, Apr. 11, 1957. v. 113, no. 5, p. 1168–70, 2 illus.) 8 refs. Text in Russian. ***Title tr.:*** Structure and systematic position of *Monobrachium parasitum* Mereschk.; Hydrozoa.

Study of the anatomy and taxonomy of this polyp, sole representative of the genus and the family Monobrachiidae; it was described in 1877 by K. S. Merezhkovskiĭ from the White Sea (cf. No. 11285) and is known also from the Barents, Kara, Chukchi and Okhotsk Seas. It does not belong to the suborder Athecata (Merezhkovskiĭ) but is a typical representative of Lemnomedusa. ***Copy seen:*** DLC.

53511. NAUMOV, GURIĬ VASIL'EVICH. Sel'skoe khozîaĭstvo basseĭna reki Vilûîa; obshchaîa kharakteristika raĭona. (Akademiîa nauk SSSR. ĬAkutskiĭ filial, *Yakutsk.* Trudy, ser. ėkonomicheskaîa, 1957, vyp. 1, Materialy po ėkonomike sel'skogo khozîaĭstva ĬAkutii, p. 135–54, tables, maps.) Text in Russian. ***Title tr.:*** Agriculture in the Vilyuy River basin; a general characteristic of the region.

The Vilyuy basin, roughly 62°–64°30′ N. 110°–126° E., is comprised of the Suntar, Nyurba, Verkhne-Vilyuysk and Vilyuysk administrative districts. For each district in turn, the farming activity,

poultry and stock (cattle, horse, reindeer) raising, and fox farming are outlined, and production data are tabulated (percentage). Stock-raising predominates. Expansion of farming in three stages is suggested and described. Industry is insignificant at present but known mineral resources may be developed soon.

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NAUMOV, GURIĬ VASIL'EVICH, *see also* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . ÎAkutskoĭ ASSR. *1958.* No. 49171.

NAUMOV, GURIĬ VASIL'EVICH, *see also* Kondakov, K. G., *and* G. V. Naumov. Narodnokhoziâĭstvennoe znachenie . . . *1957.* No. 52379.

NAUMOV, GURIĬ VASIL'EVICH, *see also* Trofimov, V. S., *and* G. V. Naumov. ÎAkutskie almazy. *1957.* No. 55523.

53512. NAUMOV, V. M. Ovogenez i ėkologiîa polovogo ŝikla Murmanskoĭ sel'di, *Clupea harengus harengus* L. (Murmansk. Polârnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziâĭstva i okeanografii. Trudy, 1956. vyp. 9, p. 176–225, illus. tables.) 110 refs. Text in Russian. ***Title tr.:*** Oogenesis and ecology of the sexual cycle of the Murman herring, *Clupea harengus harengus* L.

Deals with types of spawning in herring; fertility of the Murman kind; structure of ovaries; developmental stages of the oocytes and of their maturity; maturation scale of sexual products in other commercial fish and in the Murman herring. Degrees of maturity and environmental conditions (effects of temperature, salinity and light) are considered; also maturity and blood picture, ecologic conditions and rate of maturation of sexual products. The final chapter describes the biological condition of mature Atlantic herring in the area west of Spitsbergen.

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53513. *NAUTISK TIDSKRIFT.* Atomubåtarnas nordpolsfärder lockar till civila project. (Nautisk tidskrift, Sept. 1958. årg. 51, nr. 9, p. 317–20, illus.) Text in Swedish. ***Title tr.:*** The North Pole journeys of the nuclear submarines inspire civil projects.

Comments on risks involved in trips of the *Nautilus* and *Skate* under polar ice, and on the dependability of nuclear installations on ships in general. A British nuclear-propelled submarine has been planned for shipment of ore from Hudson Bay. ***Copy seen:*** DLC.

53514. *NAUTISK TIDSKRIFT.* Internationell sjöfart på Hudson Bay. (Nautisk tidskrift, July-Aug. 1955. årg. 48, nr. 7–8, p. 219–22, illus.) Text in Swedish. ***Title tr.:*** International navigation on Hudson Bay.

Reviews development of the Hudson Bay trade route and of Churchill as a port. ***Copy seen:*** DLC.

53515. *NAUTISK TIDSKRIFT.* Isfritt med tryckluft. (Nautisk tidskrift, Apr. 1958. årg. 51, nr. 4, p. 137–40, illus.) Text in Swedish. ***Title tr.:*** Ice-free water by forced air.

Describes attempt to maintain an ice-free channel for ships in Granfjärden in Sweden, by submerging a perforated plastic hose across the harbor and pumping forced air through the hose. A trial in 1957/58 had excellent results. The forced air puts the bottom water in circulation. This water, which is somewhat warmer, is driven to the surface and melts the ice. ***Copy seen:*** DLC.

53516. *NAUTISK TIDSKRIFT.* Vattenvägarna i norra Canada. (Nautisk tidskrift, June–July 1957. årg. 50, nr. 6–7, p. 182–85, illus., map.) Text in Swedish. ***Title tr.:*** Waterways in northern Canada.

Contains brief description of shipping and navigation on the 4,022 km. Mackenzie River system, and the delta channels, serving Aklavik and Tuktoyaktuk (Port Brabant). Ports and types of vessels are mentioned, as used by the four major transport companies, viz.: Mackenzie River Transport, Northern Transportation, Yellowknife Transport, McInnes Production. Shipping to Aklavik exceeds 25,000 t. annually; that from Aklavik is about 4,200 t. The Mackenzie's most important tributary, the Liard, connects with the Alaska Highway (at Fort Nelson), and opens early in May. Navigation starts on Great Slave Lake in June, and by this route Mackenzie River traffic connects with railhead at Waterways. ***Copy seen:*** DLC.

53517. NAVARRA, S., *and others.* Variazioni del flusso e del coefficiente di utilizzazione di ossigeno del sangue coronarico di animali sottoposti ad ipotermia. (Minerva chirurgica, Dec. 31, 1957. anno 12, no. 24, p. 1679–82, illus.) Text in Italian. *Other authors:* A.

Santoro, R. G. Banna *and* S. Latteri. ***Title tr.:*** Variations in flux and in utilization coefficient of coronary blood oxygen in animals submitted to hypothermia.

Account of experiments with dogs made hypothermic by different methods to 30°, 25° and 20° C. The following parameters were studied: modifications in coronary flow, variations in the coefficient of O_2 utilization in the blood of the coronary sinus, coronary and aortic pressure, and variations in heartbeat.

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53518. *NAVY TIMES.* Underwater "Bubble" unit keeps Thule port ice free. (Navy times, Oct. 25, 1958. v. 8, no. 2, p. 51, illus.)

Describes equipment, procedure and results, of ice prevention project (Project Polynya), carried out (in 1958) by a 12-man team sent to Thule by the Military Sea Transportation Service. Three lengths of hose were laid underwater parallel to DeLong pier; compressed air, forced out of the hose, rose to the surface, bringing warmer water from below, and clearing the ice from the pier. The system is effective regardless of air temperature, if the surface water can be kept above the freezing point (28°+ at Thule). ***Copy seen:*** DN–HO.

53519. NAYUDU, Y. R. Recent sediments of the Gulf of Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1697.) Abstract of paper presented at the Society meeting at Eugene, Oregon, Mar. 27–29, 1958.

Results are given of a study of some dredge hauls and 75 deep-sea cores. Red clay was found less widespread in distribution, and diatomaceous sediments more widespread than previously believed. Two ash layers were found in the north, the top one from the Katmai eruption of 1912. ***Copy seen:*** DGS.

53520. NEAVE, FERRIS. The origin and speciation of *Oncorhynchus*. (Royal Society of Canada. Transactions, June 1958. v. 52, ser. 3, sect. 5, p. 25–39, map.) 32 refs.

Author analyzes factors which led to the emergence of the genus *Oncorhynchus* (Pacific salmon) and its six species, all except one inhabiting arctic and subarctic areas. Considering its geographical distribution and isolation, a probable modus of its development from *Salmo* is reconstructed. A time period for the establishment of the new genus and its existing species is also allotted; it is shorter than generally accepted for such evolutionary processes.

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53521. NEBIKER, WALTER A., *and* **S. ORVIG.** Evaporation and transpiration from an open lichen woodland surface. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report 1957. v. 3 *pub.* 1958, p. 379–84, text map, table.) 11 refs.

Report on measurements of evapotranspiration and evaporation, made at the McGill Sub-Arctic Research Station, Knob Lake, Que., July 1–Aug. 31, 1956; as first part of a study of moisture conditions related to an aerial photographic investigation of surface characteristics of Labrador-Ungava, begun in 1948. A battery of evapotranspirometer tanks and two black Bellani plate atmometers, the latter for measurement of latent evaporation, were installed at Knob Lake. Evapotranspiration takes place at this site only from June to September, because of low temperatures; some evaporation occurs from the snow in winter. With a lichen cover, on a burned-over area, the evapotranspiration was only one-third the theoretically estimated amount; the difference attributed to the lichen cover, rather than climatic conditions.

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53522. NEBIKER, WALTER A. Evapotranspiration studies at Knob Lake, June–September 1956. Montreal, Aug. 15, 1957. 86 p. illus., 2 text maps, diagrs., tables (McGill University. McGill Sub-Arctic Research Laboratory. McGill sub-arctic research papers no. 3. Also: McGill University. Arctic Meteorology Research Group, Publication in meterorology, no. 11.) 27 refs.

Part of a program of research into the radiative and moisture characteristics of different natural surface cover types in the Canadian sub-Arctic. This report defines terms used; describes instruments, site, installation and sources of climatological data; gives a general description of the site (approx. 54°45′ N. 67°00′ W.), surface cover and climate; compares computed with measured evapotranspiration and gives determination of latent evaporation. Distribution of daily evapotranspiration readings and relation of daily readings of latent evaporation to

measured potential evapotranspiration are discussed. Results of climatic parameters are summarized. Author concludes that the use of evapotranspirometers provides a more reliable, "true" index of the climate. Evaporation/transpiration totals for the period July 1–Sept. 5, 1956 indicate that the computed potential evapotranspiration (PE) is 3.4 times, and latent evaporation (LE) 2.5 times as great, as measured PE, partly because of cloudiness, precipitation, and general high albedo. ***Copy seen:*** DN–HO.

53523. NECHAEV, M. Budni flotskogo teatra. (Sovetskiĭ morfăk, Mar. 1957. god 17, no. 6, p. 18, illus.) Text in Russian. ***Title tr.:*** Workdays of the navy's theater.

Notes work of a theatrical team of the Soviet navy in the north (on the Kola Peninsula coast?): trip to the naval base, enthusiastic reception by onlookers, etc.
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NECHAEVA, E. A., *see* Ginzburg, A. I., *and others.* Geologifă mestorozhdeniĭ redkikh ėlementov . . . *1958.* No. 51198.

NEEDLEMAN, S. M., *see* Stoertz, G. E., *and* S. M. Needleman. Report on Operation Groundhog. *1957.* No. 55176.

53524. NEERGAARD, HELGA BRUUN DE. Hverdag i Nanortalik. (Grønland, June 1957, nr. 6, p. 216–20, illus.) Text in Danish. ***Title tr.:*** Everyday life at Nanortalik.

Impressions of life and problems at this West Greenland settlement (60°07′ N. 45°16′ W.) by the factor's wife.
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53525. NEERGAARD, HELGA BRUUN DE. Ind i fjorden. (Grønland, July 1958. nr. 7, p. 265–71, illus.) Text in Danish. ***Title tr.:*** Up the fiord.

Impressions of landscape in southwest Greenland, particularly around Tasermiutfjord (60°15′ N. 44°37′ W.).
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53526. NEGOVSKIĬ, V. A., *and* **V. I. SOBOLEVA.** Dinamika ugasaniifă i vosstanovleniifă zhiznennykh funktsiĭ organizma pri smertel'nom obeskrovlivanii v usloviifăkh gipotermii. (Arkhiv patologii, 1956. t. 18, no. 6, p. 58–70, illus. tables.) 25 refs. Text in Russian. ***Title tr.:*** Dynamics of extinction and restoration of vital functions during lethal exsanguination under hypothermia.

Account of experiments with dogs made hypothermic down to 24.5° C. and rewarmed by immersion in water. Cooling did not change the dying process due to loss of blood. Rewarming began upon cessation of heartbeat and continued until body temperature reached 32° C. Restoration of breathing is also discussed.
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53527. NEHER, HENRY VICTOR, 1904– . Cosmic rays near the North Geomagnetic Pole in the summers of 1955 and 1956. (Physical review, July 15, 1957. v. 107, no. 2, p. 588–92, illus.) 10 refs.

Experiments in continuation of those reported in No. 41556, and No. 53528 are described. The cosmic rays as measured in balloon flights at Thule, Greenland were found little changed in 1955 from 1954 (when a solar minimum existed), but they had decreased markedly from 1955 to 1956, becoming even less in 1956 at middle altitudes than in 1937 (cf. No. 2891) when the sun was at a peak of activity. The ionization-depth curve did not, however, pass through a maximum in 1956 as it did in 1937. The shape of the curves in 1956 was similar to those of 1951 when the low-energy radiation was missing and when a "knee" was present in the latitude curve at high latitudes. The average intensity of cosmic rays since 1954 was found to be decreasing with time as the sun approaches its maximum activity.
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53528. NEHER, HENRY VICTOR, 1904– . Low-energy primary cosmic-ray particles in 1954. (Physical review, July 1, 1956. v. 103, no. 1, p. 228–36, tables, graphs.) 15 refs.

Presents results of balloon flights carried out at Bismarck, N. Dakota, and by a shipborne expedition from Boston via Thule (on the *Atka*) to latitude 83° N. (*Eastwind*). A considerable increase in cosmic-ray intensity, compared with observations in 1951, was recorded. Using the increased areas under the ionization depth curves, combined with geomagnetic calculations, the number of primary particles coming in near the poles is estimated at 0.10 cm.$^{-2}$ sec.$^{-1}$ sterad^{-1} for 1937 (solar maximum), 0.14 for 1951, and 0.24 for 1954 (solar minimum). The fluctuations in 1954 were also small compared with those measured in 1937, 1938, and 1951. The results are found to be in accordance with For-

bush's theory, that there is an inverse relationship between solar activity and cosmic-ray intensity. ***Copy seen:*** DLC.

53529. NEĬSHTADT, MARK IL'ICH, 1903– . Goloťsen na territorii SSSR. (Akademiîa nauk SSSR. Komissiîa po izucheniû chetvertichnogo perioda. Trudy, 1957. t. 13, p. 111–17, table.) Text in Russian. ***Title tr.:*** The Holocene in the territory of the U.S.S.R.

General outline of autochthonous and allochthonous Holocene deposits in the U.S.S.R.: types of deposits, their lower boundary, stratigraphic division, regional features and distribution, paleogeographic zones, climatic conditions, and research methods and tasks. Spore and pollen analyses are emphasized. Attention is given to the emerged coastal areas of the Sea of Okhotsk, Barents, Kara and other seas, where peat turf of different ages has been found on the benches. Importance of Holocene study is stressed. ***Copy seen:*** DLC.

53530. NEĬSHTADT, MARK IL'ICH, 1903– , *and* M. N. NIKONOV. Torfîanye mestorozhdeniî IAkutskoĭ ASSR. (Problemy Severa, 1958, vyp. 2, p. 129–55, illus., tables.) 8 refs. Text in Russian. ***Title tr.:*** Peat deposits in Yakutia.

Describes in detail the southern deposits, but notes also (p. 129–32) those in the northern (Yana, Indigirka, Lena and Anabar basins and Buorkhaya Peninsula) and central parts of Yakutia. The paper is based on authors' exploration sponsored by the Central Peat Experimental Station (TSentral'naîa torfîanaîa opytnaîa stanťsiîa, TSTOS). ***Copy seen:*** DLC.

53531. NEKHOROSHEV, V. P. Osobennosti mshanok otriîda Cryptostomata v ordovike i silure Sibirskoĭ platformy. (Leningrad. Vsesoûznyĭ geologicheskiĭ institut. Materialy, nov. seriîa, 1955. vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 129–32). 4 refs. Text in Russian. ***Title tr.:*** Characteristics of Bryozoa, order Cryptostomata, from the Ordovician and Silurian of the Siberian platform.

Presents new data on this fauna from the Podkamennaya Tunguska and other parts of the Siberian platform. For only six Silurian bryozoans hitherto known here, over 200, mainly Cryptostomata, are now recognized. The stratigraphy, based earlier mainly on comparison with Bryozoa in North America, should be reconsidered because of the new data. Different forms, Cryptostomata (mainly), Trepostomata, Cyslostomata, are outlined and a new stratigraphic division is discussed. ***Copy seen:*** DLC.

53532. NEKHOROSHEVA, L. V. Mshanki srednego ordovika ûzhnogo ostrova Novoĭ Zemli. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 78–80, illus.) 3 refs. Text in Russian. ***Title tr.:*** Bryozoa of the Middle Ordovician in the southern island of Novaya Zemlya.

Describes four species of Cryptostomata and one of Trepostomata from the collection made by N. P. Golovanov in the Middle Ordovician deposits. Representatives of gen. *Escharopora,* hitherto known in the Ordovician of the Baltic states, are now recorded for the first time in the U.S.S.R. Connection between the Arctic and Baltic marine basins is postulated. ***Copy seen:*** DLC.

NEKLIÛDOVA, G. A., *see* Tereshchenko, V. A., *and* G. A. Neklîûdova. Tekhnologiîa proizvodstva stenovykh materialov . . . *1958.* No. 55386.

53533. NEKRASOV, I. A. Ékspediťsiîa na ozero Él'gytkhyn. (Problemy Severa, 1958, vyp. 1, p. 360–70, illus., map.) 6 refs. Text in Russian. ***Title tr.:*** Expedition to Lake El'gytkhyn.

Reviews rumors and references to this lake since the 18th century; its discovery (approx. 67°30′ N. 172° E.) by S. V. Obruchev in 1933 and subsequent descriptions. The 1955 expedition (headed by the author) of the Institute of Permafrostology to this area, in the Anadyr Plateau, is described: itinerary, temperatures and weather, topography and area of lake (117.5 km.²), geology, water temperatures, sediments, surrounding terrain, etc. ***Copy seen:*** DLC.

53534. NEKRASOV, I. A. Godovoĭ khod al'bedo vo vnutrennikh raĭonakh Chukotki. (Priroda, Dec. 1958. god 47, no. 12, p. 94–95, illus. table.) Ref. Text in Russian. ***Title tr.:*** The annual course of albedo in the inner districts of Chukotka.

Account of daily observations, Sept. 19, 1956–Aug. 12, 1957, on an island of the Anadyr' River, approx. 65°29′ N. 179°19′ E. There was a great difference in albedo between the snow-covered and the summer tundra. In the first case albedo

reached extremes of 99% and 60%; in summer, albedo varied between 7–18%. Conditions making for the differences are noted. ***Copy seen:*** DLC.

53535. NEKRASOV, I. A. My edem na Dikson. (Pioner, Nov., Dec. 1958. no. 11, p. 33–42; no. 12, p. 49–57, illus., col. map.) Text in Russian. ***Title tr.:*** We sail to Dikson.

Describes a trip on the diesel ship *Chkalov*, down the Yenisey from Krasnoyarsk to Dikson: the taiga and tundra landscapes, a stop in Dudinka, Noril'sk, the vessel beset in the Yenisey Gulf, released by the icebreakers *Indigirka* (diesel-electric) and *Ermak*. The port, Dikson, ice-bound all but 40–60 days a year, its hydrographic base, geophysical station at Kolba are described. The booming lumber-town Igarka was visited on the return trip. Col. photos of the *Indigirka* and Noril'sk.

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NEKRASOV, I. A., *see also* Okladnikov, A. P., *and* I. A. Nekrasov. Novye sledy . . . neoliticheskoĭ kul'tury na Chukotke . . . *1957*. No. 53737.

NEKRASOV, N. N., *see* Chernenko, A. K. Pervoe obshchee sobranie Sibirskogo otdeleniîa Akademii . . . *1958*. No. 50207.

53536. NEKRASOV, VLADIMIR KONSTANTINOVICH, *and* **E. V. KALECHITS.** Stroitel'stvo avtomobil'nykh dorog. Dopushcheno v kachestve ucheb. posobiîa dlîa avtomobil'nodorozhnykh tekhnikumov. Moskva, Nauchno-tekhnich. izd-vo avtotransp. lit-ry, 1957. 487 p. illus., diagrs., tables. Refs. Text in Russian. ***Title tr.:*** Highway construction. Approved textbook for highway engineering schools.

A textbook with descriptions of Russian and foreign techniques. Specific attention is given to organization of work. Thermal conditions in road beds, drainage (particularly before the winter period), and frost-heave-prevention measures are discussed. Construction of road beds on marshlands and permafrost is described (p. 258–67). Roads on marshland are constructed either by excavation of peat or by covering with dry earth, sand and gravel. Road construction in forests or on soft grounds using covers of tree branches, logs, or prefabricated concrete slabs is decribed (p. 317–22) with illus.

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53537. NEKRASOVA, O. I. Litologiîa nizhne- i srednekembriĭskikh otlozheniĭ razreza Amginskoĭ opornoĭ skvazhiny, Vostochnaîa Sibir'. Moskva, Gosgeoltekhizdat, 1955. 68 p. table, fold. diagr., map. (Leningrad. Vsesoîuznyĭ geologicheskiĭ institut. Trudy, nov. seriîa, t. 4.) 80 refs. Text in Russian. ***Title tr.:*** Lithology of the Lower and Middle Cambrian deposits according to cross-sections of deep borings in the Amga region of East Siberia.

Contains comprehensive and collective study of Cambrian deposits made during 1939–1951 from samples collected in three deep holes bored for prospecting in mineral resources. Physical properties, mineral content, trilobite and brachiopod fauna, alteration and recrystallization of rocks were studied from different viewpoints, and data of these studies are outlined. Diagenesis and recrystallization in various Lower and Middle Cambrian rocks are considered. Mineralic changes of the rocks are indicated and their causes discussed. Appearance of bitumen, fluorite and other transformed minerals and rocks is noted.

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NEKRASOVA, O. M., *see* Demokidov, K. K., *and others*. Stratigrafiîa i faĭsii kembriîa . . . 1958. No. 50497.

53538. NELLEMANN, GEORGE. Svalbard, et naboland. (Grønland, Mar. 1957, nr. 3, p. 106–111, illus.) Text in Danish. ***Title tr.:*** Svalbard, a neighbouring country.

General historical sketch.

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NELSON, J. H., *see* Alaskan Science Conference, 1954. Science . . . proceedings. 1957. No. 49210.

NELSON, L. M., *see* Creek, D. W., *and others*. Hypervitaminosis A, a toxic reaction. *1958*. No. 50376.

53539. NELSON, RONALD A. A vegetation transect of the Thule Peninsula. Natick Mass., Apr. 1958. 7 p., map, 3 diagrs., 3 plates. (U.S. Quartermaster Corps. Environmental Protection Research Division. Research study report RER–18.) 16 refs.

Vegetation of the Thule Peninsula (approx. 76°30′ N. 68°30′ W.) northwest Greenland was sampled along a 16-mile transect between Thule Air Base and Camp Tuto, June 1957. The general vegetation is small and sparse. Grasses

and sedges, found in marshy areas, are the largest plants; most plants are less than five inches high. Typical habitats are illus., stone polygon vegetation diagrammed, and species (14) collected described. The vegetation may be used in emergency for fuel, food, and insulation by individuals or small groups; it is of no value for providing cover or concealment.—From Author's abstract.

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53540. NELSON, URBAN C. Sora, snowy egret, blue-winged teal, and mourning dove in Juneau, Alaska. (Condor, Mar.-Apr. 1958. v. 60, no. 2, p. 142.)

Contains notes on *Porzana carolina*, on Oct. 21, 1956; *Leucophoyx thula*, May 18–20, 1956; *Anas discors*, Sept. 1, 1957; and *Zenaidura macroura*, the same day.

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NELSON, URBAN C., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

NELSON, URBAN C., *see also* Hansen, H. A., *and* U. C. Nelson. Brant . . . Bering Sea: migration and mortality. *1957.* No. 51557.

NELSON, WALTER L., *see* Karstens, C. W., *and others.* Pipeline study . . . *1957.* No. 52194.

53541. NEMNONOV, N. Kto vinovat? (Fizkul'tura i sport, 1957. god 27, no. 3, p. 37, illus.) Text in Russian. ***Title tr.:*** Whose fault?

Describes free-lance skiing, skating and fishing on and along the Angara River and criticizes the lack of organized sports activities at the Bratsk power station club.

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NEMTSEV, G., *see* Gal'burt, A. Avtostartery. *1957.* No. 51056.

53542. NEMUKHIN, IGOR' ALEKSANDROVICH. Lyzhi, sport sil'nykh i smelykh. 2. ispr. i dop. izd. Moskva, Fizkul'tura i sport, 1955. 40 p. Text in Russian. ***Title tr.:*** Skis, the sport of the strong and the brave. 2d corrected and enlarged edition.

Includes the mention of skis in Ostyak, Kamchadal and Karelian legends, archeological finds of skis and ski drawings (2,000 B.C.) in northern Russia, and the use of skis by Russians in their conquest of Siberia in the 15th-17th centuries. The theory of the invention of skis by Scandinavians is refuted. The Soviet use of ski troops is noted. Six ski marathons Arkhangel'sk-Moskva (1923), Moskva - Leningrad - Finland - Sweden - Oslo (1927), Lake Baykal - Murmansk and Nerchinsk-Moscow (1935), etc. are described.

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53543. NERENST, POUL. Valg af cement ved betonstøbning om vinteren. (Ingeniøren, Feb. 18, 1950. årg. 59, nr. 7. p. 161–64.) 5 refs. Text in Danish. ***Title tr.:*** Choice of cement for winter concreting.

Discusses effects of cement type, and heating, mixing, and pouring procedures on the concrete properties. The setting period should be made short by using fresh cement and low water: cement ratio, and by keeping the setting temperature high. Heat generation during setting increases with increasing cement content (max. 400 kg./m^3); the same effect is obtained by using a faster working type of cement. Choice of portland, rapid, or superrapid cement depends otherwise on type and size of construction.

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53544. NERSESOVA, Z. A. Izmenenie aktivnoĭ poverkhnosti gruntov pri polozhitel'noĭ i otritsatel'noĭ temperature. (*In:* Materialy po laboratornym issledovaniiam merzlykh gruntov, sbornik 3, 1957. p. 163–67, tables.) 6 refs. Text in Russian. ***Title tr.:*** Change in the active surface of soils by positive and negative temperatures.

Presents results of experiments made at the Institute of Permafrostology with absorption of $C_{16}H_{18}N_3$ SCl in clayey soil samples, saturated with various cations. Maximum absorption by negative temperatures (−2° C.) was obtained when using a 50% water-alcohol solution. By coagulation the effect of the H-ion was approx. 100 times stronger than that of the Na-ion; the presence of OH-ions in the solution completely neutralized the coagulation effect of the Na-ion. A formula for the fluctuation of the active surface is derived from the experimental data.

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53545. NERSESOVA, Z. A. Vliianie obmennykh kationov na fazovyĭ sostav vody v merzlykh gruntakh. (*In:* Materialy po laboratornym issledovaniiam merzlykh gruntov, sbornik 3, 1957. p. 168–76, tables, graph.) 39 refs. Text in Russian. ***Title tr.:*** The effects of exchange cations on the phase composition of water in frozen ground.

"The effects were investigated in the laboratory with samples of silty-clay and clay soils using a calorimetric method for measuring the percentage of ice and water. Maximum increase in water content attributable to cation exchange appeared at temperatures above −2° or −3° C., *i.e.* in the zone of intense phase changes, and decreased when sample temperatures were below −2° or −3° C. The exchange effects reached a maximum in samples with moisture contents close to the maximum molecular capacity."—SIPRE. ***Copy seen:*** DLC.

NERSESOVA, Z. A., *see also* T͡Sytovich, N. A., *and others.* O fizicheskikh ſi͡avleniſi͡akh . . . v . . . gruntakh. *1957.* No. 55539.

53546. NESHEIM, ASBJØRN, 1906– . An ancient type of sledge in Ullsfjord, northern Norway. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 46–56, illus., map.) Refs. in text.

Describes the construction of a ski-sledge with steering pole from Stordalen, a small Sea-Lapp community on the Ullsfjord (Ulfsfjord). Used to transport firewood, hay, dung or stones, it is made in different sizes and supplied with different supports according to the load. Its measurements, weight, etc., are given and the Lappish names of its component parts indicated. The distribution of this sledge type in Norway and northern Eurasia through Kamchatka is discussed. The Ullsfjord sledge is considered a cultural loan from Norway in "primeval Nordic times" either directly or through other Lapps. ***Copy seen:*** DSI.

53547. NESMEſI͡ANOV, ANDREĬ NIKOLAEVICH, 1899– . Ob osnovnykh napravleniſi͡akh v rabote Akademii nauk SSSR. (Akademiſi͡a nauk SSSR. Vestnik, Feb. 1957. god 27, no. 2, p. 3–42.) Text in Russian. ***Title tr.:*** Basic trends in the work of the Academy of Sciences of U.S.S.R.

Abridged text of the presidential address at the plenary meeting on Dec. 28, 1956. The Academy's achievements and plans are outlined. Arctic and subarctic investigations are mentioned, among them discovery of natural gas at the Vilyuy River mouth by K. R. Chepikov, V. A. Vakhrameev and I͡U. M. Pushcharovskiĭ, working out of stratigraphic scales for the Northern Ural, recent achievements in permafrost studies (p. 29–30); resource studies in Yakutia, Magadan and Kamchatka Provinces are projected in the sixth five-year plan.

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NESTEROV, G. A., *see* Marakov, S. V., *and* G. A. Nesterov. O vrede, nanosimom sivuchami . . . kotikam. *1958.* No. 53124.

53548. NESTURKH, MIKHAIL FEDOROVICH. Chelovecheskie rasy. Pod red. N. N. Cheboksarova. Moskva, Gos. uchebno-pedagog. izd-vo, 1954. 100 p. illus. Text in Russian. ***Title tr.:*** Human races. Edited by N. N. Cheboksarov.

Discusses the distinguishing racial traits and their historical and environmental causes, human evolution, selection of the fit, formation and crossing of races, etc. The Yakuts, Tungus, Gilyaks, Chukchis, Eskimos and Aleuts are mentioned among the members of the Mongoloid race (p. 23–24, 55, 78), and its related mixed subgroups are noted, including the Ostyaks, Voguls and Lapps (p. 53–54). Some mixed-blood individuals are illustrated, among them a Negro-Chukchi (plate 5).

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53549. NEUSSER, H. Kohlensäuregasbehandlungen bei Erfrierungen. (Archiv für physikalische Therapie, 1955. Jahrg. 7, Heft 2, p. 134–37.) 6 refs. Text in German. ***Title tr.:*** Carbon dioxide gas treatments of frostbite.

Description of a method of using CO_2 at room temperature and in a humid atmosphere, in some 300 cases of frostbite of second and third degree. Prompt reduction of edema, secretion and pain is claimed for this method, with change into dry gangrene, quick demarcation and healing. ***Copy seen:*** DNLM.

NEVERRE, GEORGES, *see* Malmejac, J., *and others.* Diabète rénal en "hypothermie provoquée." *1958.* No. 53082.

NEVERRE, GEORGES, *see* Malmejac, J., *and* G. Neverre. Étude . . . hypothermie . . . coeur. *1956.* No. 53083.

NEVERRE, GEORGES, *see* Malmejac, J., *and others.* Possibilités expérimentales de ventriculotomies . . . *1957.* No. 53085.

NEVERRE, GEORGES, *see* Malmejac, J., *and others.* Sur . . . transfusion sanguine . . . le chien refroidi. *1957.* No. 53087.

NEVERRE, GEORGES, *see* Malmejac, J., *and others.* Variations quantitatives de la sécrétion urinaire . . . *1958.* No. 53088.

53550. NEVESSKIĬ, E. N., *and* **F. A. SHCHERBAKOV.** Izuchenie protsessov kontsentratsii tiazhelykh mineralov v svîazi s poiskami pribrezhnykh morskikh rossypeĭ. (Akademiîa nauk SSSR. Doklady, Nov. 1, 1958. god 26, t. 123, no. 1, p. 152–55, illus.) 6 refs. Text in Russian. ***Title tr.:*** A study of the processes of heavy-mineral concentration in connection with search for coastal placers.

Main problems concerning the study of concentration of heavy minerals in the coastal placers are discussed and exemplified from the coasts of the Bering and Black Seas. Finds of zirconium and other ore minerals in underwater sandy banks of the Bering Sea are reported and the manner of heavy-mineral concentration is sketched. It is noted that such studies are receiving more attention in other countries and may bring useful results. ***Copy seen:*** DLC.

53551. NEVESSKIĬ, E. N. Nekotorye dannye o sostave glinistykh mineralov v donnykh otlozheniîakh Okhotskogo moriî. (Akademiîa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 22, p. 158–63, illus., tables, map.) 6 refs. Text in Russian. ***Title tr.:*** Some data on the composition of clay minerals in the bottom deposits of the Okhotsk Sea.

Contains information on methods of investigation of bottom samples; distribution of the main minerals over the area; vertical distribution in the bottom deposits (down to a depth of 12.5 m.); source and genesis of the minerals.

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NEVSKIĬ, V. A., *see* Utkin, L. A., *and others.* Bibliografiîa . . . *1957.* No. 55692.

53552. NEVZOROV, N. V., *and* **V. D. SHCHERBACHEV.** Polnost'iû ispol'zovat' lesnye bogatstva Krasnoîarskogo Priangar'îa. (Lesnoe khozîaĭstvo, Jan. 1958. god 11, no. 1, p. 44–50, illus., tables.) Ref. Text in Russian. ***Title tr.:*** Complete utilization of forest resources of the Angara basin in Krasnoyarsk Province.

A new method of cutting trees and sorting them for various purposes is discussed with tabulations of data on types, sizes and other characteristics. Forests along the Angara represent about 80% of all Krasnoyarsk region reserves. They include pine 63.6%, larch 19.4%, spruce and fir 11.3%, cedar 0.5%. Local utilization of branches, tops and saw-mill waste materials for further processing is discussed in detail. Sulphate cellulose, semi-cellulose and chemical wood pulp can be used in preparation of paper, corrugated boards, and other building insulation products, either locally, or by transport to paper manufacturing plants.

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NEWBOULD, P. J., *see* Pearsall, W. H., *and* P. J. Newbould. Production ecology 4, standing crops . . . sub-Arctic. *1957.* No. 53902.

NEWELL, FRANK W., *see* Chow, K. L., *and others.* Degeneration of retinal ganglion cells . . . darkness . . . *1957.* No. 50244.

NEWLING, P. S. B., *see* Glaser, E. M., *and* P. S. B. Newling. The control of body temperature in thermal balance. *1957.* No. 51220.

NEWMAN, KATHERINE, *see* Irvine, D. G., *and others.* Effects of dietary phospholipid . . . *1957.* No. 51957.

53553. NEWSOM, BERNARD D., *and* **D. J. KIMELDORF.** The role of food consumption in the mortality response of irradiated rats subjected to prolonged cold exposure. San Francisco, May 1957. 11 p. illus., tables. (U.S. Naval Radiological Defense Laboratory. Research and Development Technical Report USNRDL–TR–172 NM006–015 Bu Med 62–03–60.) 3 refs.

Report on food consumption of irradiated rats during a 30-day period of exposure to low (6° C.) and normal (23° C.) temperature. The results suggest that increased mortality observed in irradiated animals exposed to cold is related to inadequate food intake.

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53554. NEWSOM, BERNARD D., *and* **D. J. KIMELDORF.** Role of food consumption in the mortality response of irradiated rats subjected to prolonged cold exposure. (American journal of physiology, Nov. 1958. v. 195, no. 2, p. 271–75, illus., table.) 4 refs.

Exposure of irradiated rats to an environment of 6°±1° C. increased their 30-day mortality rate. Feeding experi-

ments showed that this increased mortality is not due to inability to cope with the increased metabolic demand of the cold, but is related to inadequate food intake. ***Copy seen:*** DNLM.

NEWTON, CARLOS, *see* Yaglou, C. P., *and others.* Reflective wall lining . . . heat loss . . . *1957.* No. 56133.

53555. NEWTON, JOHN M. An investigation of tracking performance in the cold with two types of controls. Fort Knox, Ky., Feb. 1958. 2, 13 p., illus., tables. (U.S. Army Medical Research Laboratory. Report no. 324.) 3 refs.

Account of experiments with 12 men, aimed at determining whether there is a difference in performance when movement and pressure controls are used at low ambient temperature. The results showed that performance with pressure control was superior to that with movement control. Differences in performance were also found among subjects, and trials. ***Copy seen:*** DNLM.

53556. NEZHEVENKO, A. Novaĭa otrasl' sibirskoĭ industrii. (Sibirskie ogni, Jan. 1958. god 37, no. 1, p. 11–12). Text in Russian. ***Title tr.:*** A new branch of Siberian industry.

Deals with the heavy power-machinery construction plant at Novosibirsk, which started production in 1953. It supplied hydraulic generators to the Irkutsk and Angara power stations, has the 200,000 kw. hydraulic generators for Bratsk in the blueprint stage; and is working on the first consignment of hydrogen-cooled 60,000 kw. turbo-generators. U.S. Senator Allen J. Ellender's visit to the plant is mentioned. ***Copy seen:*** DLC.

53557. NIAZI, SUAD A., *and* **F. J. LEWIS.** Profound hypothermia in man; report of a case. (Annals of surgery, Feb. 1958. v. 147, no. 2, p. 264–66, table.) 9 refs.

Report on induced hypothermia of 9° C. (48° F.) in a woman aged 51, with cardiac standstill lasting one hour, and recovery immediate and complete. Heart rate and ECG; arterial blood pressure and blood pH; plasma CO_2; serum sodium and potassium; mental condition and intelligence, etc. are recorded. Hypothermia was induced as a possible cure against cancer, which however, did not regress. ***Copy seen:*** DNLM.

53558. NIAZI, SUAD A., *and* **F. J. LEWIS.** Profound hypothermia in the monkey with recovery after long periods of cardiac standstill. (Journal of applied physiology, Jan. 1957. v. 10, no. 1, p. 137–38, illus., table.) 9 refs.

Description of conditions in Java monkeys made hypothermic to between 4° and 9° C. with cardiac standstill intervening at 11°–14° C. and lasting from 42 minutes to over two hours. All monkeys survived, and five out of six lived for many months, with their behavior, intelligence, habits and neurological aspects, normal. ***Copy seen:*** DNLM.

NICHOLLS, DORIS, *see* Rossiter, R. J., *and* D. Nicholls. Phosphorus metabolism . . . adrenal . . . cold environment. *1957.* No. 54412.

53559. NICHOLS, BENJAMIN. Drift motions of auroral ionization. (Journal of atmospheric and terrestrial physics, 1957. v. 11, p. 292–93, diagr.) 3 refs. Reprinted as Alaska. University, Geophysical Institute, Contributions, Series A, no. 38.

Measurements of the frequency spectra of VHF echoes from auroral ionization made in Jan.–Mar. 1957, show that the general pattern of the electron drift was horizontally east or west at speeds of 0.5 to 3.0 km./sec. in the region 400 to 900 km. geomagnetically north of College, Alaska. Continuous wave transmitters at 106.0 and 41.15 mc/s were located 40 km. east of College; similar receiving systems were located at College. The frequency spectrum on each channel, in the absence of auroral or airplane echoes, consisted of a single line, whose width was determined by a spectrum analyser. Radar echoes from auroral ionization are frequently spread in range by more than 100 km. Radar results, as well as the measured drift velocities and the suggested electron density, are consistent with magnetic observations.

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NICHOLS, DONALD RAYMOND, 1927– , *see* Ferrians, O. J., *and others.* Pleistocene volcanic mudflow . . . Copper River . . . *1958.* No. 50883.

53560. NICHOLS, R. W. The hardness of some carbon and low-alloy steels at low temperatures. (Iron and Steel Institute. Journal, Apr. 1956. v. 182, pt. 4, p. 348–54, 3 tables, 4 figs.) 9 refs.

Diamond pyramid and ball-hardness tests were made on small rectangular

samples of eight steels at temperatures of +18°, −70°, and −196° C. The hardness was found to increase with decreasing temperature, the percentage rate of increase being in general less than that of the 0.01% proof stress. The U.T.S./Vickers-hardness ratios were found to be almost the same at −70° as at +18° C. The effects of temperature on hardness and tensile properties and on stress/strain curves are interpreted over the entire temperature range.

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53561. NICHOLS, R. W. The mechanical properties of carbon steel wire at low temperatures. (Iron and Steel Institute. Journal, Apr. 1956. v. 182, pt. 4, p. 337–47, 5 illus., 3 graphs, 4 tables.) 15 refs.

Tensile, impact, fatigue, and reverse bend tests were made on 0.044 in. diam. wire at temperatures of 20°, −30°, and −60° C. The wires were prepared from steels of approx. 0.5% and 0.75% C and were tested in the conditions of as-drawn, annealed, and electro-galvanized. Test results are tabulated and graphed. In the tensile test, the proof stress and U.T.S., values for all test samples increased with decreasing temperature while the ductility slightly decreased. No marked embrittlement was noted in the temperature range tested. Fatigue endurance limits and endurance ratios for the as-drawn wires were found to increase with temperature decrease while endurance limits of annealed wires appeared relatively unaffected by temperature. In high-strain reverse bend tests, the electro-galvanized wire was superior to the as-drawn wire at room temperature but showed a greater deterioration at −60° C.

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53562. NICHOLSON, NORMAN L. The face of the North. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 70–75, illus., maps.)

Distinguishes three Norths climatically: the permanent ice and snow fields, the Arctic, and the sub-Arctic which together cover 78% of Canada. All are included in this general survey of landscape and topography, vegetation, wildlife, man and his activities, natural resources and their development. The strategic location of "the Canadian North" in the air age is noted. ***Copy seen:*** DGS.

53563. NICHOLSON, NORMAN L. The Geographical Branch, 1947–57. (Canadian geographer, 1957. no. 10, p. 61–68, illus., diagr.) 3 refs.

Organization and services of this branch of the Canadian Dept. of Mines and Technical Surveys are outlined. Its field work and research program include reports on surface terrain conditions in the North and a long-range study of northern ice conditions with relation to increased surface and air transport. The Canadian Ice Distribution Survey established in 1951, its ice information file, observation program and reports are noted.

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NICHOLSON, NORMAN L., *see also* Canada. Dept. of Transport. Navigation conditions . . . Hudson Bay Route . . . 1956. *1957.* No. 50082.

NICHOLSON, NORMAN L., *see also* Canada. Dept. of Transport. Navigation conditions . . . Hudson Bay Route . . . 1957. *1958.* No. 50083.

53564. NICKELSEN, J. C. Landsplanen for kringkastingen i Norge. (Teknisk ukeblad, Jan. 27, 1955. årg. 102, nr. 4, p. 65–70, text maps.) Text in Norwegian. ***Title tr.:*** The Norwegian broadcasting plan.

Conversion to a meter-wave system, suggested for densely populated areas, is not suitable for northern Norway. Transmission on electric power- and telephone wires from the present stations in Troms and Vadsø would improve the receiving conditions, as would increasing the strength of the transmission antennas' ground wave. The possibility of establishing a northern station on the same low frequency (218 kc/s) as the Oslo Broadcaster, is briefly discussed.

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NICKERSON, MARK, 1916– , *see* Shemano, I., *and* M. Nickerson. Effect of ambient temperature on thermal responses to drugs. *1958.* No. 54765.

53565. NICKUL, KARL, 1900– . Changes in Lappish community; a reflection of political events and state attitude. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 88–95, maps.) 10 refs.

Deals with the Skolts of Suenjel (Suenjelsijd), an isolated Lapp community on the Lutto River in the Petsamo region, who retained their seminomadic way of life until the 1930's. The fate and tribulations of those Suenjel people who chose to remain in Finland after the 1920 Treaty of Dorpat are

described: loss of their winter village and best salmon fishing grounds through the arbitrarily drawn Soviet-Finnish border, building of a new village in 1927–30 and progressive acculturation; their evacuation during the Russo-Finnish War of 1939–40, participation in World War II operations, and their resettlement in the Lake Inari region in 1947 after Finland's cession of the Petsamo region to the U.S.S.R. ***Copy seen:*** DSI.

NICKUL, KARL, 1900– , *see also* Graenseforeningen. Det nye Norden . . . *1956*. No. 51322.

NIELSEN, B. ROSENKILDE, *see* Petersen, J. C. A. Ujuâts dagbøger . . . 1894–1935 . . . *1957*. No. 53953.

53566. NIELSEN, EINER STEEMANN, 1907– . Light and organic production in the Sea. (*In:* Plankton symposium 1957. *pub. as:* International Council for the Exploration of the Sea. Rapports et procès-verbaux, Apr. 1958. v. 144, p. 141–48, illus., maps.) 24 refs.

Includes information on the significance of light for organic productivity at medium and high latitudes; utilization of high and low intensity light; fraction of light utilized by marine algae and spectra utilized; influence of weather especially at high latitudes; factors affecting the incidence of spring blooming in an arctic area. ***Copy seen:*** DGS.

53567. NIELSEN, EINER STEEMANN, 1907– . A survey of recent Danish measurements of the organic productivity of the sea. (*In:* Plankton symposium 1957. *pub. as:* International Council for the Exploration of the Sea. Rapports et procès-verbaux, Apr. 1958. v. 144, p. 92–95, illus., map.)

Account of investigations with the carbon-14 technique, including the coastal waters near Greenland at all seasons of the year. High rate of production was in all fronts between two current systems. This is due to formation of eddies which bring up nutrient-rich water to the surface. Such productive areas are listed and outlined. ***Copy seen:*** DGS.

53568. NIELSEN, FINN. Grønlands stilling i riget, og udadtil. (Grønland, Oct. 1957, nr. 10, p. 361–69, illus.) Text in Danish. ***Title tr.:*** The status of Greenland within the realm, and in the world.

Summarizes the position after adoption of the new constitution in Denmark, June 1953 and makes some comparisons with the old order. Laws, passed by Parliament include Greenland unless otherwise specified. A ministry for Greenland has been created with broad powers. Details are given on administration and on some foreign relations: the dispute with Norway over parts of northeast Greenland, the American military bases, etc. ***Copy seen:*** DLC.

53569. NIELSEN, FREDERIK, 1881– . En efterårsdag i Julianehåb. (Grønland, Jan. 1958, nr. 1, p. 28–35, illus.) Text in Danish. ***Title tr.:*** An autumn day at Julianehåb.

Describes this West Greenland town (60°43′ N. 46°08′ W.) and everyday life there. ***Copy seen:*** DLC.

53570. NIELSEN, FREDERIK, 1881– . Forsøgsbyen i Frobisher Bay. (Atuagagdliutit: Grønlandsposten, Nov. 22, 1956. Ukiut 96-iat, nr. 23, p. 12–13, 16–17, illus.) Text in Danish and Eskimo. ***Title tr.:*** The experimental village in Frobisher Bay.

Describes Niaqúngûn built in 1955–1956 (Koojesse Bay) for local Eskimos, and visited by the writer with a Greenlanders' good-will mission to Canada in 1956. Further illus. of the village appear in the Dec. 13, 1956 issue of this journal p. 12–13. ***Copy seen:*** DLC.

53571. NIELSEN, FREDERIK, 1881– . Den grønlandske kulturs skaebne i det nye Grønland. (Grønland, Apr. 1957, nr. 4, p. 152–59, illus.) Text in Danish. ***Title tr.:*** The fate of Greenland culture in the new Greenland.

Advocates intensified action to preserve Eskimo and Greenlandic culture, particularly language, traditions and legends and art. ***Copy seen:*** DLC.

53572. NIELSEN, FREDERIK, 1881– . Hvad betyder "erqigdlit"? (Grønland, Nov. 1957. nr. 11, 436–37, illus.) Text in Danish. ***Title tr.:*** What does "erqigdlit" mean?

This word is used in some Eskimo myths to denote an enemy people in whom the upper part of the body is a man's and the lower part a dog's. The word generally taken to mean "person who is full of louse eggs" (Greenlandic *erqeq*), is suggested now, to signify "person with a pronounced posterior(or tail)" (Greenlandic *erqoq*).

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53573. NIELSEN, FREDERIK, 1881– . Nekrolog: Frederik Lynge, 1. august 1889–1. november 1957. (Grønland, Dec. 1957. nr. 12, p. 467–68, port.) Text in Danish. ***Title tr.:*** Obituary: Frederik Lynge, Aug. 1, 1889–Nov. 1, 1957.

Contains biographical notes on Lynge, a teacher who joined the Greenland Trading Company. Active in Greenland administration, a member of the North Greenland provincial council, and (1951) of the first provincial council for all Greenland, he was (1953) one of the two Greenland representatives in the Danish parliament. ***Copy seen:*** DLC.

53574. NIELSEN, HANS. Gamle og nye metoder inden for butikshandelen i Grønland. (Grønland, June 1958, nr. 6, p. 224–29, illus.) Text in Danish. ***Title tr.:*** Old and new methods of running a store in Greenland.

Describes the Greenland Trading Company's old store and the new one, opened in 1955, at Upernavik, West Greenland; also the changes in buying and selling methods during the author's three years (1952–55) in charge. The first self-service store in Greenland was opened at Sukkertoppen in 1957 and the experiment was successful. ***Copy seen:*** DLC.

53575. NIELSEN, HENNING. Manitoba pushes ahead on new major nickel source. (Mining engineering, Dec. 1957. v. 9, no. 12, p. 1321–23, illus. map).

Brief account of progress of International Nickel Co. of Canada's program to develop a new mining region near Mystery Lake-Moak Lake (approx. 55° 55′ N. 97°35′ W.), expected to become second only to the Sudbury workings in production. Two mines, the Thompson, and the Moak Lake, are to be opened; production is planned to be 75 million lb./year. A 30-mile rail spur has been built between the new town of Thompson and Sipiwesk on the Hudson Bay line. Little copper has been found, but nickel content of the ore is expected to compare favorably with that from Sudbury. With total production by INCo planned at 385 million lbs. of refined nickel by 1961, new civilian markets are needed. ***Copy seen:*** DGS.

53576. NIELSEN, J. Laks fra Norge i grønlandske elve. (Atuagagdliutit: Grønlandsposten, Aug. 1, 1957. Ukiut 97-iat, nr. 16, p. 10–13, illus.) Text in Danish. ***Title tr.:*** Salmon from Norway in Greenland rivers.

From Kapisigdlitelven (the only spawning stream in Greenland) salmon spawn were moved to another river in the Godthåb Fjord in summer 1956 by Grønlands fiskeriundersøgelser (Greenland Fishery Investigations); and in the autumn the fish were in good condition. Eggs were moved from a hatchery at Hammerfest, north Norway, to a river near Godthåb: 6,000 in 1956 and 25,000, 1957. Over 95% of the first batch hatched. The transport and methods used in these experiments are described. ***Copy seen:*** DLC.

53577. NIELSEN, J. K. Betonbyggeri i Grønland. (Ingeniøren, teknisk ugeblad, udgave A, Apr. 13, 1957. årg. 1, nr. 2, p. 7, illus.) Text in Danish. ***Title tr.:*** Concrete construction in Greenland.

Summary of lecture to the Danish Concrete Association and Construction Engineer Groups. Methods used for building foundations in permafrost areas are described. At station Nord (approx. 81°36′ N. 16°41′ W.) on the north coast, a temporary shed was built of oil barrels welded together for walls and frame, and covered with a tarpaulin. Due to a lack of suitable aggregates in Greenland, more cement than usual is added to the concrete mix. Air injection is also used, and both methods have provided satisfactory results. ***Copy seen:*** DLC.

53578. NIELSEN, LAWRENCE ERNIE, 1917– . Climbs in the central Chugach Mountains, Alaska. (Appalachia, Dec. 1957. v. 31, no. 4, p. 491–97, 2 photos, text map.) Ref.

Account, by leader, of a five-man party's expedition in June–July 1957. Most of the high peaks around the head of Columbia Glacier (61°05′ N. 147°05′ W.) were climbed for the first time. Names and altitudes given to several peaks, routes followed are shown on map. Events of climbing are described. Brief account also pub. in American alpine journal, 1958, v. 11, no. 1, issue 32, p. 92–93. ***Copy seen:*** DGS.

53579. NIELSEN, LAWRENCE ERNIE, 1917– . Crevasse patterns in glaciers. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 44–51, plate, 2 diagrs.) 3 refs.

Discussion of theoretical basis for formation and spacing of crevasses; ten possible idealized combinations of stresses and the resulting crevasse patterns are diagrammed and described. The significance of spacing of crevasses, depending upon thickness, breaking strength and density of the ice and the acceleration of gravity, is illustrated and discussed. Reasons (five) why active glaciers are more crevassed than stagnant glaciers are given. Like pitch and many plastics, ice is ductile to slowly applied force, but brittle to rapid; thus crevasses form usually where the gradient increases rapidly. ***Copy seen:*** DGS.

53580. NIELSEN, LAWRENCE ERNIE, 1917– . Preliminary study on the regimen and movement of the Taku Glacier, Alaska. (Geological Society of America. Bulletin, Feb. 1957. v. 68, no. 2, p. 171–80, text map, 5 diagrs., 7 tables.) 11 refs.

Applies the mathematical theory of equilibrium glaciers (No. 41612) to data obtained on Taku 1948–1955, during the Juneau Ice Field Research Project. Measurements of net accumulation and distribution of snow at the end of the 1953 ablation season show its quantity to be primarily a function of the elevation above the firn line. Ablation of bare ice below the firn line was determined; about 40 feet of ice melts each year in the Taku terminal area. Detailed studies of movement were made on three transverse profiles where the ice thickness had been measured by seismic methods. Volumes of ice passing through these profiles were calculated from three types of measurements: flow, ablation, and accumulation. The Taku Glacier may be in approximate equilibrium in the terminal region, but much more snow is accumulating in the upper regions than is melting below the firn line.—From author's abstract.

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53581. NIELSEN, NIELS. O. B. Bøggild, 16. maj 1872 – 13 november 1956. (Geografisk tidsskrift, 1957. bd. 54, p. ix) Text in Danish. ***Title tr.:*** O. B. Bøggild, May 16, 1872 – Nov. 13, 1956.

Obituary of O. B. Bøggild, professor of mineralogy at Copenhagen University 1912–1942. His major work is *Mineralogia Groenlandica* (No. 1819, 28209).

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NIELUBOWICZ, J., *see* Bober, S., *and others.* Zmiany elektrokardiograficzne . . . *1957.* No. 49782.

53582. NIEWIAROWSKA, MARTA. Influence de l'hypothermie par refroidissement sur la coagulation du sang et sur la fibrinolyse chez le chat. (Revue d'hematologie, Nov.–Dec. 1957. t. 12, no. 5, p. 650–56, illus. tables.) 30 refs. Text in French: ***Title tr.:*** Effect of hypothermia by cooling, on blood coagulation and fibrinolysis in the cat.

Account of observations on animals made hypothermic down to 0° C. A considerable activation of fibrinolysis in the euglobulins precipitated from the plasma, was observed. This is connected not with a rise in plasminogene level but with a fall in the level of plasmatic antiplasmine. ***Copy seen:*** DNLM.

NIGEON-DUREUL, MARIE, *see* Ratsimamanga, A. R., *and others.* Le comportement du rat surrénaloprive . . . *1958.* No. 54232.

NIKANDROV, V. I͡A., *see* Voskresenskiĭ, A. I., *and others.* Primenenie tverdoĭ uglekisloty . . . *1957.* No. 55893.

53583. NIKIFOROV, E. G. Ob izmenenii splochennosti ledi͡anogo pokrova v svi͡azi s ego dinamikoĭ. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 59–71, table, diagrs.) Text in Russian. Translated into English for the U.S. Air Force, Cambridge Research Center, Geophysics Research Directorate, by the American Meteorological Society ***Title tr.:*** Variations in the compactness of an ice cover in relation to its dynamics.

The effects of ice drift and its irregularities on ice consolidation are mathematically analyzed, and formulas for calculating the degree of compaction are given. Spatial variations of the speed and direction of wind and diverse effects of the same wind speed on ice fields of different profiles and thicknesses are the chief factors determining drift irregularities and changes in degree of compaction. Currents and special features of ice consolidation near the shoreline must also be considered. Formulas and examples provide for the kinematic factors only; effects of dynamic and thermal processes are not considered.—From SIPRE.

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53584. NIKIFOROV, L. P. Opyt opredelenii͡a vozrasta ondatry v polevykh

usloviiakh. (Ratsionalizatsiia okhotnich'ego promysla, 1958. vyp. 7, p. 137–41, illus.) Ref. Text in Russian. ***Title tr.:*** Attempts in determining the age of the muskrat under field conditions.

Describes a method of ascertaining a muskrat's age by measurement of the exposed portion of the teeth and the roots: the older the animal, the longer, relatively, are the roots, as the upper parts are worn down by gnawing. The method was worked out by the author in a study of 350 muskrat skulls. Other methods of age determination are also briefly discussed. ***Copy seen:*** DLC.

53585. NIKIFOROV, N. D. O vosproizvodstve semgi. (Rybnoe khoziaĭstvo, May 1958. god 34, no. 5, p. 19–20.) Ref. Text in Russian. ***Title tr.:*** On reproduction of salmon.

Notes and data on the number of rivers of the Kola Peninsula suitable for spawning; amelioration of water bodies for propagation and growth; stocking with fry; results of management.
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NIKIFOROV, S. S., *see* Bablĭuk, B. T. Na rodnom iazyke. *1957.* No. 49467.

53586. NIKIFOROVA, OL'GA IVANOVNA, 1905– . Novye dannye po stratigrafii i paleogeografii ordovika i silura Sibirskoĭ platformy. (Leningrad. Vsesoiuznyĭ geologicheskiĭ institut. Materialy, nov. seriia, 1955, vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 50–106, tables, text maps, fold. plate.) 51 refs. Text in Russian. ***Title tr.:*** New data on the stratigraphy and paleogeography of the Ordovician and Silurian of the Siberian platform.

Presents results of investigations by the author and other geologists in 1950–53 in the upper and middle course of the Lena, the middle Angara, the Ilim, Vilyuy, Olenek, Podkamennaya and Nizhnyaya Tunguska, and adjacent areas. The previous stratigraphic division of these deposits was deemed insufficient and partly misleading. The Ordovician and Silurian are considered as separate systems, and their formation, series with characteristic fossils, are described. The paleogeography of the Ordovician and Silurian systems is extensively treated and for the main periods, maps are given. Tectonic movements during these times are noted and their effects considered. A new stratigraphic division is presented (fold. plate). ***Copy seen:*** DLC.

53587. NIKITIN, IU. V., *and* **I. S. SAUKHATAS.** O litievykh pegmatitakh Severnoĭ Karelii. (Akademiia nauk SSSR. Laboratoriia geologii dokembriia. Trudy, 1957. vyp. 7, p. 109–119, illus., tables, map). Text in Russian. ***Title tr.:*** On the lithium pegmatites of northern Karelia.

Presents results of authors' field investigation in 1956 on newly found veins of lithium pegmatites of Plotnaya Lambina. Their characteristics are given and absolute age of several minerals determined by argon method. Lithium muscovites are treated in detail and chemical, spectral, optical, and thermic properties are outlined. The lithium pegmatites of Plotnaya Lambina are claimed to be the first of their kind and may be considered for the mining of lithium and rubidium.
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53588. NIKITIN, MAKAR MAKAROVICH. Vysokoshirotnaia vozdushnaia ėkspeditsiia 1957 goda. (Problemy Arktiki, 1958, vyp. 4, p. 104–108, table.) Text in Russian. Translated into English for the U.S. Air Force, Cambridge Research Center, Geophysics Research Directorate, by the American Meteorological Society. ***Title tr.:*** High Latitude Air Expedition, 1957.

Résumé by the leader of this expedition in which 270 scientists, engineers and flyers, with 17 airplanes, participated. The new drifting station North Pole–7 was established on an ice floe at 81°41′ N. 196°12′ E. in April–May 1957; North Pole–4 was evacuated on Apr. 20; North Pole–6 was relieved and resupplied; meteorological and hydrological observations were carried out. A special feature of this expedition was the setting up (table, p. 107) of 11 automatic radiobeacons and 14 drifting automatic radiometeorological stations (Dreifuiushchaia avtomaticheskaia radiometeorologicheskaia stantsiia, DARMS) in the Arctic Basin; two DARMS were installed in the vicinity of North Pole–6 and –7 as controls on the conventional observations. Time and coordinates of setting up of 14 DARMS are given (p. 107). The expedition worked in April–June and, on reduced scale, in Sept.–Oct. 1957. Its teams and outstanding participants are noted. ***Copy seen:*** DLC.

53589. NIKITINA, N. S., *and* **I. B. ULANOVSKIĬ.** Nekotorye dannye po mikrobiologicheskim faktoram korrozii stali v morskoĭ vode. (Akademiia nauk

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SSSR. Murmanskaĭa biologicheskaĭa stant͡siia. Trudy, 1957. t. 3, p. 190–200, illus. tables.) 34 refs. Text in Russian. ***Title tr.:*** Some data on microbiological factors of steel corrosion in sea water.

Account of research commenced at the Murmansk Biological Station in 1953. Numbers and kinds of bacteria found on submerged steel plates, rate of their development, comparisons with conditions on glass plates, rate of corrosion due to bacteria, role of fouling aerobacteria, the effect of steel upon the microbial populace are reported. ***Copy seen:*** DLC.

53590. NIKITINA, N. S. Raspad organicheskikh ostatkov na litorali Barent͡sova moria. (Akademiia nauk SSSR. Kol'skiĭ filial. Murmanskaĭa biologicheskaĭa stant͡siia. Trudy, 1958. t. 4, p. 18–40, illus. tables.) 25 refs. Text in Russian. ***Title tr.:*** Disintegration of organic remnants on the littoral of the Barents Sea.

A study of decomposition of this matter under natural conditions; specifically, the effect of the seasons on the process, the significance of the chemical composition of the disintegrating material, the role of the bottom, and other environmental factors were assessed. Maximal disintegration was observed in summer and fall; its rate varied between species and depended also on the amount of decaying material, phase of decay, quantity and quality of bacteria, and type of bottom. ***Copy seen:*** DLC.

NIKITSKIĬ, N. P., *see* Olenin, A. S., *and others.* Torfianoĭ fond SSSR . . . *1956.* No. 53748.

53591. NIKOLAEV, A. F. Kombaĭn dlia ukladki kabeleĭ sviazi v merzlom grunte. (Mekhanizat͡siia trudoemkikh i tiazhelykh rabot. Apr. 1957. god 11, no. 4, p. 38–39, illus.) Text in Russian. ***Title tr.:*** Combine for laying of communication cables in frozen ground.

A heavy excavating machine (FK–GPI–25), installed on a caterpillar tractor together with a spiral steel cutter for frozen ground and a cable-loading tractor are described with illus. The combine can be moved at various speeds from 25 to 560 m./hr. and can cut permafrost ground at a speed of 200 m./hr. This combine is a substitute for manual work of more than 500 men. To cut a narrow trench in frozen ground or two trenches, a special machine (DFM–1B–GPI) is designed with one or two disc cutters, moving with a speed of 330 m./hr. The machine (FK–GPI–25) can be also used for cutting ice around frozen-in ships. ***Copy seen:*** DLC.

53592. NIKOLAEV, A. P. Navaga Onezhskogo zaliva Belogo moria. (Akademiia nauk SSSR, Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniiu Belogo moria, 1957. vyp 1, p. 140–54, illus. tables, map.) 11 refs. Text in Russian. ***Title tr.:*** The navaga of the Onega Bay of the White Sea.

Account of investigations conducted during 1949–1953, comprising 42,000 specimens with 9,500 biologically analyzed. The fishery, size and growth, sexual differences in the latter, size composition of catches, maturation, reproduction, fertility are considered. Attempt at artificial reproduction is discussed. ***Copy seen:*** DLC.

53593. NIKOLAEV, N. I. Noveĭshaia tektonika SSSR. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1949. 296 p. illus., tables, maps. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda, t. 8.) Approx. 600 refs. Text in Russian. ***Title tr.:*** Recent tectonics of the U.S.S.R.

A handbook in two parts: methods of study of tectonic movements; recent tectonic movements of European Russia (p. 132–293), including those of the Scandinavian-Kola region (p. 143–61) and those of the Urals (p. 205–222). Extent of these regions, earlier research, epeirogenetic movements, and tectonic movements in subareas since late glacial times, are treated in turn. A final section of pt. 2 deals with the regularities in recent and present tectonic movements of the earth's crust and their connection with its structure; regularities in tectonics of Russia and adjacent areas, etc.

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53594. NIKOLAEV, S. I. Osnovnye ėtapy ėtnicheskoĭ istorii vilʹuĭskikh ĭakutov. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1957. vyp. 27, p. 90–98, table.) 10 refs. Text in Russian. ***Title tr.:*** Basic stages in the history of the Vilyuy Yakuts.

Dissertation by a native of the area, based in part on field work in 1954. Russian 17th century data on the population of the Vilyuy are reviewed. Two stages of Yakut colonization of this

formerly Tungus-occupied basin are distinguished: a pre-Russian settlement of its lower area by Amga-Lena Yakuts, and a mid-16th to mid-17th century migration into its middle and upper regions by Yakuts from central Yakutia. By the 19th century, the Yakuts had completely absorbed the local Tungus, thus forming a culturally and ethnically new group, whose pre- and post-Revolutionary economy and material culture are sketched.

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53595. NIKOLAEV, T. Perspektivy razvitiîa sel'skogo khoziîaĭstva ĬAkutskoĭ ASSR. (Ékonomika sel'skogo khoziîaĭstva, Jan.–Feb. 1958. god 29, no. 1, p. 23–28.) Text in Russian. ***Title tr.:*** Prospects for development of agriculture in Yakut A.S.S.R.

Yakutia has some 3,000 industrial enterprises, producing gold, non-ferrous metals, mica, timber, fur, etc. and its industrial output is 48 times greater than that in the pre-Revolutionary period. Agriculture has a similar development: 274 collective farms, 17 motor-tractor stations, and 6 state farms with over 100 electric power stations, 245 thousand head of cattle, 133 thousand horses, etc. Achievements of the collective and state farms are stressed. Income from fur farming has increased twenty-fold in the last decade; the reindeer farms in the far North have increased their herds by 44.6% during the same period. Author is Minister of Agriculture of Yakut A.S.S.R.

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53596. NIKOLAEV, V. Gorodu 325 let. (Fizkul'tura i sport, 1957. god 27, no. 1, p. 32.) Text in Russian. ***Title tr.:*** The city is 325 years old.

Describes the sports organizations and achievements in Yakutsk since the first Yakut Spartakiade in 1932. Yakut sport champions are cited by name.

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53597. NIKOLAEV, V. Kollektiv druzhnykh. (Fizkul'tura i sport, Sept. 1958. god 28, no. 9, p. 11, illus.) Text in Russian. ***Title tr.:*** Group of friends.

Describes sports and calisthenics activities of a school in Yakutsk.

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53598. NIKOLAEV, V. Novosely na polûse kholoda. (Fizkul'tura i sport, 1957. god 27, no. 4, p. 16–17, illus.) Text in Russian. ***Title tr.:*** New settlers at the Cold Pole.

Describes the hilly landscape of Oymyakon district and the athletic activities at sports clubs organized for youthful new settlers sent by the Party to work the local gold mines. ***Copy seen:*** DLC.

53599. NIKOLAEV, V. Ystanga, kuobakh, kylyy. (Fizkul'tura i sport, 1957. god 27, no. 7, p. 11, illus.) Text in Russian. ***Title tr.:*** Ystanga, kuobakh, kylyy.

Describes three kinds of jumping or hopping, a Yakut national sport, traditionally featured at local outings and "ysyakh" festivals. Its organized development under the Soviets, establishment of set rules, and introduction into the programs of Yakut sports clubs are discussed. ***Copy seen:*** DLC.

53600. NIKOLAEV, V. A., *and* **E. D. PETRÎAEV.** O sostoîanii i zadachakh bibliografii Sibiri. (Sibirskie ogni, June 1958. god 37, no. 6, p. 180–87.) 2 refs. Text in Russian. ***Title tr.:*** On the state and problems of a bibliography on Siberia.

Comments on 19th and early 20th century bibliographies, lack of major Soviet publications, and on that of R. J. Kerner, *Northeastern Asia.* Several large bibliographies (on Yakutia, the Far East, etc.) have been compiled in the 1930's, but not published. Need for extensive bibliographic work is stressed, and a start with Western Siberia is suggested by I. Samoĭlov and others in an appended paper (p. 186–87) "Neotlozhnaîa zadacha" (Urgent problem).

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NIKOLAEVA, V. V., *see* Akademiîa nauk SSSR. ĬAkutskiĭ filial. Revoliûtsionnye sobytiîa 1905–1907 . . . *1956.* No. 49167.

NIKOLAEVSKIĬ, BORIS IVANOVICH, 1887– , *see* Dallin, D. J., *and* B. I. Nikolaevskiĭ. Forced labor in Soviet Russia. *1947.* No. 50423.

53601. NIKOL'SKIĬ, A. P. K voprosu o geograficheskom raspredelenii v vysokikh shirotakh anomal'nogo pogloshcheniîa radiovoln v ionosfere. (Akademiîa nauk SSSR. Doklady, Feb. 1, 1957. t. 112, no. 4, p. 628–31, table, diagrs.) 6 refs. Text in Russian. English translation (with comments) by E. R. Hope issued as: Canada. Defence Research Board. Directorate of Scientific Information Service, T244R, May 1957. 6 p. table, diagrs. ***Title tr.:*** On the high-latitude

geographic distribution of anomalous absorption of radio waves in the ionosphere.

Author's discovery of a second zone of increased magnetic intensity is discussed. It is theorized that this zone coincides with a zone of anomalously high absorption of radio waves in the ionosphere, and that the corpuscles which cause the morning magnetic disturbances are also to a large extent responsible for this absorption. ***Copy seen:*** DLC.

53602. NIKOL'SKIĬ, A. P. Magnitnye vozmushcheniĭa v okolopolĭusnoĭ oblasti Arktiki. (Problemy Severa, 1958, vyp 1, p. 116–32, illus., diagrs., tables.) 8 refs. Text in Russian. ***Title tr.:*** Magnetic disturbances in the circumpolar region of the Arctic.

Major investigations in this field (in particular those of Birkeland and Størmer) are analyzed on the basis of recent observations in the Central Arctic. From the geographical distribution of magnetic disturbances, evidence is found of a second zone of increased magnetic activity within that previously known. The recent data are otherwise in good correlation with adopted theories. ***Copy seen:*** DLC.

53603. NIKOL'SKIĬ, A. P. Nekotorye osobennosti sutochnogo khoda polĭarnykh siĭaniĭ. (Problemy Arktiki, sbornik stateĭ, 1957. vyp 1, p. 85–90, graphs, diagrs.) 8 refs. Text in Russian. ***Title tr.:*** Some features in the diurnal variation of auroras.

Presents extrapolated isolines for the lower latitudes of morning maxima of magnetic disturbances and anomalous absorption of radio waves. Evidence is found that the penetration of solar corpuscles reaches further south than hitherto believed ($\phi \cong 55$–$60°$).

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53604. NIKOL'SKIĬ, A. P. O planetarnom raspredelenii magnitno-ionosfernykh vozmushcheniĭ polĭarnykh siĭaniĭ. (Akademiĭa nauk SSSR. Doklady, July 1, 1957. t. 115, no. 1, p. 84–87, diagrs.) 9 refs. Text in Russian. English translation (with comments) by E. R. Hope, issued as: Canada. Defence Research Board. Directorate of Scientific Information Service, T266R, Oct. 1957. 6 p., diagrs. ***Title tr.:*** The world-wide distribution of magneto-ionospheric disturbances and auroras.

Location of the four Størmer zones of augmented proton incidence is discussed on the basis of observational data. The analysis shows that Størmer's zone D coincides with the author's second zone of increased magnetic activity (*supra*) except for a longitudinal discrepancy of 50° in the positions of the zones' major axes. ***Copy seen:*** DLC.

53605. NIKOL'SKIĬ, G., *and others.* Notes on recent Atlantic salmon investigations in the USSR. (International Council for the Exploration of the Sea. Journal du Conseil, 1958. v. 23, no. 3, p. 434–39, tables.)

Contains information on total catches of salmon in Russian northern waters (in 1956: 10,000 cwt.); investigations by the Institute of Freshwater Fisheries (contributed by V. Ivlev) on types of spawning grounds, number of eggs, natural hatching losses, survival, etc.; investigations by the Polar Institute of Marine Fisheries and Oceanography (contributed by I. Lagunov and V. Asbelov) on river stocks and their age groups, year-to-year fluctuations, etc.; and investigations of the Pechora State Preserve (contributed by M. N. Vladimirskaĭa) on conditions in the Pechora regarding spawning areas, migrations, size, tagging, etc., and acclimatization experiments with Barents Sea salmon. ***Copy seen:*** DLC.

53606. NIKOL'SKIĬ, G., *and* **A. KELEĬNIKOV.** Po Évenkii. (Okhota i okhotnich'e khozĭaĭstvo, June 1958. god 4, no. 6, col. plates inserted between p. 32 and 33.) Text in Russian. ***Title tr.:*** In Evenki Land.

Artists' drawings made in the Evenki (Tungus) National District of Krasnoyarsk Province: Tungus hunter, sables, reindeer, banks of the Podkamennaya Tunguska River, etc. ***Copy seen:*** DLC.

53607. NIKOL'SKIĬ, G., *and* **A. KELEĬNIKOV.** V Évenkii. (Okhota i okhotnich'e khozĭaĭstvo, Nov. 1958. god 4, no. 11, p. 5–16, illus.) Text in Russian. ***Title tr.:*** In the Evenki District.

Artists recount experiences of a winter trip from Moscow to Krasnoyarsk, thence by air via Baykit to Poligus, a settlement on the Podkamennaya Tunguska River, where they purposed painting and sketching. They visited the Lenin collective farm at Poligus and its sable-trapping hunters deep in the taiga. Illus. by authors' drawings, including a general view of Poligus.

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53608. NIKOL'SKIĬ, N. P. Obzor literatury po ėtnografii, istorii, fol'kloru i ĭazyku khantov i mansi. (Sovetskaĭa ėtnografiia. Sbornik stateĭ, 1939 no. 2, p. 182–207.) Text in Russian. ***Title tr.:*** Review of literature on ethnography, history, folklore and language of the Ostyaks and Voguls.

Lists and reviews 306 Russian publications printed between 1840 and 1937.

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53609. NIKONOV, A. A. Mikronarusheniia v vodnoledникovykh otlozheniiakh na zapade Kol'skogo p-ova. (Akademiia nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiia, 1958, no. 3, p. 43–45, illus.) Ref. Text in Russian. ***Title tr.:*** Micro-dislocation in the aqueo-glacial deposits in western Kola Peninsula.

Reports on eskers, fluvial deltas, outwash fans, kames and other aqueo-glacial features in the upper Lotta River basin (approx. 68°45′ N. 31°50′ E.) and adjacent areas; and describes occurrences of miniature (ranging from a few cm. to a m.) flexures, dislocations of layers or other deformations, with illus. of some examples. They are believed to have been caused by thawing of fossil ice in the postglacial period.

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53610. NIKONOV, MIKHAIL NIKOLAEVICH, *and others.* Agrokhimicheskaia kharakteristika torfov v sviazi s ikh ispol'zovaniem v sel'skom khoziaĭstve. (*In:* R.S.F.S.R. Glavnoe upravlenie torfianogo fonda. Sbornik stateĭ . . . 1956, p. 101–132, diagrs., tables.) 62 refs. Text in Russian. *Other authors:* A. A. Grebenshchikova, TS. I. Minkina, G. V. Golgofskaia, and I. S. Boiarkina. ***Title tr.:*** Agrochemical characteristics of peats in connection with their utilization in agriculture.

Rational large-scale use of peat and its composts as fertilizers is described in detail and illustrated by graphs; 18 types of peat are examined for characteristics affecting vegetational properties. Effects of pure ventilated peat and its composts with manure, phosphoric and lime ingredients are analyzed. Agrochemical indexes of peat (life-stimulating effects on vegetation) are discussed: its improvement of physical and chemical properties of soils includes increase of humus substances essential to vegetation and microorganisms. The agrochemical characteristics are evaluated on the basis of the following coordinated data: botanic composition, degree of decomposition, ash content, acidity (pH = 2.8–7.5) content of: nitrogen (0.8–3.8%), calcium (5%), phosphorus (8%), iron (3.0%), sulphur (0.5–10%), mobile aluminum. Positive and negative effects of these components, (particularly of acidity and mobile aluminum and their neutralization) are discussed with reference to specific conditions.

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53611. NIKONOV, MIKHAIL NIKOLAEVICH. O roli torfonakopleniia v formirovanii mezorel'efa sushi. (*In:* R.S.F.S.R. Glavnoe upravlenie torfianogo fonda. Sbornik stateĭ . . . 1956, p. 200–206, illus.) 13 refs. Text in Russian. ***Title tr.:*** Role of peat accumulation in formation of meso-relief of the land.

Gradual peat accumulation is discussed in relation to changes in the general land profile. The surface may be lowered 2–3 m. by marshland drainage as the water content may be as high as 90–97%. Growth of peat is estimated as approx. 1 m. per thousand years; it requires study as a special type of geomorphic process. ***Copy seen:*** DLC.

NIKONOV, MIKHAIL NIKOLAEVICH, *see also* Neĭshtadt, M. I., *and* M. N. Nikonov. Torfianye mestorozhdeniia . . . *1958.* No. 53530.

53612. NIKSO-NIKOCHIO, N. Les i fauna. (Okhota i okhotnich'e khoziaĭstvo, June 1958. god 4, no. 6, p. 26–28, illus.) Text in Russian. ***Title tr.:*** Forest and fauna.

Discusses ecological interrelation of forest and fauna: role of birds in forest growth and propagation of fruit-bearing shrubs; cutting in northern forests and penetration of aspen into coniferous forests extends the area of the elk and contracts the area of wild reindeer and squirrel, etc. ***Copy seen:*** DLC.

53613. NIKULIN, V. I. Intensivnost' sinteza belkov organov i tkaneĭ pri gipotermii. (Éksperimental'naia khirurgiia, Jan.–Feb. 1957. god 2, no. 1, p. 55–60, illus.) 2 refs. Text in Russian. Summary in English. ***Title tr.:*** Rate of protein synthesis in organs and tissues during hypothermia.

Account of investigations on rabbits with the aid of radio-active isotopes. Protein synthesis was lowered during hypothermia in all organs and tissues studied, except in the liver. In the

myocardium the decrease was slight. In most cases there was no change in the correlation of rate figures in the organs and tissues. ***Copy seen:*** DNLM.

NIKULIN, V. I., *see also* Kokosov, N. M., *and others.* Khanty-Mansiĭskiĭ natsional'nyĭ okrug . . . *1956.* No. 52358.

53614. NILSSON, DAVID. Neue und alte Amphicteniden. Göteborg, Elander, 1928. iv, 96 p. illus. (Göteborgs k. vetenskaps- och vitterhets-samhälle. Handlingar, 4. följden, bd. 33, no. 4) Approx. 160 refs. Text in German. ***Title tr.:*** New and old *Amphictenidae.*

Following a morphological and taxonomic outline of these bristleworms and notes on anatomy and physiology, 23 species are described, five of them new. Four or five species are arctic, but none of them new. Morphology, anatomy, habitat, distribution, etc. are noted.

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53615. NILSSON, GUNNAR. Zur Flechtenflora von Ångermanland. (Arkiv för botanik, 1932. bd. 24, no. 3, p. 1–122.) Text in German. ***Title tr.:*** A contribution to the lichen flora of Ångermanland.

Contains a brief survey of the lichen flora of this province in northeast Sweden, and of investigations prior to the author's trip in 1930. The botanical aspects are treated and an annotated list of species given with distributional data, notes on habitat, and descriptions of a few new species. ***Copy seen:*** DA.

53616. NILSSON, SVEN. On some Swedish freshwater Hyphomycetes; preliminary notes. (Svensk botanisk tidskrift, July 2, 1958. bd. 52, häfte 2, p. 291–318, 14 illus.) 42 refs.

Twenty-one species of these aquatic fungi are described; among them *Tetracladium marchalianum* from Torneträsk and *Alatospora acuminata,* Laksjön, Abisko. ***Copy seen:*** DA.

53617. NILSSON, TORE. Better, bigger dams; the Swedish contribution. (Engineering news-record, Sept. 11, 1958. v. 161, no. 11, p. 60–66, illus., diagrs., map.)

Reviews construction methods and designs of major Swedish hydro-power dams, five of them in the far North: Suorva, Porjus, Harsprånget, Ligga, and Messaure. Earthfill and rockfill dams are favored; a thin core of concrete or wood provides safeguard during the stabilization period. A wet-fill method, involving compaction of the moraine at a water content near the liquid limit of the material, is widely used. Most constructions call for specially designed log flumes to conduct floating timber past the dams. Advanced construction methods have reduced costs by 50% over the last ten years. Dam construction involves abandonment of salmon fishery in rivers, and its increase in the sea.

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NILSSON, TORE, *see also* Sundius, S. Vattenkraftsutbyggnaden. *1957.* No. 55231.

53618. NINIVAARA, K. Årsavdunstningen i Finlands vattenområden. (Tekniska föreningen i Finland. Förhandlingar, Jan. 1954. årg. 74, nr. 1, p. 12–16, table, diagrs. map.) 11 refs. Text in Swedish. ***Title tr.:*** Yearly evaporation in the drainage areas of Finland.

Contains tabulated data on average precipitation for the summer and winter periods, correction of these values for the years 1911–40, average temperature April-October, and discharge and average evaporation 1911–40 for 40 drainage areas in Finland. Yearly evaporation in the south is about 350 mm. and decreases northward to 100 mm. at the Pasvik River, Virtaniemi. Average evaporation 1911–1940 is about 50% of the precipitation in southern and 25% in northern Finland. These data are discussed.

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53619. NØIS, DANIEL N. Villreinen på Svalbard. (Polarboken 1958, p. 45–57, illus.) Text in Norwegian. ***Title tr.:*** Wild reindeer in Svalbard.

Contains a general description of this animal and its habitat, based on several wintering expeditions and other visits (writer is a hunter). Climatic conditions are often unfavorable and intensive hunting has reduced the stocks. Its hunting has been prohibited since 1925 but stocks have not increased as expected, due probably to infringement of regulations. An incident related seems to indicate that a reindeer crossed over the ice from Novaya Zemlya in 1911.

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53620. NOLI, S., *and others.* Comportamento del quadro elettrolitico nell' ipotermia artificiale. (Archivio di fisiologia, 1957. v. 57, fasc. 4, p. 351–58, tables.) 20 refs. Text in Italian. Sum-

mary in English. *Other authors:* G. C. Maggi *and* R. B. Bevacqua. ***Title tr.:*** Condition of the electrolyte level in artificial hypothermia.

Account of investigation of dogs at normal, 30°, and 20° C. temperatures. Na^+, K^+, Ca^{++}, and Mg^{++} of the plasma were recorded. No significant changes were observed at the different temperatures. ***Copy seen:*** DNLM.

NOLI, S., *see also* Fumagalli, B., *and others.* Comportamento del cuore isolato . . . *1957.* No. 51027.

NOLI, S., *see also* Maggi, G. C., *and* S. Noli. Comportamento del quadro elettrolitico . . . *1957.* No. 53043.

NOLI, S., *see also* Maggi, G. C., *and others.* Modificazioni dell' equilibrio acido-base . . . *1957.* No. 53044.

53621. NOOTBAAR, WILHELM. Polar-Motorschiff "Thala Dan." (Schiff und Hafen, Dec. 1957. Jahrg. 9, Heft 12, p. 1064–66, illus., plates.) Text in German. ***Title tr.:*** Polar motor vessel *Thala Dan.*

Describes 2,150 t. dw. cargo vessel recently delivered to the J. Lauritzen Co., Copenhagen, by Aalborg Vaerft A/S. It is strengthened for navigation in ice, has diesel engines of 2,020 i. hp., and makes 12.5 knots. Provision is made for 12 passengers, or 36 with 1,950 t. dw. cargo. ***Copy seen:*** DLC.

53622. NORD-NORGES NAERINGSLIV, produksjon og handel; utgaven 1954–55. Oslo, Halvorsen & Larsen, 1954. 447 p. illus., maps, diagrs., tables. Text in Norwegian. ***Title tr.:*** North Norway's industries, production and trade; 1954–55 edition.

Trade directory and survey, first of a planned series of such publications on Norway's three northernmost counties: Nordland, Troms, and Finnmark; prepared in cooperation with the "Utbyggingsfondet for Nord-Norge" (the Development Fund for North Norway). Basic information is provided in some 25 short articles by public officials on most phases of economic activity in the area: fishery, agriculture, forestry and the wood industry, mining, the dairy, construction, chemical, textile, food, iron and metal, etc. industries, tourism, trade, etc., together with description of communications, electric power, water supplies, mineral resources, etc. Activities of the Development Fund are outlined, also educational facilities provided by trade schools in North- and South Norway. Advertisements of the informative type accompany these articles with data on the companies' origin and development, assets, range of products, etc. A comprehensive directory of public offices and officials with addresses, telephone, is appended (p. 367–97), also an index to the companies represented by advertisements (p. 399–418), and a products index (p. 421–43).

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53623. NORD- OG SØR-NORSK NAERINGSLIV; fiskeindustri, fiskerier, produkjon og handel: II. utgaven, 1955–56. Oslo, Halvorsen & Larsen, 1956? 352 p. illus., maps, diagrs., tables. Text in Norwegian and English. ***Title tr.:*** North and South Norwegian industries; fish processing industry, fisheries, production and commerce. 2nd edition 1955–56.

Second of a series of informative publications on Norwegian industries, this volume surveys in some 25 articles (several in English as well as Norwegian) by public officials, most phases of the country's fisheries industry. Legal matters, organization, equipment and methods, research, sales organization and export, processing plants, future expansion requirements in the North, etc., are dealt with, also salmon fishery in the North, sealing, and whaling. Scandinavian and international conferences on fishing and whaling are reviewed. Production statistics are included, also a directory of processing plants, and an index to products not represented in the first edition; as in the latter (*supra*), advertisements are of the informative type. ***Copy seen:*** DI.

53624. NORDENSKIÖLD, HEDDA. Cyto-taxonomical studies in the genus *Luzula,* I; somatic chromosomes and chromosome numbers. (Hereditas, June 1951. bd. 37, häfte 3, p. 325–55, 6 illus., 5 tables.) 31 refs.

Contains results of cytological investigation of 36 species of *Luzula,* at least seven native to northern Scandinavia, Alaska and northern Canada. About one-third of investigated species have 12 chromosomes of equal size in the nucleus. Three different kinds of chromosomal deviation from the standard pattern have been traced: an ordinary type of polyploidy (tetraploids, hexaploids or octoploids); a special type of polyploidy in

which the chromosome size regularly decreases when the number of chromosomes increases; chromosome races of certain species with a particular type of aneuploidy, which has been interpreted as a half completed endonuclear polyploidy. The endonuclear polyploidy or its related type of aneuploidy is found in all three subgenera of *Luzula*. As a plausible explanation of these chromosomal deviations a regularly acting fragmentation seems to be the most likely. ***Copy seen:*** DLC.

53625. NORDENSKIÖLD, HEDDA. Cyto-taxonomical studies in the genus *Luzula*, II; hybridization experiments in the compestris-*multiflora* complex. (Hereditas, 1956. bd. 42, häfte 1–2, p. 7–73, 9 illus., 19 tables.) 13 refs.

Contains cytological data on species of the complex, including *L. groenlandica* and some of its hybrids occurring in northern Canada, referred to different levels of polyploidy, from the diploid to the octoploid level (table 2). The true diploids have 2n=12. The taxonomical units of the diploid level are all easily hybridized (tables 3–8) and the fertility of the first and second generations is fairly good (tables 18–19). All the taxonomic units of the tetraploid level cross easily. Hybridization between species belonging to different levels of polyploidy is possible only between the tetraploid and hexaploid or between the hexaploid and the octoploid level (table 15). Hybridization between the endonuclear polyploids is possible when they belong to the same level of polyploidy. It has been found that the species belonging to the diploid level are more easily crossed and the hybrids more fertile than is the case with the hybrids between the tetraploid units. The polyploids of the complex seem to be more variable than the diploids. From the data obtained, an attempt has been made to formulate a probable path of evolution of taxonomical units of the complex investigated. ***Copy seen:*** DLC.

53626. NORDENSKIÖLD, HEDDA. Hybridization experiments in the genus *Luzula*, III; the subgenus *Pterodes*. (Botaniska notiser, 1957. v. 110, no. 1, p. 1–16, 2 illus., 4 tables.) 9 refs.

Seven species of the subgenus *Pterodes*, including *L. rufescens* from northeastern Asia and Alaska, were studied and hybrids were obtained in all possible cross combinations. The F_1 hybrids are usually almost or completely sterile except the one between *L. forsteri* and *L. luzulina*. The hybrids between *L. johnstonii* and the European species have a relatively high fertility. Europe seems to be the center of the species of *Pterodes*. ***Copy seen:*** DLC.

53627. NORDERHUS, H. Skogbruket i Nord-Norge; statens skoger. (Skogbrukeren, Apr. 15, 1954. årg. 29, nr. 8, p. 113–16, illus.) Text in Norwegian. ***Title tr.:*** Forestry in North Norway; national forests.

Survey of the three northern provinces, Nordland, Troms and Finnmark, with emphasis on national forests. Nordland south of Saltfjellet and the Arctic Circle belongs botanically to Nord-Trøndelag and the coniferous forests consist of spruce. North of the Arctic Circle, Norway has 170,000 hectares (ca. 425,000 acres) in pine. In Nordland and Troms, natural regeneration follows upon thinning out old trees. Because of the climatic conditions and northern location, pine does not grow well in Finnmark, and natural regeneration is poor; it is used locally, chiefly for building material. Northern Norway has half of the hardwood of the entire country, chiefly birch. Since World War II forest cultivation has been strengthened by better care of existing forests and by planting of conifers in earlier hardwood areas. ***Copy seen:*** DA.

53628. NORDERHUS, H. Skogstuer i Aust-Finnmark og Lyngen. (Skogbrukeren, Mar. 15, 1954. årg. 29, nr. 6, p. 85–86.) Text in Norwegian. ***Title tr.:*** Forest huts in East Finnmark and Lyngen.

The forest inspector for North Norway shows, in response to criticism, that the huts in East Finnmark (sparsely populated, with temperature to −40° C.) are satisfactory; in Lyngen (69°36′ N. 20°10′ E.), a well-populated area where forestry workers live at home, two huts were built to accommodate overnight travelers. ***Copy seen:*** DA.

53629. NORDHAGEN, ROLF, 1894– . Some new observations concerning the geographic distribution and the ecology of *Arenaria humifusa* Wg. in Norway, as compared with *Arenaria norvegica* Gunn. (Botanisk tidsskrift, 1954. bd. 51, p. 248–62, 5 illus., 2 tables.) 16 refs.

A comparative study of the two *Arenaria* species and some 60 other scree plants associated with them in Lule Lappmark and northern Norway. Substrate

and its physical and chemical condition, habitat, ecology, micro-distribution and occurrence, geographic distribution, taxonomy, etc. are discussed.

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53630. NORDSTRÖM, GÖRAN. Die Vogelberingung in Finnland im Jahre 1955. (Societas pro fauna et flora fennica. Memoranda, 1955–1956, *pub.* 1957. no. 32, p. 62–98.) Text in German. ***Title tr.:*** Bird banding in Finland in 1955.

Lists volunteers and banding places, also the recoveries: 149 species (24,962 bands) including some localities in Finnish Lapland. ***Copy seen:*** DLC.

53631. NORDSTRÖM, GÖRAN. Die Vogelberingung in Finnland im Jahre 1956. (Societas pro fauna et flora fennica. Memoranda, 1956–1957, *pub.* 1958. no. 33, p. 69–108.) Text in German. ***Title tr.:*** Bird banding in Finland in 1956.

Lists volunteers and banding places, also the recoveries: 149 species (30,937 bands) including some localities in Finnish Lapland. ***Copy seen:*** DLC.

NORDSTRÖM, GÖRAN, *see also* Välikangas, I., *and* G. Nordström. Die Vogelberingung . . . 1954. *1957.* No. 55700.

53632. NORDSTRÖM, HUGO FREDRIK, 1888– , *and others.* Model tests with icebreakers. Göteborg, Gumpert, 1952. 59 p. illus., graphs, tables. (Gothenburg, Sweden. Statens skeppsprovningsanstalt. Meddelanden, nr. 20.) Refs in text. *Other authors:* H. Edstrand *and* H. Lindgren.

Describes limited experiments with paraffin wax scale models of icebreakers of 2,220 and 4,350 t. displacement, equipped with two aft and one fore, and two aft and two fore propellers. The variously pitched propellers are described and illustrated; tests were made in open water only, no attempt was made to create turbulence or ice conditions. Data on friction, propeller and propulsion efficiency, effective and shaft power, etc., are tabulated and graphed; wake fractions and thrust deduction factors are calculated. ***Copy seen:*** DLC.

53633. NORDSTRÖM, L. Frörfrågan i Norrlands höjdlägen. (Skogen, *Stockholm,* Oct. 15, 1952. årg. 39, nr. 10*, p. 108.) Text in Swedish. ***Title tr.:*** The question of seed in high altitude areas in Norrland. Summary of lecture given at the Swedish Forestry College.

Shortage of seed due to frequent inability to ripen, and the poor viability of seedlings during the first period of growth in this area are explained. Warmth, moisture and light are required for seed growth. Author's experiments with illumination of seed prior to sowing to improve viability are outlined and the effects of light on seed are described in detail. ***Copy seen:*** DA.

53634. NORÉN, S. M. The nominal cleavage strength of steel and its importance for welded structures. (Shipbuilder and marine engine builder, Apr. 1957. v. 64, no. 589, p. 244–47, graphs.)

Discusses the application of nominal cleavage strength as a practical factor in the interpretation of Charpy V-notch and yield-strength tests, with special attention to the initiation and propagation of fractures caused by external loads and welding stress on welded structures. Steel, it is emphasized, cannot have both a high nominal cleavage strength at low temperature and strong energy-absorbing properties on fracture at higher temperatures. Graphically presented, the requirements of the nominal strength curve for weld metal (steep curve) differs from that for steel (flat curve).

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53635. NORIN, B. N. K kharakteristike chosenievykh soobshchestv *Chosenia macrolepis* Ass., na krainem severo-zapade ikh areala. (Botanicheskiĭ zhurnal, June 1958. t. 43, no.6, p. 847–50, map.) 8 refs. Text in Russian. ***Title tr.:*** On the characteristics of *Chosenia macrolepis* Ass. communities in the extreme northwest of the distribution area.

Reports on the ecology of the bryophyte *Chosenia macrolepis* found on the Kuramis River, a right tributary of the Lena (Kharaulakhskiy Range, 70°45′ N. 127° 45′ E.) in 1956, the northernmost locality known in Yakutia. About 40 herbaceous plants appear in the first stand of associated plants. The dominants of the northern variant of Chosenietum include *Anemone richardsonii, Galium boreale* and *G. verum.* ***Copy seen:*** DLC.

53636. NORIN, B. N. K poznaniiû semennogo i vegetativnogo vozobnovleniiâ drevesnykh porod v lesotundre. (Rastitel'nost' Krainego Severa SSSR i ee osvoenie, 1958. vyp 3, p. 154–244, illus., tables.) Over 160 refs. Text in Russian. ***Title tr.:*** On the generative

and vegetative reproduction of trees in the forest-tundra.

Reports results of studies on reproduction of *Larix sibirica, Picea obovata, Betula pubescens* and *B. tortuosa* carried out in the Nyda River basin on the Taz Peninsula ("Malyy Yamal,") in 1953–55 (cf. No. 47076). Literature on reproduction of forests in the far North of the U.S.S.R. and, partly, in northern Finland, is surveyed (p. 156–65); the geomorphology, soil and climate of area, 66°15′–66°45′ N. 72°50′–74°20′ E. are outlined; vegetation and typical plant associations of the forest tundra are described (p. 165–92). Tree reproduction by seed (p. 192–231) and vegetative (p. 231–38) is discussed in detail, covering all biological stages. The adverse climatic and soil conditions hamper all reproduction, but in the larch, seed gave better results, and *Betula tortuosa* favored the vegetative method. Similar studies are required in other regions of the U.S.S.R. for development of effective methods for afforestation of treeless tundras. The general index at end of the volume includes the plants cited in this paper. ***Copy seen:*** DLC.

NORLING, GUNNAR, *see* Hjulström, F., *and others.* Mikkaglaciären . . . *1957.* No. 51733.

53637. NORMAN, CARL. Peter Freuchen. (Norseman, Jan.–Feb. 1958. v. 16, no. 1, p. 49–50).

Obituary of this Danish traveler and writer, noting his main explorations.

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NORRIS, A. W., *see* Fritz, M. A., *and others.* Stratigraphy . . . Williams Island . . . *1957.* No. 50998.

53638. NORSK FORSTMANNSFORENING. Festskrift: Norsk forstmannsforenings 50 års jubileum, 1898–mars–1948. Oslo, Oscar Andersens boktryk. 114 p. 29 illus. Refs. in text. Text in Norwegian. ***Title tr.:*** Festival publication: the Norwegian Foresters' Association's 50-year jubilee, 1898–March–1948.

Contains ten articles on the history and organization of the Association, its outstanding members, development of forest science in Norway, technical advances, professional training and opportunities, etc. Regional accounts of the forester's life and work include one, by J. G. Juul (p. 79–84), on North Norway, where most of the forest, state owned, has had foresters' attention since 1860. The local climate and topography, different from the rest of the country, conditions and practices in earlier times: use of reindeer as draft animals, of unskilled labor in hand-sawing lumber, etc. are sketched. Work of J. M. Norman (cf. No. 12519) at Alta, 1861, and of others is cited as helping establish standards.

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53639. *NORSK HVALFANGST-TIDENDE.* Hans Bogen. (Norsk hvalfangsttidende, Dec. 1957. årg. 46, nr. 12, p. 681–82.) Text in Norwegian and English.

Contains biographical notes on the Norwegian author, Hans S. I. Bogen, 1899–1957. His writing was connected with Sandefjord, south Norway, and its economic life, chiefly whaling, of which he had unique knowledge. His main works are listed. ***Copy seen:*** DLC.

53640. *NORSK HVALFANGST-TIDENDE.* The Norwegian small whale hunting in the seasons 1953 and 1954. (Norsk hvalfangst-tidende, Mar. 1955. årg. 44, nr. 3, p. 135–38, map, tables.) Text in Norwegian and English.

Presents data from Norwegian and Spitsbergen waters and the Barents Sea. Geographical distribution of the catches (total: 2,492 in 1953, 3,517 in 1954), their size by month, value (2,914,862 and 6,123,816, Norw. kr.), also number of animals/year 1938–1954 are tabulated.

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53641. NORSK MYRSELSKAP. Meddelelser. *Oslo.* 1, 1903– , *in progress.* Text in Norwegian. ***Title tr.:*** The Norwegian Bog Association. Communications.

Issued in six numbers (approx. 30 p. each) a year, dealing with the investigation, improvement, and productivity of bogland. Articles are published on areal inventories; peat production, its heat content, drying methods, transport, household use, and commercial value; bog drainage, soil qualities, mineral content, afforestation and cultivation, fertilization, crop response; increase of agriculture and forest area, and soil conservation. Annual reports include statistics on production and sale of peat from individual provinces, allocation of public and association funds, etc. Information on the three arctic provinces of Norway which include substantial bogland areas, appears throughout. Articles of special arctic interest are abstracted under their authors' names in this Bibliography. ***File seen:*** DA.

53642. NORSK MYRSELSKAP. Her er saedejord nok. (*Its:* Meddelelser, Feb. 1957. årg. 55, nr. 1, p. 1–5.) Text in Norwegian. ***Title tr.:*** Here is seeding ground enough.

A general inventory is made of possibilities for increasing the cultivated area and agricultural production in Nordland, northern Norway. Intensive cultivation of berries, vegetables, potatoes, pasture, hay, and forest is discussed. Modernization of farms and agricultural education are required for men of the region who combine farming with fishing and forest work. Financing and transportation are critical factors in expanding Nordland agriculture. ***Copy seen:*** DA.

53643. NORSK MYRSELSKAP. Sitkagran i kyststrøkene. (*Its:* Meddelelser, Dec. 1955. årg. 53, nr. 6, p. 185–86.) Text in Norwegian. ***Title tr.:*** Sitka spruce in the coastal regions.

Alaska spruce planted from seed in Norway in 1923 and transplanted in 1927 to coastal locations in Nordland, is reported: In 1951 and 1954 fertile seed was gathered from these spruce which require good, moist soil, and high precipitation and air humidity. In windy locations they fare better than the native spruce. Annual growth and supervised planting are discussed. ***Copy seen:*** DA.

53644. *NORSK SKOGBRUK.* Fra landbruksdepartementet: småviltjakt i saerskilt matrikulerte statsskoger, jaktlovens § 18. (Norsk skogbruk, May 1957. årg. 3, nr. 10, p. 291.) Text in Norwegian. ***Title tr.:*** From the Department of Agriculture: small-game hunting in individually registered state forests, the Game Act, section 18.

This section gives the forest owner the right to limit the hunting season, methods, and licenses. The effect of the law in northern Norway, where much of the registered forest land is state owned, is discussed. ***Copy seen:*** DA.

53645. *NORSK SKOGBRUK.* Furufrøbeholdningen i Troms så godt som oppbrukt. (Norsk skogbruk, Oct. 1956. årg. 2, nr. 19, p. 620.) Text in Norwegian. ***Title tr.:*** Fir seed supply in Troms practically exhausted.

Increased production of seedlings by local nurseries combined with poor conditions for seed ripening over several years has caused a scarcity of fir seed in this part of northern Norway. Proposal is made to bring in seed from the Inari region of northern Finland.

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53646. *NORSK SKOGBRUK.* Den nye naturvernloven åpner adgang til å opprette virkelige nasjonalparker i Norge; Børgefjellsområdet blir muligens vår første nasjonale villmark. (Norsk skogbruk, June 1955. årg. 1, nr. 3, p. 84–87, illus.) Text in Norwegian. ***Title tr.:*** The new law for protection of nature opens the way to establish real national parks in Norway; the Børge mountain region will possibly be our first national wilderness.

Discussion of the law and its intent with proposal that the first national park (approx. 1200 km.^{2}) be established in the Børge region on both sides of the southern boundary of Nordland province in northern Norway. ***Copy seen:*** DA.

53647. *NORSK SKOGBRUK.* Skogkultur og skogreising i 1956. (Norsk skogbruk, Jan. 1957. årg. 3, nr. 1, p. 13–14, table.) Text in Norwegian. ***Title tr.:*** Silviculture and reforestation in 1956.

Summary is given of forest cultivation and planting in 1955 and allocation of funds for 1956. Of the 73 million trees set out in 1955, 11.3 million were planted in north Norway, exceeding the planting planned to 1960. National support of the program is currently 75% of the total expenditure in that region.

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53648. *NORSK SKOGBRUK.* Skogplanting på Grønland. (Norsk skogbruk, Sept. 1955. årg. 1, nr. 6, p. 230.) Text in Norwegian. ***Title tr.:*** Forest planting Greenland.

Planting of hardy conifers in southern Greenland is discussed and growth compared with that in Denmark. The seedlings were grown in northern Denmark, 15,000 having been supplied in 1953. But if forestry is to be developed in Greenland, the seedlings should be sprouted and grown there.

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53649. *NORSK SKOGBRUK.* Skogplanting på 71 grader nord. (Norsk skogbruk, Apr. 1955. no. 1, p. 11.) Text in Norwegian. ***Title tr.:*** Forest planting at 71° N.

Notice of government decision to underwrite 75% of the cost of establishing a forest demonstration plot on the school-

grounds at Havøysund, West Finnmark. At present the island, Havøygavlen, is unforested. ***Copy seen:*** DA.

53650. *NORSK SKOGBRUK.* Sulfatfabrikk anlagt i Varanger. (Norsk skogbruk, Feb. 1957. årg. 3, nr. 3, p. 62.) Text in Norwegian. ***Title tr.:*** Sulphate factory in Varanger.

In Jan. 1957, Finnish and Norwegian delegations met in Oslo to discuss economic cooperation in utilization of forest resources of the Inari district of northern Finland. A sulphate cellulose factory in Varanger, northernmost Norway, development of the road system, and combined financing and management were considered. A joint commission is to study costs. Continuous operation, utilizing 30–40 thousand tons of forest production per year, is planned.

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53651. NORSKE INSTITUTT FOR KOSMISK FYSIKK. The auroral observatory at Tromsø (ϕ = 69°39′.8 N., λ = 18°56′.9 E. Gr.), observations 1955, 1956. Bergen, a/s John Grieg, 1957, 1958. 2 v., each 31 p., tables, diagrs. (*Its:* Publikasjoner nr. 40, 41.) For observations 1930–1954, see No. 12539, 31008–31012, 41635, 47087.

Hourly mean values are tabulated for each month for the magnetic elements of declination, horizontal intensity, and vertical intensity. K-indices for three-hour interval and daily sum of K-indices are given for Tromsø and Bjørnøya (74.5° N. 19.2° E.). Monthly and annual mean values of the magnetic elements and results of ionospheric observations are included. Tabulated data on ozone values are given covering nine months at Tromsø and seven months at Longyearbyen (78.2° N. 15° E.), Vestspitsbergen. ***Copy seen:*** DLC.

NORTH ATLANTIC TREATY ORGANIZATION, *see* Polar Atmosphere Symposium . . . 1956 . . . *1958.* No. 54042.

53652. NORTHCOTE, T. G. Effect of photoperiodism on response of juvenile trout to water currents. (Nature, *London,* May 3, 1958. v. 181, no. 4618, p. 1283–84, illus.) 2 refs.

Account of experiments with fingerlings kept at 10°, 15° and 20° C. and exposed to 8 hr. light and 16 hr. darkness or vice versa. The response to water currents varied considerably between the different groups depending largely on their preceding exposure to light. ***Copy seen:*** DLC.

53653. NORTHERN CANADA POWER COMMISSION. Annual report for the fiscal year ended March 31, 1957, 1958. Ottawa, 1957, 1958. 2 v. illus., maps incl. 1 fold. In sequence to No. 47095.

Summarizes operations of 1948–1958; reports on power produced at the Snare River, Fort Smith, Mayo River and Fort Simpson plants; construction progress on a 15,000 hp. hydroelectric plant at Whitehorse Rapids scheduled for completion in Nov. 1958 and a utility project at the new site of Aklavik (Inuvik) to be completed in May 1959; projects being considered at Moose Factory and Frobisher Bay; financial condition of existing plants with itemized statements. The 1957 report notes amendment to the Northwest Territories Power Commission Act, approved Aug. 14, 1956, changing the Commission's name, and enabling extension of its operations throughout Canada. ***File seen:*** DLC.

53654. *NORTHERN MINER.* Canada planning wide research on arctic continental shelf. (Northern miner, Dec. 11, 1958. v. 44, no. 38, p. 17, 21)

Describes plan for scientific parties to study the 1,500 miles of arctic continental shelf, under auspices of the Dept. of Mines and Technical Surveys. Topography and geologic character of ocean floor, underlying structures, sea water, fish and marine mammals, etc. are to be investigated; geophysical stations are to be set up at Alert and Mould Bay. Studies begin in 1959–1960 on a 300-mile area centered on Isachsen, Ellef Ringnes Island. Heavy equipment goes a year in advance by ship to Resolute, thence by air to Isachsen, other equipment and personnel by air from Churchill early in the spring field season.

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53655. *NORTHERN MINER.* Quebec proceeding on record program of geological work. (Northern miner, Aug. 21, 1958. v. 44, no. 22, p. 18.)

Lists geological field parties at work for Quebec Dept. of Mines during 1958. Of 49 projects, eight are in the Ungava area, three are in the Mt. Wright-Mt. Reed region. Continuing examination of mineral prospects and investigation of water supply problems are also part of the program. ***Copy seen:*** DGS.

53656. NORTHROP, JOHN HOWARD, 1891– . The effect of ultraviolet and white light on growth rate, lysis and

phage production of *Bacillus megatherium*. (Journal of general physiology, May 1957. v. 40, no. 5, p. 653–61, illus.) 23 refs.

Account of experiments which showed that exposure to ultraviolet rays produces a toxic (mutagenic) substance inside the bacterial cell. This substance is inactivated by white light. Lysis due to UV exposure is prevented by white light, provided the exposure to UV is brief. ***Copy seen:*** DNLM.

53657. NORTON, EDWARD. Catalogue of the described Tenthredinidae and Uroceridae of North America. (American Entomological Society. Transactions, 1868. v. 1, p. 31–84, 193–280.)

Includes at least 15 species native to Alaska and northern regions of Canada. ***Copy seen:*** DA.

NORTHWEST TERRITORIES POWER COMMISSION. *See* Northern Canada Power Commission.

53658. NORWAY. FISKERIDIREKTORATET. Årsberetning vedkommende Norges fiskerier. Bergen, 1894– , *in progress*. Issued by Departementet for det indre 1894–1899; Norges fiskeristyrelse 1900–1905; subsequently by Fiskeridirektoratet. Text in Norwegian. ***Title tr.:*** Annual report of the Norwegian fisheries.

Basic work. *Includes* information and statistical data on catch of commercially important species, fishing conditions and catch results according to provinces or fishing grounds. Regulations, shipping, administrative activities, hatchery reports, finances etc. are reported each year, together with a summary of general conditions and results. Topical and research reports are included, and those of arctic interest are described in this Bibliography under the authors' names. ***Copy seen:*** DLC.

53659. NORWAY. FISKERIDIREKTORATET. Norges fiskerier, 1884– , *in progress*, since 1952 *pub.* in Bergen. Issued yearly in approx. 100 pages, 8 vo., tables. Text in Norwegian. Summary in English. ***Title tr.:*** Norway's fisheries. Produced in the series Norges offisielle statistikk (Official statistics of Norway) during the period 1884–99 by Statistisk sentralbyrå (Central office of statistics) and subsequently by the director of fisheries.

Includes data and information on the fishing off north Norway, East and West Greenland, Bjørnøya and Spitsbergen and in the Barents Sea: cod, halibut, herring, small whales, seals, etc.

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53660. NORWAY. GEOFYSISKE KOMMISJON. Geophysical research in Norway 1955–56, 1956–57. Bergen, John Grieg, 1957, 1958. 20, 21 p. (*Its:* Annual report, no. 6, 7.)

Reports work of 15 organizations and institutions for the period July 1, 1955–June 30, 1957, as for previous years (No. 36500, 47096). New observation stations, research cruises, and extraordinary observations are noted, also work in northern Norway, Svalbard, Bjørnøya, Barents and Greenland Seas, and Norwegian coastal waters. Regular publications of these organizations and individual papers published during the report period, are listed. ***Copy seen:*** DGS.

NORWAY. NORSK POLARINSTITUTT, *see* Orvin, A. K. The placenames . . . supplement . . . *1958*. No. 53787.

53661. NORWAY. SJØKARTVERKET. Tidevannstabeller; tide tables for den norske kyst, 1958. 21. årgang. Oslo, 1957. 66 p. tables. Text in Norwegian and English.

Contains alphabetic list of ports; daily times of high and low water and corresponding heights in cm. for specified standard ports, including in the North: Vardø, Hammerfest, Tromsø, Narvik, Bodø; harmonic tidal constants for the same ports; tidal differences for secondary ports (75 north of the Arctic Circle) compared to the standard ports; conversion tables, Norwegian and English ft.-cm. ***Copy seen:*** DN–HO.

53662. *NORWEGIAN SHIPPING NEWS.* M/S "Magga Dan". (Norwegian shipping news, 1956. årg. 12, nr. 23, p. 1301–1302, illus.)

Contains a short description (in English) of this Danish-built passenger and refrigerated cargo vessel intended for service on all seas, but specially designed for navigation and ice-breaking in arctic waters. ***Copy seen:*** DLC.

NOSAL', V. I., *see* Akademiîa nauk SSSR. Obsuzhdenie raboty . . . Kol'skogo filialov. *1958*. No. 49157.

NOSOV, M. M., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Istoriîa ÎAkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957*. No. 49168.

NOVATNEY, DOROTHY, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

NOVICHKOVA, L. N., *see* Kosheleva, I. T., *and* L. N. Novichkova. O pi͡atnistykh tundrakh . . . *1958*. No. 52422.

53663. NOVIKOV, A. Vmeste s russkimi. (Ogonëk, Oct. 1957. god 35, no. 41, p. 20–21, illus.) Text in Russian. ***Title tr.:*** Together with the Russians.

Brief sketch of Yakutia and the Yakuts, stressing the importance of friendship with the Russian people. The poor childhood and present position of Avksentiĭ Egorovich Mordinov, the Yakut scientist, are noted; he translated Marx, Engels and Lenin's works into the Yakut language, became the first rector of Yakutsk University. ***Copy seen:*** DLC.

53664. NOVIKOV, VLADIMIR MIKHAĬLOVICH (KI͡UNNI͡UK URASTYROV), 1907– . Severnai͡a raduga. Moskva, Sovetskiĭ pisatel', 1957. 115 p. Text in Russian. ***Title tr.:*** Northern rainbow.

Russian translation of lyric and descriptive poems written between 1928 and 1956 by this Yakut poet. Biographical notes are appended. ***Copy seen:*** DLC.

53665. NOVIKOVA, I͡U. O surovoĭ prirode i sil'nykh lu͡dakh. (Pioner, Apr. 1958, no. 4, p. 48, col. illus. between p. 48 and 49.) Text in Russian. ***Title tr.:*** Of rugged nature and hardy men.

Discusses the painting of Rockwell Kent depicting northern sea- and landscapes. ***Copy seen:*** DLC.

53666. NOVIKOVA, I͡U. Skvoz' taezhnye debri. (Pioner, Mar. 1957. god 34, no. 3, p. 27–32, illus.) Text in Russian. ***Title tr.:*** Across the impassable taiga.

Describes the field trips of the philologist and folklorist Glafira Makarovna [sic] Vasilevich, her studies and life among various Evenki (Tungus) nomad groups, especially those of the Nizhnyaya and Podkamennaya Tunguska. Her travels by horse and reindeer, wintering in the taiga, etc. are related. The cultural advances of the natives at the present time are contrasted with the illiteracy and primitive living conditions encountered on her first expedition in 1925. ***Copy seen:*** DLC.

53667. NOVIKOVA, KLAVDIĬA ALEKSANDROVNA. Osnovnye osobennosti ėvenskikh govorov I͡Akutskoĭ ASSR. (Akademii͡a nauk SSSR. Institut i͡azykoznanii͡a. Doklady i soobshcheniĭa, 1958. no. 11, p. 185–205.) 6 refs. Text in Russian. ***Title tr.:*** Basic features of the Eveny dialects in Yakut A.S.S.R.

A preliminary report on author's linguistic field studies during her 1953 scientific mission to Yakutia. Of particular interest were the westernmost (Sakkyryr) dialects spoken along the right tributaries of the Lena and in the Yana River basin. These dialects are so divergent from the eastern Eveny or Tungus, basis of the established literary language, that development of a second literary language was petitioned for (unsuccessfully) in 1953. Few grammatical discrepancies were found among all dialects; though phonetic and lexic differences are (in some cases) considerable, the accepted literary language can be understood by most Eveny except those speaking the Sakkyryr dialects. In its 25 years' existence, the literary language has gained little acceptance as spoken language and has not affected the use of local dialects. A division of the Eveny dialects into eastern, western and westernmost (Sakkyryr) is suggested. Most Eveny of Yakutia speak also Yakut but only few know Russian.

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NOVIKOVA, KLAVDIĬA ALEKSANDROVNA, *see also* Avrorin, V. A. Literaturnye i͡azyki . . . *1953*. No. 49443.

53668. NOVOSELOV, VI. Kraĭ pechorskiĭ, pripolʹarnyĭ. (Okti͡abr', Dec. 1957. god 34, no. 12, p. 164–75.) 8 refs. Text in Russian. ***Title tr.:*** The subarctic Pechora country.

Sketches of the industrialization of the Pechora basin: petroleum in the Ukhta region, coal mining in the Vorkuta and Inta basins; the new industrial centers of Ukhta, Izhma (recently renamed Sosnogorsk), Inta and Vorkuta; the wood industry; importance of the Pechora basin in the economy and industry of the North; pioneers of resource development.

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53669. NOVOSIBIRSK. OBLASTNAĬA BIBLIOTEKA. Pisateli Sibiri; kratkiĭ bibliograficheskiĭ ukazatel'. Sostavlen: T. A. Vorob'evoĭ i dr. Novosibirsk, Novosibirskoe knizhnoe izd-vo, 1956. 76 p. Text in Russian. ***Title tr.:*** Siberian writers; a short bibliographic

guide. Compiled by T. A. Vorob'eva and others.

A bio-bibliographic index of 56 Siberian (predominantly Russian) writers. One Komi (Zyryan) is included: Ivan Grigor'evich Istomin; born about 1917 in an Ob' fisherman's family, he is a painter, prose-writer and poet writing in Zyryan, Samoyed (Nenets) and Russian.

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53670. NOVOZHILOV, NESTOR I. Conchostraca du Permien et du Trias du littoral de la Mer des Laptev et de la Toungouzka inférieure. (Centre d'Études et de Documentation paléontologiques. Annales, 1958. no. 26, p. 15–79, illus., plates, sketch maps, tables.) 45 refs. Text in French. ***Title tr.:*** Conchostraca from the Permian and Triassic of the Laptev Sea littoral and the Nizhnyaya Tunguska.

Contains information on the areas investigated: southern shores of the Gulf of Khatanga, littoral of the Laptev Sea, western Taymyr and the right bank of the Nizhnyaya Tunguska. Forms collected are described in taxonomic order, with data on morphometry, location, geological formation, synonymy, etc. The habitat of these crustaceans is outlined, stratigraphic distribution in the Permian and Triassic of northern Siberia is tabulated, and comparisons are made with occurrence in other areas. Alphabetic index of the forms is appended.

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NOWLAN, B. C., *see* National Research Council of Canada. Muskeg research conf. *1957.* No. 53502.

53671. NOWOSAD, F. S. Agricultural research in sub-arctic and arctic Canada. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 100–103, illus.)

Discusses agricultural possibilities on the basis of findings at the Dept. of Agriculture's experimental sub-stations. Results obtained with field and horticultural crops, livestock and poultry at Mile 1019, Alaska Highway (60°45′ N. 137°35′ W.) in Yukon Territory, and with field and horticultural crops at Fort Simpson, Mackenzie District (61°52′ N. 120°21′ W.) are given. The Fort Simpson sub-station is supervising the landscape and garden work at East 3 (Inuvik), the new townsite of Aklavik: two–three years' cultivation are required before permafrost recedes sufficiently for successful growth. The use of plastics for constructing greenhouses and cold frames is under study at the Fort Chimo sub-station in northern Quebec. Possibilities of raising sheep, domestic geese of the Pilgrim brand, and hens are being investigated, also reclamation of the False River tidal flats for agricultural use.

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NOYES, JOHN RUTHERFORD, *d.* 1956, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

NOYES, JOHN RUTHERFORD, *d.* 1956, *see* International Geographical Congress, 1952. Proceedings. *1957.* No. 51939.

53672. NUMEROV, K. Sobol' v Krasnoiarskom krae. (Okhota i okhotnich'e khoziaĭstvo, Mar. 1957. no. 3, p. 23–24, illus.) Text in Russian. ***Title tr.:*** Sable in Krasnoyarsk Province.

Over-hunting of sable in tsarist Russia depleted the stock and in 1935 its hunting was prohibited throughout the U.S.S.R. The stock began to recover and in 1941 hunting was resumed, though restricted. Today sable is abundant in Krasnoyarskiy Kray and a hunter takes 30–100 animals a year; in several areas, the decrease of hunters causes under-hunting and over-population. Measures for increasing the sable catch are discussed.

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NUNDAL, A., *see* Vegard, L., *and others.* Results of auroral observations at Tromsø . . . 1953–1957. *1958.* No. 55774.

53673. NUORTEVA, MATTI. Zur Kenntnis der parasitischen Hymenopteren der Borkenkäfer Finnlands. (Suomen hyönteistieteellinen aikakauskirja, 1957. v. 23, no. 2, p. 47–71, 5 illus., 2 tables.) 42 refs. Text in German. ***Title tr.:*** A contribution to the knowledge of parasitic Hymenoptera of the bark-beetles of Finland.

The study covers 28 species, at least five native to the Kuusamo region and Finnish Lapland. Morphological and biological notes, hosts, distributional data and occasional taxonomic notes are given.

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NUPEN, WILHELM, 1913– , *see* Eriksson, R. Medens friktion mot snö och is . . . *1949.* No. 50780.

53674. NUSSER, FRANZ. Distribution and character of sea ice in the Euro-

pean Arctic. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 1–10, 5 text maps.) 14 refs.

"Sea ice conditions are examined individually for the East Greenland-East Spitsbergen area and the North and Baltic Seas. The ice of the North Polar Sea and that of the East Greenland Current has the same place of origin and owes its formation to the constant cold polar climate. The ice of the North Polar sea forms a pack-ice cover several years old, which belongs to the 'inner polar type' (of Büdel). The ice of the East Greenland and East Spitsbergen Currents is advective ice of the 'polar oceanic type', and although it is still polar ice carried to the South, it can no longer form pack-ice covers due to the strong currents. Bay and fjord ice of the east coast of Greenland represents local ice of the 'polar bay type.' Another form of ice, the 'polar border sea type' is found in the Barents Sea; it is local in origin. Ice in the North and Baltic Seas owes its formation to the strong cooling of the continent and is a seasonal phenomenon with winters rich in ice alternating with those free of ice, depending not so much on temperature depression as on single periods of cold. Types of ice found in these seas, depending on climate, include the 'full maritime type,' and 'half maritime type,' and various transition types."—SIPRE.

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53675. NUSSER, FRANZ. Eine neue internationale Eisnomenklatur. (Deutsche hydrographische Zeitschrift, 1956. v. 9, no. 4, p. 174–82.) Text in German. ***Title tr.:*** A new international ice nomenclature.

"A German version of the World Meteorological Organization's Ice Nomenclature is presented with English equivalents. An alphabetical list of the English terms with German equivalents and definitions is also given."—SIPRE.

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53676. *NUTRITION REVIEWS.* Body reserves at low temperatures. (Nutrition reviews, Jan. 1957. v. 15, no. 1, p. 13–14.)

A summary of advances in recent research of the problem, specifically regarding body weight and cold environment; composition of reserves, including water content, energy balance, utilization of reserves, etc. ***Copy seen:*** DNLM.

53677. *NUTRITION REVIEWS.* Experimental hypervitaminosis A in man. (Nutrition reviews, May 1957. v. 15, no. 5, p. 134–35.)

A review of reports on vitamin A toxicity in experimental animals since 1945, and accidental hypervitaminosis A in man, since 1951. A recent (1956) case of experimental hypervitaminosis in a man is described and discussed in detail.

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53678. NUTT, DAVID C., *and others.* Arctic Institute Greenland Expedition 1958; field report, Oslo, Sept. 1, 1958. 10 p., text map, 3 diagrs. (Arctic Institute of North America. Contract N onr 1138(01) Project ONR 229.) 8 refs. *Other authors:* P. F. Scholander, L. K. Coachman, and W. Dansgaard.

Reports investigation of gas inclusions in glacier ice, and preliminary oceanographic surveys, carried out June 5–Aug. 24, 1958, between Melville Bugt and Brede Fjord, West Greenland, by a ten-man party, headed by P. F. Scholander. Glacier ice samples were analyzed for composition, quantity and pressure of gas, age of ice, salt content, etc. aboard the expedition's vessel, M/S *Rundøy.* Program and methods used are presented, results to be published later.

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53679. NYBELIN, ORVAR. Zur Helminthenfauna der Süsswasserfische Schwedens, I; Phyllodistomen. Göteborg, Elander, 1926. 29 p. illus. (Göteborgs k. vetenskaps- och vitterhets-samhälle. Handlingar, 4. följden, bd. 31, no. 3.) 30 refs. Text in German. ***Title tr.:*** Helminth fauna of Sweden's fresh-water fishes, 1; Phyllodistomea.

A description of seven species of these flatworms, four of them new. Morphometry, anatomy, seasonal and geographic distribution, development, etc. are noted. Known larval forms are also discussed. Some of the hosts are of arctic distribution. ***Copy seen:*** DLC.

53680. NYE, J. F. Glacier mechanics: comments on Professor L. Lliboutry's paper. (Journal of glaciology, Oct. 1957. v. 3, no. 22, p. 91–93.) 5 refs.

Discussion of No. 52874 and alleged inconsistences in Nye's theory of glacier mechanics (No. 36524), with reference to slopes at the center of the Greenland icecap (northern part) and the finite gradient of slopes at the snouts of glaciers. Lliboutry's formulae, methods and solu-

tions are criticized; his suggestion that the northern part of the Greenland icecap is stagnant is considered; also the question of crevasse origin.

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53681. NYGREN, AXEL, 1912– . A cytological and embryological study of *Antennaria porsildii.* (Hereditas, Oct. 13, 1950. bd. 36, häfte 4, p. 483–86, 7 illus.) 17 refs.

Contains historical notes on this plant from the Pältsa district in northernmost Sweden and the results of its cultivation in a place only a few miles from its natural locality on Mt. Moskana. The number of chromosomes is 2n=63. A closely related *A. glabrata* has the same number, both probably originated from *A. alpina* with 2n=42. The variation within *alpina* is so great that it will permit the formation of *glabrata* as well as *porsildii.* ***Copy seen:*** DLC.

53682. NYGREN, AXEL, 1912– . Experimental studies in Scandinavian alpine plants, I; ecotypical differentiation in *Melandrium angustiflorum* (Ruprecht) Walpers. (Hereditas, 1949. bd. 35, häfte 2, p. 215–20, 7 illus., table.) 9 refs.

Contains a table of measurements of different morphological characters in *M. angustiflorum* cultivated from seeds collected in Björkliden in Swedish Lapland (68°30′ N.), and from the Alta district of northern Norway (70° N.). The two types are so different that they deserve the rank of subspecies. From the genetical and ecological viewpoints, the Alta type is an "alpine lowland ecotype of *M. angustiflorum,* and the Björkliden population a mountain ecotype of the same species. The chromosome number of both species is 2n=48, and both have a regular meiosis.

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53683. NYGREN, AXEL, 1912– . Experimental studies in Scandinavian alpine plants, II; on the origin of the Greenlandic species *Melandrium triflorum* (R. Br.) J. Vahl. (Hereditas, 1951. bd. 37, häfte 3, p. 373–81, 16 illus.) 12 refs.

Contains a study of the taxonomy and origin of three *Melandrium* species in Greenland: *furcatum, apetalum* and *triflorum.* In 1948 the author crossed two ecotypes (from Alta in northern Norway, and Björkliden in Swedish Lapland) of *M. angustiflorum* with *M. apetalum* and *M. rubrum.* The hybrid plants of the first combination flowered in 1950 and they looked morphologically as intermediate between the parent plants. Outside Scandinavia *M. triflorum* comes nearest to the new hybrid. The chromosome numbers of Greenland species are: *M. furcatum:* 2n=48; M. *apetalum:* 2n=24, and *M. triflorum:* 2n=72. The problem of *M. triflorum* needs further cytological study and experimental crossing. ***Copy seen:*** DLC.

53684. NYGREN, AXEL, 1912– . Experimental studies in Scandinavian alpine plants, III; intra- and interspecific crosses in *Melandrium furcatum* (Raf.) Hultén subsp. *angustiflorum* (Ruprecht) Walpers. (Uppsala. Lantbrukshögskolan. Annaler, 1957. v. 23, p. 405–411, 34 illus. 2 tables.) 6 refs.

It is possible to cross *Melandrium* species of different sections with each other. The hybrid between *M. apetalum* (L.) Frenzl. and *M. angustiflorum,* produced earlier was completely sterile, as was the hybrid *M. angustiflorum* and *rubrum.* But a cross between *Lychnis flos cuculi* L. and *M. rubrum* has given rise to a hermaphrodite, fertile, sex-segregating hybrid, showing the impossibility of predicting the fertility of the F_1, in a cross between different species in the carnation family. The material for this study was collected at Björkliden close to Abisko (68°30′ N.) in Swedish Lapland, and in the Alta district of northern Norway (70° N.). ***Copy seen:*** DLC.

53685. NYGREN, AXEL, 1912– . A fertile hybrid *Lychnis flos cuculi* and *Melandrium rubrum* and its sex segregating offspring. (Uppsala. Lantbrukshögskolan. Annaler, 1957. v. 23, p. 413–21, 36 illus.) 8 refs.

A study of a hybrid between the hermaphroditic *L. flos cuculi* (2n=24) used as mother and the dioecious *M. rubrum* (2n=24), which produced seeds for 21 F_2 plants (of which seven males, five females and one intersex flowered in 1957). The Y chromosome from *M. rubrum* is present in the second generation males. The father type of *M. rubrum* came from Alta in northernmost Norway (70° N.).

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53686. NYGREN, AXEL, 1912– . The genesis of some Scandinavian species of *Calamagrostis.* (Hereditas, 1946. bd. 32, häfte 2, p. 131–262, 235 illus., tables.) 158 refs.

Contains a cytological study of eight species of this grass genus (six from Lap-

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land), both amphimictic and apomictic. Of the amphimictic species, *C. arundinacea, canescens, neglecta* and *varia* are all tetraploid (2n=28), while *epigeios* is tetraploid, hexaploid or octoploid; the amphimictic species are predominantly cross-fertilized. The apomictic species are: *C. chalybaea* (2n=42), *C. purpurea* (2n=56–91) and *C. lapponica* (2n=42–112); the last occasionally forms pollen. *Calamagrostis* apomicts seem to occur solely in the Northern Hemisphere; they have an arctic-subarctic distribution. *C. canescens* is assumed to have had an extensive distribution in the Northern Hemisphere during the Tertiary period, and *C. canadensis, C. langsdorffii* and *C. purpurea* to have arisen from it in the earlier phase of the Quaternary. Apomixis within the genus (as *C. purpurea*) is due to intra- and inter-specific hybridization in combination with polyploidy.

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53687. NYGREN, AXEL, 1912– . Investigations on North American *Calamagrostis*, I. (Hereditas, 1954. bd. 40, häfte 3–4, p. 377–97, 93 illus., text map.) 3 refs.

Chromosome numbers of 19 species of these grasses are determined, of which *C. nutkaensis* (tetraploid, 2n=28) ranges from the Aleutian Islands to southern California, and *C. purpurascens* (2n=40–42, 47–50, 53–57) occurs in northern Siberia, from Alaska and the Yukon south to California, and east to Baffin Island and Greenland. Most North American species are restricted to small areas with a low number of plants; they are no doubt expiring species. The most successful species are *C. canadensis, inexpensa, purpurascens* and *rubescens*.

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53688. NYGREN, AXEL, 1912– . A preliminary note on cytological and embryological studies in arctic Poae. (Hereditas, 1950. bd. 36, häfte 2, p. 231–32.) 3 refs.

Summarizes author's five-year study of *Poa* species (grasses) in the northern Scandinavian mountains. Viviparous *P. alpina* forms pollen and may cross with other *P.* species. *P. laxa* ssp. *flexuosa* constitutes in Scandinavia a sexual and autogamous species with 2n=42. *P. arctica* is very polymorphous and has chromosome numbers running from 2n=39 to 2n=92; three subspecies are recognized in northern Scandinavia: *caespitans, microglumis* and *tromsensis;* the last one was not investigated. *Microglumis* has chromosome numbers varying between 2n=68 and 2n=82, *caespitans* has 56 chromosomes somatically and does not form any pollen. The innumerable number of viviparous and non-viviparous arctic *P.* forms originated after crosses between apomictic, facultatively sexual, and sexual types, in the later generations of which new sexual and apomictic forms have arisen.

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53689. NYGREN, AXEL, 1912– . Studies on vivipary in the genus *Deschampsia*. (Hereditas, 1949. bd. 35, häfte 1, p. 27–32, illus., table.) 15 refs.

Contains results of experimental study of *D. caespitosa* and *D. alpina* and some species of *Festuca* and *Poa* from material collected in different biotypes in the Dovre Mts. (62° N.) and Abisko, Torne Lappmark (68° N.), and cultivated at Uppsala (60° N.). The plants were exposed to light for eight hours (7 A.M.–3 P.M.) daily during May–June. Only the northernmost biotype of *D. caespitosa* was affected in the direction of vivipary, and such forms as had an already fixed vivipary preserved this even after the treatment. In all plants the development was delayed in comparison with the control plants in normal daylight at the latitude of Uppsala. *D. alpina* includes the polyploid series 2n=36–39–52. The basic number is 13.

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NYHOLM, PAULA, *see* Sarajas, H. S. S., *and others.* Stress in hypothermia. *1958.* No. 54550.

53690. NYMAN, FRANK. Anchorage cuts freeze-ups 85%. (Pacific builder and engineer, May 1957. v. 63, no. 5, p. 112, 114, illus.)

Reviews development of the Anchorage water-supply system. Water mains and services first constructed in 1917 were buried approx. five ft.; in 1949 required depth was increased to ten ft. Main water intake on Ship Creek was shifted eight mi. up-river, and tapped through a gravity supply line of 24 in. wood stave pipe and 20 in. dipped and wrapped steel pipe. A deep-well program was initiated in 1954 and three wells built in 1956, produce an average of 1500 g.p.m. The remotely controlled pump (14 in., four stage) and motor (150 hp.) at well no. 1 are designed to pump directly into the distribution system

against a head of 250 ft.; freezing of private services is estimated at 15% of that prior to operation of this pump. ***Copy seen:*** DLC.

NYMAN, M. A., *see* Mefford, R. B., *and others.* Whole body lipid metabolism . . . adverse environments. *1958.* No. 53213.

53691. OBIDIN, N. I. K voprosu o podzemnykh vodakh i vechnoĭ merzlote na ostrovakh Sovetskoĭ Arktiki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958. vyp. 11, p. 48–53.) 5 refs. Text in Russian. ***Title tr.:*** On the question of underground waters and permafrost on islands of the Soviet Arctic.

Reviews generally the conditions and accessibility of ground waters in Novaya Zemlya, Vaygach, Franz Joseph Land, Viktoriya, Ushakova and other islands of the Barents and Kara Seas, based on study of geologic literature. Hydrogeology of various formations is outlined. Thickness of permafrost in various sections is noted and some data given. Analyses of some wells are presented, and temperature and properties of the water discussed. Novaya Zemlya and Vaygach have more favorable conditions than the other areas considered. ***Copy seen:*** DGS.

53692. O'BRIEN, R. BARRY. To North Pole by ship? (Canadian shipping, May 1958. v. 29, no. 8, p. 42, 74, illus.)

Notes drifts of the *Fram* (1893–96) and *Sedov* (1937–40) across the polar basin, and the *Labrador*'s voyages through the Northwest Passage in 1954 and 1955. The *Labrador* is to attempt a record penetration into the polar basin in 1959. ***Copy seen:*** DLC.

53693. O'BRIEN, LYAL J., 1908– , *and others.* Functional reactivation with fructose of the hypothermic heart after potassium arrest. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 96.) *Other authors:* F. W. Gonzales *and* M. M. Guest.

Account of investigation of heart-lung preparations of dogs made hypothermic to 27°–28° C., with fibrillation induced by faradic stimulation; 50% fructose in Ringer-Locke, combined with cardiac massage restored heartbeat. Except for serum potassium and reducing sugar concentrations, there were no significant chemical or functional changes following the treatment. ***Copy seen:*** DLC.

53694. OBRUCHEV, SERGEĬ VLADIMIROVICH, 1891– . Po goram i tundram Chukotki; ėkspedit͡siia 1934–1935 gg. Moskva, Gos. izd-vo geogr. lit-ry, 1957. 198 p. illus., plates, fold. col. map. Text in Russian. ***Title tr.:*** In the mountains and tundras of Chukotka; an expedition in 1934–1935.

Popular account of the expedition headed by the author, which explored the Chaun Bay region and Chaun River basin: the party (by steamship from Vladivostok) established a base at Pevek (69°45′ N. 170°20′ E.) Aug. 1934; made boat trips to Ayon Island and the shores of Chaun Bay; winter trips by reindeer and propeller sled, summer trips by boat, canoe and foot to the upper reaches of the Chaun River and its tributaries and to the Northern Anyuy Mountain Range and the Anadyr' Plateau (cf. map). Propeller sledges were preferred to the reindeer provided by the Chukchis, even in mountainous areas. The life of the Chukchis is depicted vividly and in detail: the social and family relations, position of women, construction of dwellings (yarangas), food, clothing, hospitality, etc., their seasonal migrations with the reindeer herds and the work of the Russian "migratory" teachers who accompanied them are described. Obruchev's party carried out geographical, geodetic and geological explorations of the then little known area of the Chaun depression and its borders, and discovered tin deposits. Further development of the Chaun region and of Chukotka generally is reviewed in conclusion (p. 194–97): Pevek has become a tin production center; the Chukchi economy has been collectivized, hospitals, schools, etc. have been established. Fold. col. map (1 cm.=15 km.) shows that party's travel routes. The scientific results of the expedition were reported in 1938, by Obruchev, M. I. Rokhlin and A. G. Kovtun (No. 9200, 9201, 12662, 14759 and 14763). ***Copy seen:*** DLC.

OBRUCHEV, SERGEĬ VLADIMIROVICH, 1891– , *see also* Lur'e, M. L., *and* S. V. Obruchev. Osnovnye cherty . . . Sibirskoĭ platformy. *1955.* No. 52967.

53695. OBRUCHEV, VLADIMIR AFANAS'EVICH, 1863–1956. Prekrasnai͡a i bogotai͡a. (Vokrug sveta, May, 1958, no. 5, p. 1–6, illus.) Text in Russian. ***Title tr.:*** Beautiful and rich.

Excerpts from Obruchev's *Sibirskie pis'ma* (Letters from Siberia), describing

his travels in the upper Lena and Yenisey River areas in 1889–1891; recent photographs are added to illustrate the economic development of the country: the large river steamers which have replaced the primitive small boats used by Obruchev, tractors for lumbering in the forests, the Irkutsk hydroelectric station on the Angara, the new town of Angarsk, etc. ***Copy seen:*** DLC.

53696. OCHNEV, N. Grazhdanskiĭ vozdushnyĭ flot SSSR, detishche Velikogo Oktîabrîa. (Grazhdanskaîa aviatsiîa, Oct. 1957. god 14, no. 10, p. 6–11, illus.) Text in Russian. ***Title tr.:*** Civil air fleet, a child of the Great October.

Sketch of the history of Soviet aviation, with remarks on developments in the far North and achievements of Soviet arctic fliers, S. A. Shestakov, V. P. Chkalov, M. M. Gromov, V. S. Molokov, and M. V. Vodop'îanov. ***Copy seen:*** DLC.

OCHOCKA, MARIA, *see* Askanas, A., *and others.* Sztuczna hibernacja . . . *1956.* No. 49411.

53697. O'CONNOR, J. M. The stability of body temperature. (Irish journal of medical science, Feb. 1957. no. 374, ser. 6, p. 49–58, illus.) 19 refs.

Information is presented on temperature gradients in the body; temperature regulation and its assumed centers; O_2-consumption and temperature change; exposure to cold and body temperature; physiology of temperature regulation during cold exposure.

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O'DELL, ANDREW C., *see* International Geographical Congress, 1952. Proceedings. *1957.* No. 51939.

53698. ODENIUS, OLOPH. Contributions to Åke Campbell's bibliography. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 285–96.)

Lists his publications, 1910–1956, including approx. 20 on Lapps; his work as illustrator is noted. ***Copy seen:*** DSI.

53699. ODINTSOV, MIKHAIL MIKHAÏLOVICH. Geologiîa Priangar'îa. (Priroda, Jan. 1957. god 46, no. 1, p 87–90, illus.) Text in Russian. ***Title tr.:*** Geology of the Angara River basin.

Outlines the geographical structure of area adjacent to this river, from the Archean bed rock in the valley between the outlet and Bratsk, up to trap intrusions and Quaternary deposits. The abundance of ores and minerals (iron ores, coal, salt, talc, refractory clays, marble, etc.) is noted.

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53700. ÖDMAN, OLOF HERMAN RANFAST, 1906– . Beskrivning till berggrundskarta över urberget i Norrbottens län. Stockholm 1957. 151 p. illus., maps incl. 1 fold. in pocket. (Sweden. Geologiska undersökning, ser. Ca., Avhandlingar och uppsatser, nr. 41.) 126 refs. Text in Swedish. Summary in English. ***Title tr.:*** Description to the map of the Precambrian rocks of Norrbotten county.

The Precambrian covering some 31,815 sq. mi. in Sweden's northernmost province is divided into two major formations, the Svionian (older) and the Karelian cycles. The Svionian is believed to be of the same age as the basement formations in central Sweden and southwest Finland. Age determinations indicate that this cycle terminated about 1,800 million years ago. The Karelian cycle marks the end of the Archean in Fenno-Scandinavia and is considered to be about 800 million years old. The detailed stratigraphy of the Precambrian in Norrbotten is shown (table). The region is described in detail and compared with neighboring Precambrian areas. A survey of ore and mineral deposits is given. A list of place names is appended. In pocket, is the map (for which this description was prepared) at scale 1:400,000: it was compiled, mainly by the author and assistants, during 1940–1955. Some of Ödman's interpretations are discussed critically by P. A. Geijer, q.v. ***Copy seen:*** DGS.

53701. ØDUM, SØREN. Floraen i et kystområde i Sydvestgrønland. (Botanisk tidsskrift, Dec. 1958. bd. 54, hefte 4, p. 387–99, 6 illus.) 6 refs. Text in Danish. Summary in English. ***Title tr.:*** The flora of a coastal region in southwest Greenland.

Contains notes on plants collected by the author on Nunarssuit and Alangorssuaq islands in the outer coast region of southwesternmost Greenland (60°48′ N. 48°10′ W.). The most important vegetation is in heaths with *Empetrum* and *Vaccinium uliginosum,* high rocky plateaus and snowbeds. The plants found are listed with their frequency.

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53702. ØIEN, FRITZ. Bryllupsreise til Bjørnøya. (Polarboken 1958. p. 101–120.) Text in Norwegian. ***Title tr.:*** Honeymoon on Bjørnøya.

Recounts a wintering (1930–31) on Bjørnøya as director of the meteorological station. History and way of life on the island are described. ***Copy seen:*** SPRI.

53703. ØRVIG, TOR. Notes on some Paleozoic lower vertebrates from Spitsbergen and North America. (Norsk geologisk tidsskrift, 1957. bd. 37, hefte 3–4, p. 285–353, illus., map.) over 100 refs.

A study of various fossil remnants of fishes, including: thelodontid scales, endoskeletal tissues of *Benneviaspis holtedahli*, and Acanthodian jawbones from the Devonian of Spitsbergen. Other arctic material includes description of a pethalichthyid *Arthrodire Ellopetalichthys scheei*, from the Devonian of Ellesmere Island. In addition descriptions are presented of endoskeletal hard tissues of pachyosteomorph brachythoracids from Ohio shale; the microstructure of ptyctodontid tooth plates and that of calcified cartilage of two Paleozoic elasmobranchs from North America. ***Copy seen:*** DGS.

53704. ØSTBY, H. Catch of small whales 1956. (Norsk hvalfangst-tidende, June 1957. årg. 46, nr. 6, p. 300–308, map, tables.) Text in Norwegian and in English.

Presents catch data from Norwegian and Spitsbergen waters and Barents Sea: number of ships, whales taken (3,966 altogether), geographical distribution of catch, yield of meat, blubber and bone 7,937,471 Norw. kr.), etc.

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53705. ØSTBY, H. Catch of small whales 1957. (Norsk hvalfangst-tidende, Aug. 1958. årg. 47, nr. 8, p. 377–85, tables, map.) Text in Norwegian and English.

Contains statistical information on the catch of small whales in Norwegian and Spitsbergen waters and the Barents Sea. Number of ships, whales caught (3,935 altogether), geographical distribution of catch, yield of meat, blubber and bone (7,606,094 Norw. kr.), etc. are tabulated.

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ÖSTLUND, GEORG, *see* Kvarby, N., *and others.* Skogliga arronderingsfrågor. *1957.* No. 52599.

53706. ØSTLYNGEN, EMIL, 1915– . Profilretningen på steinalderens dyrefremstillinger. (Naturen, 1957. årg. 81, nr. 4, p. 231–41, 3 tables.) Text in Norwegian. ***Title tr.:*** Profile direction on the stone age animal illustrations.

In northern Norway most quadrupeds on stone age illustrations face toward the right, but the reason (drawing technique, lack of right-handedness in the artist, the magic significance of the portrayal, or other) is not known. The numbers of quadrupeds, birds, and aquatic animals in each of the Norwegian stone age illustrations are tabulated and many of them are described in relation to their setting. ***Copy seen:*** DGS.

53707. ØVERAAS, S. The development of Norwegian sealers. (European shipbuilding, 1953. v. 2, no. 2, p. 47–51, illus., tables.) 2 refs.

Reviews history of arctic sealing and development of constructional design features of sealers. Main specifications are tabulated for 11 vessels; the *Polaris* (1951) is considered most advanced type. General requirements in hull- and propeller construction are outlined. Total tonnage of Norwegian sealers 1924–39 is tabulated, also lost sealers (home port Ålesund) 1911–39, with data on where wrecked and occasion.

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OFFENHAUER, C. M., *see* Crafts, W., *and* C. M. Offenhauer. Development . . . chromium-copper-nickel steel . . . *1952.* No. 50369.

53708. OFTEDAL, IVAR WERNER, 1894– . Oversikt over Norges mineraler. Oslo, Aschehoug, 1948. 48 p. (Norway. Geologiske undersøkelse, nr. 170.) 136 refs. Text in Norwegian. ***Title tr.:*** Summary of Norway's minerals.

Norway's 315 known minerals, less than a fifth of the world's total, are alphabetically indexed and briefly described. The minerals originally described from Norway are listed separately, with original locality and reference. All others are systematically listed with references. Only for rare minerals are all known localities included. The arctic area is well represented. ***Copy seen:*** DGS.

53709. OGILVY, W. L., *and others.* Vascular changes and direct tissue effects in severe cold injury. (Surgical forum, 1957. v. 7, p. 340–43, illus.) *Other authors:* M. A. Entin *and* D. R. Webster.

Account of experiments with dog skin frozen and thawed *in situ* or when isolated, and subsequently transplanted. Assessment of survival of the transplants suggests severe, irreversible damage to the isolated tissue. Cold injury to the skin *in situ* was not severe but secondary sequelae due to vascular changes caused extensive necrosis. ***Copy seen:*** DNLM.

53710. OGLESBY, JOSEPH E. When science called, the U.S. Navy built seven bases at the end of the earth. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 24–29, illus.)

Describes constructional features of bases established in the Antarctic during operations Deepfreeze I and II. Designed to withstand winds of 100 mph., snow loads of 125 lbs./ft.², and temperature differentials of 190° F., the standard 20 x 48 ft. building consists of 4 x 8 ft. panels for flooring, walls and roofing, lined on the inside with an aluminum vapor barrier and joined by metal clips. A void stuffed with Fiberglas provides insulation between the inside aluminum panel and the outside plywood; roof panels are supported by high-tensile steel or aluminum roof joists. At land bases (3), the floor panels rest on wooden sills, while buildings constructed on ice (4) were set on high-tensile steel or aluminum saddle trusses. Skylights, 4 x 8 ft. each, triple layers of glass with air pockets between panes, were fitted. Construction of access tunnels, snow-melter installations, and towers for antennas and observation posts, is described; operational procedures in site surveying and equipment transportation are briefly outlined. ***Copy seen:*** DLC.

OGLOBLIN, P. F., *see* Levin, D. M., *and* P. F. Ogloblin. Zimnîâ ėkspluatat͡siîâ . . . *1956.* No. 52781.

53711. *OGONËK.* Severnyĭ nomer. Moskva, Izd-vo "Pravda," 1957. 32 p. illus., ports., col. plates, maps. (Ogonëk, Feb. 1957. god 35, no. 8.) Text in Russian. ***Title tr.:*** Northern number.

Issue of a popular magazine, devoted to northern problems of the U.S.S.R. A general survey of development of the North, by M. P. Tarasov, Chairman of Presidium of Supreme Soviet of the R.S.F.S.R. introduces over 25 articles and notes on Soviet industrial, economic and cultural expansion in arctic and subarctic regions, including sketches of life and work in Kola Peninsula, in the towns of Ukhta, Vorkuta, Igarka, Noril'sk, Yakutsk, Magadan, at the Cape Chelyuskin polar station, on the diamantiferous fields of Yakutia, on a drifting station in the Arctic Basin, and so on. Despite their popular character, these articles offer useful information, as for instance, on education (technical school in Noril'sk, university in Yakutsk, boarding school in Neksikan), mining (gold in Kolyma basin, coal at Vorkuta). Living conditions in the far North are so lauded as to suggest that the purpose of this special issue is to attract youth to the North, suffering from shortage of manpower. Most of the articles are described in this bibliography under their authors' names: M. P. Tarasov, D. I. Shcherbakov, S. Fridlîând, M. Bondarenko, P. Manuĭlov, E. I. Rîabchikov, S. Osipov, M. Zlatogorov, B. Bablûk, O. Babin, S. T. Morozov, M. Tikhonov, ĭŪ. Rîabov, T. Timofeev, S. Mesîat͡sev, S. Lûsin, B. I. Shovrin, V. Pekelis, O. Babin, E. Villakhov, S. Fedorov, F. Shipilov; others, anonymous, are:

Radiogramma s samoĭ severnoĭ tochki Azii (Radiogram from the northernmost point of Asia), p. 8: brief note on the radiometeorological central station on Cape Chelyuskin and text of a radiogram from its chief, F. K. ĭŪzefovich, about weather conditions, daily work, radio, air transport, etc. Work of several of the personnel who completed studies in the Leningrad Higher Arctic School, is mentioned.

Na chukotskom poberezh'e (On Chukotka shores), p. 15: notes work of the Khabarovsk artist, Vasiliĭ Evgen'evich Romanov, a series of drawings and paintings on northern subjects; two of his drawings on Chukchi hunters' life are reproduced.

Pechorskaîâ magistral' (Pechora trunk line), p. 21: note and illus. on the direct Vorkuta-Moskva railroad trip of two-and-a-half days which replaces the former tiresome journey from Vorkuta to Ust'-Vorkuta, thence by steamers to Nar'yan-Mar and Arkhangel'sk. The Pechora railroad is to become a double-track line in the current five-year period.

Na st͡senakh teatrov (On theater stages), p. 25: notes, with illus., on theaters in Magadan, Syktyvkar, Yakutsk and Murmansk.

Dva brata i bogach; Chukotskaîâ skazka (Two brothers and a rich man; a Chukchi tale), p. 31: Translation of a

propaganda tale about two reindeer herders taken from *Tales of the northern peoples*, 1956, published in Magadan.

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53712. *OGÖNEK.* Transpolîarnyĭ reĭs. (Ogonëk, Mar. 1957. god 35, no. 10, p. 3, illus.) Text in Russian. ***Title tr.:*** Transpolar flight.

Notes first Scandinavian Air Lines flight Copenhagen to Tokyo via the North Pole, Feb. 24, 1957.

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53713. OGUTI, TAKASI. Notes on the morphology of *SC*. (Tokyo University. Geophysical Institute. Geophysical notes, June 1956. v. 9, no. 1, p. 81–90, diagrs., map, table.) 11 refs.

World-wide simultaneous records of *SC* variations are examined, and the equivalent current-systems for the beginning, intermediate, and final stages are illustrated. Each current-system seems composed of two parts; a dipole-like current-system near the geomagnetic pole, and the zonal current part corresponding to the world-wide increase in the horizontal component of geomagnetic field. The dipole seems to rotate clockwise during the course of rapid *SC* variation, and its direction at the final stage becomes opposite to that at the start. This systematic change may be the cause of the systematic dependence of type of *SC* traces on magnetograms on local time, and of the particular distribution of the preliminary reverse impulse of *SC*.

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53714. *OIL IN CANADA.* Northern push emphasizes need for muskeg conquest as activity drops. (Oil in Canada, Aug. 4, 1958. v. 10, no. 40, p. 30–32+, illus., 2 text maps, diagrs.)

Reviews leading phases of muskeg research, and includes four papers read at the 1958 National Research Council of Canada muskeg conference, as listed below. A new method of seismic exploration in muskeg territory is reported; several types of exploration vehicles suitable for snow, swamp, and muskeg are illustrated and described. Access is the major problem of engineers and scientists in relation to muskeg, or organic terrain. There is a steady decline of exploration in muskeg areas which may be offset by an increase in winter activity.

Thomson, J. G. Vehicle mobility performance in muskeg, a preliminary report (p. 40–43, 4 diagrs.). *Describes* methods and results of performance tests on tracked vehicles operating in muskeg Oct. 1957. Standard test method applied in other media, such as sand, clay, and snow, was used. Conclusions based on limited data are given; test procedure was considered adequate for mobility testing of vehicles in muskeg.

Keeling, L. Some aspects of the terrain problems in northwestern Canada (p. 44–48, 5 text maps). *Describes* briefly, efforts in oil exploration; some problems created by terrain conditions are stated and illus. by maps; exploration methods used by Imperial Oil Co. personnel are outlined. Present need of ground studies and lack of air recognition of cover classes or form patterns, are stressed.

Hemstock. R. A. Muskeg in Canada (p. 50–53). *Notes* importance of Canada's 500,000 sq. mi. of muskeg to agriculture, transport, and development of natural resources.; presents problems of vehicle design, and of devising techniques for operating in muskeg. Future developments are indicated, including use of aircraft, helicopters, and automation; year-round preliminary operations are possible, with careful planning.

Palmer, R. L. Weight dropping on frozen muskeg, a new means of seismic exploration (p. 54–54B, illus., diagr.) *Describes* equipment, methods, procedure, and results of weight dropping technique, used in Canadian seismic exploration in Feb. 1957 and Nov. 1957–Mar. 1958. Already used in the United States and Algeria, the technique is rapid and inexpensive; a three-ton weight, dropped nine feet, imparts a seismic signal into the ground. ***Copy seen:*** DGS.

OINAS, FELIX J., *see* Indiana. University. The Karelians. *1955.* No. 51919.

OĬUNSKIĬ, PLATON ALEKSEEVICH, 1893–1939, *see* Pukhov, I. Platon Oĭunskiĭ . . . *1957.* No. 54168.

53715. *OKHOTA I OKHOTNICH'E KHOZÎÀÎSTVO.* N. M. Ovchinnikov. (Okhota i okhotnich'e khozîâĭstvo, Apr. 1958. god 4, no. 4, p. 62, port.) Text in Russian.

Obituary of Nikolaĭ Mikhaĭlovich Ovchinnikov, 1906–1958, director of the All-Union Scientific Research Institute of Animal Raw Material and Peltry. His work for the fur trade and on acclimatization of fur bearers (including muskrat) is noted. ***Copy seen:*** DLC.

53716. *OKHOTA I OKHOTNICH'E KHOZÍÂÍSTVO.* Okhrana zhivotnykh Kraĭnego Severa. (Okhota i okhotnich'e khozíâĭstvo, Feb. 1957. god 3, no. 2, p. 63.) Text in Russian. ***Title tr.:*** Protection of wildlife in the far North.

Polar bear hunting is prohibited, and walrus and wild reindeer hunting are drastically restricted by decree of the Council of Ministers of R.S.F.S.R., Nov. 21, 1956. ***Copy seen:*** DLC.

53717. *OKHOTA I OKHOTNICH'E KHOZÍÂÍSTVO.* Peredoviki pushnogo promysla. (Okhota i okhotnich'e khozíâĭstvo, Aug. 1957. god 3, no. 8, p. 10.) Text in Russian. ***Title tr.:*** The foremost people of the fur trade.

The most successful hunters of Arkhangel'sk Province are listed, with the quantity of furs or value of their take. Hunters of Amderma District and of Bol'shezemel'skaya Tundra are mentioned among others.

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53718. *OKHOTA I OKHOTNICH'E KHOZÍÂÍSTVO.* Petr Aleksandrovich Mantelfel', k 75-letiíû so dnía rozhdeniía. (Okhota i okhotnich'e khozíâĭstvo, Nov. 1957. god 3, no. 11, p. 15, port.) Text in Russian. ***Title tr.:*** P. A. Mantelfel', on his 75th birthday.

Biographical sketch and appraisal of the scientific work of this naturalist, professor and hunting expert; his main publications on fur animals are noted. ***Copy seen:*** DLC.

53719. *OKHOTA I OKHOTNICH'E KHOZÍÂÍSTVO.* Prikaz ob uvelichenii chislennosti pernatoĭ dichi. (Okhota i okhotnich'e khozíâĭstvo, Mar. 1957. god 3, no. 3, p. 19.) Text in Russian. ***Title tr.:*** Order to increase the stock of game birds.

Spring bird hunting is prohibited by an order of Feb. 12, 1957, from the Main Administration of Hunting Industry and Preserves of R.S.F.S.R. The entire territory of the Republic is involved except its northern areas, including Arkhangel'sk, Krasnoyarsk, Magadan and Kamchatka provinces, the far North of Tyumenskaya Province and Yakut A.S.S.R. ***Copy seen:*** DLC.

53720. *OKHOTA I OKHOTNICH'E KHOZÍÂÍSTVO.* Promyslovye zveri. (Okhota i okhotnich'e khozíâĭstvo, Nov. 1958. god 4, no. 11, p. 30–33, 4 col. plates.) 14 refs. Text in Russian. ***Title tr.:*** Fur animals.

Brief description and illus. in color of the 12 most important small fur bearers in the U.S.S.R., for beginners in the hunting industry; two squirrel, sable, marten species, and ermine are included; footnotes refer to articles on these animals previously pub. in this journal. ***Copy seen:*** DLC.

53721. *OKHOTA I OKHOTNICH'E KHOZÍÂÍSTVO.* Rosomakha; rechnaía vydra. (Okhota i okhotnich'e khozíâĭstvo, Jan. 1958. god 4, no. 1, p. 33, 2 col. plates.) Text in Russian. ***Title tr.:*** Wolverine; otter.

Brief notes on these two fur animals, occurring throughout the forest and forest tundra area from Kola Peninsula to Kamchatka. Lack of knowledge of the biology and habits of both animals is stressed. Damage by wolverines to hunting is noted. ***Copy seen:*** DLC.

53722. *OKHOTA I OKHOTNICH'E KHOZÍÂÍSTVO.* Vesna i ptiĉsy. (Okhota i okhotnich'e khozíâĭstvo, Apr. 1958. god 4, no. 4, p. 5–6.) Text in Russian. ***Title tr.:*** Spring and birds.

Editorial advocating greater protection of birds in spring time: strict observance of the ban on spring hunting and setting of lures, etc. ***Copy seen:*** DLC.

53723. OKHOTNIKOV, V. N. Ledniki na Polârnom Urale. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiía, Mar.–Apr. 1958. t. 90, vyp. 2, p. 174–76, illus.) 2 refs. Text in Russian. ***Title tr.:*** Glaciers in the Polar Ural.

Presents briefly 1954 observations of the Malokarskiy and Vostochnyy glaciers south of Maloye Shchuch'ye (approx. 66°50′ N. 66°05′ E.) by the author, P. P. Gerdvil, and IU. A. Korĭakin. Location, thickness, firn development, direction of movement and development of moraines are outlined. The observations are considered to supplement the work of K. I. Postoev and A. V. Khabakov. ***Copy seen:*** DLC.

53724. OKKO, VEIKKO OMA TOIVO, 1912– . Die Tonvorkommnisse und die Ziegelindustrie in Finnland. Helsinki, 1957. 50 p. illus., maps. (Fennia, 1958. 81, no. 3.) 31 refs. Text in German. ***Title tr.:*** The occurrence of clay and the brick industry in Finland.

The brick and other clay products industry is surveyed with reference to

the nature, quality, and location of clays; and to economic factors: fuel, manpower, local and distant markets, mechanization, and transportation. The clays of Finland are geologically described and their relative values considered. Wood, the commonest firing fuel, is abundant throughout the country. Manpower also is not important as a site factor (mechanization offsetting rural labor decreases), nor is urban location. The important site factors appear to be abundance and quality of clay, availability of transport, and locally, proximity to a sawmill. In northern Finland, though lean clays of the inland lakes and fuel wood are available, brick is transported from the south despite the demand in postwar reconstruction. Transportation is generally by highway, sometimes by rail as in the case of a small regional center like Rovaniemi which receives brick from several locations in southern Finland. ***Copy seen:*** DLC.

53725. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Ancient cultures and cultural and ethnic relations on the Pacific coast of north Asia. (International Congress of Americanists, 32nd. *Copenhagen*, 1956. Proceedings, 1958, p. 545–56, illus.)

Deals with Soviet field work of the last 25 years along the Pacific coast, including the Bering-Okhotsk Sea region, and the discovery of ancient Eskimo cultures on the Asiatic mainland. S. I. Rudenko's 1945 investigations of the Bering Strait area revealed widespread traces of the Okvik, Old Bering Sea, Punuk and Thule stages; Birnirk stage artifacts were found in 1946 by A. P. Okladnikov and D. V. Zaporozhskaĭa at Cape Baranov. M. G. Levin excavating in the Magadan region on Ol'skiy Island (Zav'yalova Island) in 1934 discovered bone and stone objects similar in appearance to some ancient Aleutian finds described by V. I. Jochelson (No. 8130). Pre- or early neolithic finds, especially a polyhedric obsidian tool of the so-called core scraper type, found on the Tigrovaya River near Vladivostok, are similar to implements belonging to the upper paleolithic stratum in Eastern Siberia and the Transbaykal region. They are also common in Mongolia and have been found on the campus of the University of Alaska at Fairbanks. These finds add weight to N. C. Nelson's views (No. 30965) on the existence of cultural ties between Central Asia and northern North America. The stone-age settlements on Ol'skiy Island and Koni Peninsula (northern Okhotsk Sea shore) were probably abandoned at latest in the 18th century (they lack Russian imports), and belonged to the ancient Koryaks who were driven out of this area in the mid-18th century by advancing reindeer-herding Evenki (Tungus). The excavation of a men's house similar to the Eskimo *kashim* and Chukchi *valkar* on Cape Tetyukhe is noted, also the discovery (in shell-mounds near Vladivostok) of flat points with one or two holes drilled at one end, exactly like harpoon-blades used by ancient Eskimos.

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53726. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Arkheologicheskie issledovaniĭa na Angare, 1936 g. (Sovetskaĭa arkheologiĭa, 1937, no. 4, p. 319–22, illus.) Text in Russian. ***Title tr.:*** Archeological investigations on the Angara River in 1936.

A report on the 1936 phase of the archeological excavations in the Angara basin sponsored by the Irkutsk Museum. Continuing the work begun in 1932–1934, the four-man party traveled 600 km. by boat from Irkutsk to Bratsk, investigating both river banks. The discovery of the paleolithic site at Buret' and the find of a carved ivory female figure with engraving of a fur garment are mentioned. Late neolithic burials of the Glaskovo and Kitoy stages and late neolithic or early iron age (7th–10th century A.D.) settlements were excavated. The prone and recumbent skeletons, single and multiple burials, polished stone and bone artifacts, ornaments, etc., are described. The preponderance of fishing over hunting implements (bronze, copper, bone) in the Angara Glaskovo stage is noted. ***Copy seen:*** DLC.

53727. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Arkheologicheskie issledovaniĭa v 1955 g. na Dal'nem Vostoke. (Akademiĭa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniĭa, 1958. vyp. 71, p. 109–118, illus., sketch map.) Refs. Text in Russian. ***Title tr.:*** Archeological investigations of 1955 in the Far East.

Describes excavations of neolithic sites in the Maritime Province, and mentions (p. 111) the discovery, at the Tetyukhe River mouth, of several rectangular semi-subterranean dwellings. One of

them, containing a central hearth enclosed by two tiers of platforms or benches (nary), was used as a workshop for the manufacture of stone implements including dart points and harpoon heads. It closely resembles the 18th–19th century men's houses of northern Asia and America. ***Copy seen:*** DLC.

53728. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Arkheologicheskie raskopki na Angare i za Baĭkalom. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniîa, 1953, vyp. 51, p. 16–22, illus.) Text in Russian. ***Title tr.:*** Archeological excavations on the Angara and beyond the Baykal.

Reports on the results of the 1951 expedition of the Institute of the History of Material Culture in cooperation with the Institute of Culture of Buryat-Mongol A.S.S.R. and the Irkutsk and Buryat-Mongol Regional Museums (cf. No. 50168). Two group-burial complexes were excavated at Verkholensk: one late neolithic (Glazkovo), the other belongs to the transitional stage between Isakovo and Serovo forming a link between these two neolithic periods and is the first Isakovo site discovered in the Lena basin. Axes of middle Lena type (Vilyuy and Yakutsk area) found in Verkholensk's Isakovo horizon, confirm the early dating of the middle Lena neolithic age. Several habitation sites on the upper Angara and an Angara island yielded inventory of stone, bronze and early iron ages. A bronze knife belonging to the Glazkovo stage shows that bronze was already well-known in the Angara area during the late neolithic period. A Kitoy stage steatite fish lure (illus.), the first such find in Siberia, closely resembles lures widely used by ancient Algonkians in North America (cf. No. 53732). Genetic cultural ties of the early iron age linking the Yakuts, Buryats and Yeniseian "Paleoasiatics" are discussed. ***Copy seen:*** DLC.

53729. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– , *and* A. P. PUMINOV. Drevneĭshie sledy cheloveka na r. Olenek. (Problemy Severa, 1958, vyp. 1, p. 354–59.) 4 refs. Text in Russian. ***Title tr.:*** The oldest traces of man on the Olenek River.

Discusses junior author's discovery of two neolithic camp (?) sites on elevated (11–35 m.) river terraces (approx. 69° N. 119° E.) during his summer 1955 survey of Quaternary deposits in the Olenek River basin for the Institute of Geology of the Arctic. The geological formation of the river banks and the mammoth, musk ox, etc. bone finds point to a late-glacial or post-glacial terrace formation. The flint and slate artifacts consisting of roughly hewn nuclei, chipped lamellar blades and flakes are described. A fragment of a well-formed, lozenge-shaped, faceted knife blade with a minutely retouched handle is compared with similar finds (dated into the Isakovo-Serov stage) made near Zhigansk and at Siktyakh on the lower Lena River (cf. No. 47160). The importance of these Olenek River finds is stressed: dating possibly from 3,000 B.C., in an area previously considered uninhabited until the iron age. ***Copy seen:*** DLC.

53730. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– , *and* I. S. GURVICH. Drevnie poseleniîa v del'te r. Indigirki. (Akademiîa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniîa, 1957. vyp. 27, p. 42–51, illus., map, diagr.) 8 refs. Text in Russian. ***Title tr.:*** Ancient settlements in the Indigirka River delta.

Discusses the bone, stone and ceramic finds made along Uralova Channel and Lake Tat'yanino in this delta region (approx. 72° N. 145° E.) on the Yakut A.S.S.R. coast. Accidental finds by local residents, in 1950–51, prompted an ethnographic expedition of the Institute of Language, Literature and History of the Academy of Sciences' Yakut Branch, headed by I. S. Gurvich in 1952, also investigations by A. N. Tolstov in 1953 while on the Permafrost Institute of the Academy of Sciences' expedition. The predominance of cloudy-white and smoky-orange chalcedony flakes and the relative scarcity of finished artifacts among the lamellar blades, scrapers, burins, adzes, arrow points, etc., are noted. Flint, though rarely used, is of highest quality, milky-white, thin and translucent. The round-bottomed ceramic vessels decorated with pseudo-textile checkered or rhombic netting found at Lake Tat'yanino are similar to finds made on the middle Lena and belong to the late neolithic or early bronze age of Yakutia, i.e. late second or early first millennium B.C. The Uralovo channel site, older, similar in some respects to the Serovo period of the Lake Baykal region, is tentatively dated into the first half of the second millennium B.C. Both sites are

attributed to paleo-Yukaghirs, an assumption corroborated by 17th century sources placing nomadic Yukaghir groups in an area extending from west of the Lena to Chukotka. ***Copy seen:*** DLC.

53731. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Iz istorii ėtnicheskikh i kul'turnykh svîazeĭ neoliticheskikh plemen Srednego Eniseîa; k voprosu o proiskhozhdenii samodiĭskikh plemen. (Sovetskaîa arkheologiîa, 1957, no. 1, p. 26–55, illus.) Over 50 refs. Text in Russian. ***Title tr.:*** History of ethnic and cultural ties of neolithic tribes of the middle Yenisey; the problem of the origin of Samoyed tribes.

Discusses the neolithic discoveries made in the mid-Yenisey region and compares the stone artifacts and pottery with the Angara-Lena and Ural finds, in an attempt to elucidate the problem of the origin of the Ugro-Finnish Samoyed tribes. The style, shape and material (nephrite, Angara slate) of stone implements point to a homogeneity between the neolithic culture stages of the mid-Yenisey (Krasnoyarsk) region and the Serovo, Kitoy and Glazkovo periods of the Angara, Lena and Lake Baykal area; yet other features, among them the style and characteristic shaping of human and animal statuettes and, particularly, the close-set hole-comb ornamentation and predominantly oval shape of the ceramic vessels, show a strong analogy to the neolithic finds made in the Urals and as far west as Karelia and Finland. The similarity between the mid-Yenisey and west Siberian artifacts, too great to be the result of merely cultural contacts, can be explained only by an eastward movement of Uralic tribes. These tribes, probably the direct ancestors of the Ostyaks, Voguls and Samoyeds, migrated from their original homeland in the forest and forest steppe area of the Urals and reached the mid-Yenisey-Sayan region during the neolithic or even paleolithic age. They may be thus responsible for the Europoid traits in the otherwise Mongoloid population of the Lake Baykal neolithic period. After the introduction of reindeer-herding, the Samoyed tribes abandoned the Yenisey-Sayan region moving northwestward into areas better suited for their new economy.

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53732. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Kamennye ryby. (Sovetskaîa arkheologiîa, 1936. no. 1, p. 215–45, illus., sketch map.) 16 refs. Text in Russian. Summary in French. ***Title tr.:*** Stone fishes.

Describes neolithic fish sculptures, found in great number along the upper Angara and Lena Rivers. Frequent in the Serovo period, they seem non-existent in the late neolithic (Kitoy and Glazkovo) and belong to a cultural stage characterized by a hunting rather than fishing economy. Their occurrence appears to be in inverse relation to the development of fishing. Author discounts their use as cult objects and suggests an, as yet undetermined, practical function. ***Copy seen:*** DLC.

53733. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Nekotorye voprosy izucheniîa verkhnego paleolita SSSR v svete novelshikh issledovaniĭ. (Sovetskaîa arkheologiîa, 1954. t. 21, p. 5–29, illus.) Refs. Text in Russian. ***Title tr.:*** Some problems relating to the study of the upper paleolithic in U.S.S.R. in the light of the most recent investigations.

Includes (p. 20–29) the settlements along the Angara (Mal'ta, Buret'), Yenisey and Lena Rivers. The technique of stone chipping and flaking is identical with other Asiatic and European paleolithic sites. Theories of genetic cultural ties versus environmental influence of similar climatic, economic and social conditions are discussed. The latter, admitted important, is exemplified in the apparent similarity between the old-Eskimo culture of the Bering Strait area and the unrelated Buret' period several millennia older. Author favors a common origin of the Siberian late paleolithic population.

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53734. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– , *and* V. V. NARYSHKIN. Neue Ergebnisse über alte Kulturen auf der Tschuktschen-Halbinsel. (Sowjetwissenschaft. Gesellschaftswissenschaftliche Beiträge, 1956, Heft 2, p. 244–51.) 3 refs. Text in German. ***Title tr.:*** New data on ancient cultures of the Chukotsk Peninsula.

German translation by H. Wüstemann of No. 41689. ***Copy seen:*** DLC.

53735. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Novye arkheologicheskie otkrytiîa v Vostochnoĭ Sibiri i drevnîaîa istoriîa Îakutii. (*In:* Akademiîa nauk SSSR. Îakutskiĭ filial. Doklady . . . 1954. p. 6–15.) 4 refs. Text in Russian. ***Title tr.:*** New archeological

discoveries in eastern Siberia and the ancient history of Yakutia.

Neolithic and early iron age finds along the upper and middle Lena River and on islands of the upper Angara are reviewed and linked to Trans-Baykal cultures. An iron age migration of cattle-herding tribes, forebears of present-day Yakuts, from the Lake Baykal area to the middle Lena region is suggested. ***Copy seen:*** DLC.

53736. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Novye neoliticheskie nakhodki na Angare, v raĭone der. Kezhmy. (Sovetskaîa arkheologiîa, 1952. t. 16, p. 320–26, illus.) 4 refs. Text in Russian. ***Title tr.:*** New neolithic finds on the Angara, in the Kezhma village area.

Describes several stone artifacts of the Serovo and Isakovo culture stages discovered in 1949 near the confluence of the Kezhma and Angara Rivers by members of the Geographical Research Institute of Moscow University. Of particular interest is a realistic sculpture of a fish (lake salmon) made of a marble-like stone. The carving and polishing techniques are discussed, and the perforations on abdomen and dorsal fin, indicating its use as fish lure, are noted. It belongs to the Serovo period, i.e., 4th millennium, B.C.

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53737. OKLADNIKOV ALEKSEĬ PAVLOVICH, 1908– , *and* I. A. NEKRASOV. Novye sledy kontinental'noĭ neoliticheskoĭ kul'tury na Chukotke; nakhodki u oz. Él'gytkhyn. (Sovetskaîa arkheologiîa, 1957, no. 2, p. 102–114, illus., maps.) 14 refs. Text in Russian. ***Title tr.:*** New traces of a continental neolithic culture on Chukotka; Lake El'gytkhyn finds.

Sketches the topography, hydrology, climate, flora and fauna of Lake El'gytkhyn (67°30′ N. 172°05′ E.) and surrounding Anadyr' plateau. The neolithic tools discovered on the lake shores by I. A. Nekrasov in 1955 are described. Especially noted are the chipped stone blades, more than 50, found in a cache or abandoned workshop; their intended use as dart, spear and javelin heads and knife blades is discussed. All implements in the cache were unbroken and made of hornstone flint, imported from the northern Anadyr' range on the arctic coast. The lack of ceramic or polished stone artifacts is ascribed to temporary use of the site by neolithic hunters in their annual trek following reindeer herds along the En'muveyem River from permanent winter quarters near Lake Chirovoye (approx. 66°25′ N. 173°25′ E.), where a settlement with semi-subterranean huts was excavated by N. A. Grave in 1952 (No. 31087). The economy, culture and artifacts of these pre-Eskimo inland nomadic hunters are compared with the pre- or Paleo-Eskimo population of the American North. Author considers these Chukotka reindeer hunters to be the original settlers of the New World. ***Copy seen:*** DLC.

53738. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . O pervonachal'nom zaselenii chelovekom doliny reki Leny; obshchiĭ obzor paleoliticheskikh pamîatnikov. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniîa, 1948. vyp. 23, p. 3–12.) 14 refs. Text in Russian. ***Title tr.:*** On man's first settling of the Lena River valley; a general survey of paleolithic monuments.

Describes the geological formations, artifacts and animal bones of 25 paleolithic sites discovered in 1941 and 1944 by the Lena historical-archeological expedition between Kachuga, on the river's upper course, and Markhachan (approx. 62° N. 123° E.). The implements (lunate scrapers, prismatic cores, lamellar blades, disks, etc.) are compared with those found in the paleolithic sites of Mal'ta and Buret' on the Angara River. The settlements, probably temporary hunting camps, are characterized by peculiar barrel-like hearths made of stone slabs. A drawing in red ocher of a wild stallion, realistic and almost life-size, discovered on the cliffs near Shishkino, in the vicinity of Verkholensk, points to the high artistic abilities of paleolithic man of the Lena basin. ***Copy seen:*** DLC.

53739. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Paleoliticheskaîa statuĕtka iz Bureti. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Materialy i issledovaniîa po arkheologii SSSR, 1941. no. 2, p. 104–108, illus.) 3 refs. Text in Russian. ***Title tr.:*** A paleolithic statuette from Buret'.

Describes a statuette made of mammoth tusk found during the 1936 excavations at Buret' on the Angara River. The 12.2 x 1.9 cm. figurine shows a woman dressed in a hooded fur garment closely resembling those worn by Eskimos, Chukchis and Koryaks. The fur is characterized by symmetrically incised grooves, and two tails (front and back), similar to the appendages on Eskimo

parkas, indicate a garment sewn from two hides. The presence of clad and unclad figures suggests that the climatic conditions of the late paleolithic era paralleled those of the present-day Arctic, resulting in an analogous practice of wearing fur clothes in the open and undressing indoors. ***Copy seen:*** DLC.

53740. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Paleoliticheskie zhilishcha v Bureti; po raskopkam 1936–1940 gg. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniîa, 1941. vyp. 10, p. 16–31, illus., diagr.) 19 refs. Text in Russian. ***Title tr.:*** Paleolithic dwellings in Buret'; excavations of 1936–1940.

Describes the systematic excavations of four late paleolithic house pits at Buret', on the Angara River. The great accumulation of large mammal bones and their position within the sites suggest their original use as house posts (mammoth long bones, rhinoceros skulls) and domed roofing (reindeer antlers). The similarity is noted between these huts (reconstructed in illus.) and the ancient, semi-subterranean, stone and bone reinforced winter houses of the Chukchis, Koryaks and Eskimos of Siberia, and the western and central Eskimos in North America (e.g., the "qarmanq", made of stone and whale ribs). A minute comparison is made with the one most akin, "val'kar" i.e., whale jaw house used to the 19th century by the Chukchis: shape, size and construction technique, subterranean tunnel leading to the river, etc. Though parallels to Chukchi and Eskimo cultures are also shown in other features of material culture (clothing, as revealed by clad female statuettes, artifacts, etc.), author refutes suggestion of a genetic link between proto-Eskimos and the paleolithic (Magdalenian) population of the Siberian interior. The similarity is explained as an environmental result of analogous geographic, economic and climatic factors, and the origin of the Eskimos traced to the neolithic peoples of the southeastern Pacific coast. ***Copy seen:*** DLC.

53741. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Pervaîa paleoliticheskaîa nakhodka v basseĭne Leny; Ponomarevskaîa stoîanka. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury. Kratkie soobshcheniîa, 1946. vyp. 12, p. 7–9, illus.) Text in Russian. ***Title tr.:*** The first paleolithic find in the Lena River basin; the Ponomarevo site.

Describes the large (predominantly flint) scrapers and cores and compares them with late paleolithic finds made on the Angara River. The general character of the Lena site suggests its use as a temporary camp unlike the permanent settlements at Mal'ta and Buret'.

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53742. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Primor'e v I tysîacheletii do nasheĭ ėry. (Sovetskaîa arkheologiîa, 1956. t. 26, p. 54–96, illus.) Refs. Text in Russian. ***Title tr.:*** The Maritime Province in the first millennium B.C.

Describes the inventory of neolithic so-called shell-mound settlements in the Okhotsk Sea area. Notes similarity between certain triangular slate harpoon points and biconical assymetrically bored points found here and in ancient Eskimo sites along the Bering Strait (p. 82); also the resemblance of dagger, spear and arrow points to those of Yakutia and other north Asiatic regions.

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53743. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Raskopki na Severe. (*In:* Po sledam drevnikh kul'tur. v. 1, 1951, p. 11–46, illus. incl. color.) 8 refs. Text in Russian. ***Title tr.:*** Excavations in the north. Previously listed as No. 31091.

Reviews the history of the Russian discovery of northeastern Asia as well as the contradictory theories on the cultural potentials of northern peoples. Closest analogies to the paleolithic culture of Mal'ta and Buret' on the Angara River (dwellings, clothing, economy) are found in that of the Eskimos and Chukchis but inference that these two peoples are descendants of the Angara peoples is rejected. Cultural changes of the post-glacial (i.e., post-paleolithic) period are sketched, the subsequent neolithic stage of the nomadic hunters moving north along the Lena and other Siberian rivers toward the Arctic Ocean and east into Chukotka traced, and the paleolithic and neolithic artifacts described. Bronze and iron originating in the south (Scythians, Huns, Chinese) were carried north by forest and forest-tundra tribes. The Eskimo and proto-Eskimo cultures of the Bering Sea area (Asia and America) are discussed as an example for the high cultural levels attained by peoples of the

far North. The Mongoloid types found in 3rd millennium B.C. burials on Oleniy Island (Lake Onega, Karelia) together with stone artifacts closely resembling those discovered in 1942 at Lake Uolba (lower Lena basin) are related to a westward migration from eastern Asia. ***Copy seen:*** DLC.

53744. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . U istokov kul'tury narodov Dal'nego Vostoka. (*In:* Po sledam drevnikh kul'tur, v. 3, 1954. p. 227–60, illus., incl. col., maps.) Ref. Text in Russian. ***Title tr.:*** At the culture sources of the peoples of the Far East.

Includes a sketch of the stone and bronze age cultures of the fishing and sea-mammal hunting peoples inhabiting Kamchatka and the Maritime Province, considered as forebears of the present-day Golds, Gilyaks and Ul'chi-Tungus. A stone-age migration from the Okhotsk Sea region to Alaska via the Bering Strait is suggested. ***Copy seen:*** DLC.

OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– , *see also:*

Chard, C. S. Archaeology in Soviet Asia . . . *1957.* No. 50168.

Chard, C. S. Northern Asia. *1957.* No. 50173.

Chard, C. S. Observations . . . Lena Neolithic. *1957.* No. 50174.

Chard, C. S. An outline . . . prehistory of Siberia . . . *1958.* No. 50176.

Chard, C. S. The southwestern frontier . . . Eskimo . . . *1957.* No. 50178.

Grach, A. D. Sessiĭa . . . arkheologicheskikh i ėtnograficheskikh issledovaniĭ . . . *1957.* No. 51318.

Kirichenko, A. O chem povedali skaly. *1957.* No. 52290.

Levin, M. G. Anthropological types . . . north-eastern Paleoasiatics . . . *1958.* No. 52783.

Levin, M. G. K . . . odrevneĭshem zaselenii Sibiri. *1950.* No. 52788.

Levin, M. G. Polevye issledovaniĭa . . . 1946 g. *1947.* No. 52790.

Lisitsyna, N. K. Arkheologicheskie . . . RSFSR 1955 g. *1958.* No. 52859.

Michael, H. N. The neolithic . . . eastern Siberia. *1958.* No. 53263.

Semenov, S. A. Sledy upotrebleniĭa na neoliticheskikh orudiĭakh . . . *1941.* No. 54684.

Sibirskie ogni. Raskopki . . . Bratskoĭ . . . *1957.* No. 54863.

Tolstoy, P. The archaeology . . . Lena basin . . . New World relationships . . . *1958.* No. 55481.

Uspenskiĭ, L., *and* K. Shneĭder. Podzemnyĭ muzeĭ Priangar'ia. *1957.* No. 55675.

Zolotarevskaĭa, I. A., *and* A. P. Okladnikov. 32-i mezhdunarodnyĭ kongress amerikanistov. *1957.* No. 56243.

OLÁH, I., *see* Radnót, M., *and* I. Oláh. Die Wirkung des Lichtes . . . *1958.* No. 54195.

53745. OLANDER, GÖSTA, 1893– . Insnöade på Kebnekajse; om fjällfärder och minnen med Torsten Boberg. (Till fjälls, 1957. årg. 29, p. 72–74, illus.) Text in Swedish. ***Title tr.:*** Snowed-up on Kebnekaise; on mountain tours and memories with Torsten Boberg.

Recollections of the Swedish writer and mountaineer, Torsten Boberg, who with the author in 1925 made the first winter ascent of the northern summit of Kebnekaise in north Sweden.

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53746. OLCHOWIK-KOLASIŃSKA, JULIA. Uwagi o zmianie niektórych terminów w literaturze rosyjskiej. (Biuletyn periglacjal'ny, 1958. sec. 3, no. 6, p. 111–15, 271–74.) Text in Polish and English. ***Title tr.:*** Some remarks about changes in the nomenclature used in the Russian literature.

Discusses changes in permafrost terminology as proposed by a terminology committee of the Institute of Cryopedology: e.g., among others, merzlota (frozen ground) should be replaced by merzlyĭ, i.e., merzlaĭa pochva (frozen soil), merzlyĭ grunt (frozen ground), merzlaĭa gornaĭa poroda (frozen rock); vechnaĭa merzlota (permafrost) or mnogoletniaĭa merzlota (long lasting frozen ground) by mnogoletniaĭa kriolitozona (long lasting cryolithozone); deĭatel'nyĭ sloĭ (active layer) by sezonnoprotaivaiushchiĭ sloĭ (seasonally thawing layer); merzlotovedenie (permafrostology) by geokriologiia (geocryology). The proposed changes gradually are coming into use. ***Copy seen:*** DLC.

53747. OLDS, JOHN M. Seal finger or speck finger; a clinical condition observed in personnel handling hair seals. (Canadian Medical Association. Journal, Mar. 1957. v. 76, no. 6, p. 455–57.) 18 refs.

A review based on 23 experiences with Newfoundland sealers and on other sources. Symptoms and signs, etiology (including bacteriological and histopathological aspects), prophylaxis, and treatment, are discussed.

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53748. OLENIN, A. S., *and others.* Torfiânoĭ fond SSSR i ego ispol'zovanie v sel'skom khoziâĭstve. (*In:* Rozanov, N. S. Dobycha i primenenie torfa, 1956, p. 1–62, illus., tables, fold. map.) 3 refs. Text in Russian. ***Title tr.:*** The peat reserve of the U.S.S.R. and its utilization in agriculture. *Other authors:* N.S. Rozanov, N. P. Nikitskiĭ *and* I. Kh. Teregulov.

Total peat resources in the U.S.S.R. are estimated at 158 billion tons, 60% of the world resources. Its distribution (map) is discussed by provinces; as a a rule, peat soil is absent or scarce in northern areas, except Kola Peninsula and Kamchatka where it covers 1–5% of the surface, and parts of Arkhangel'sk Province adjacent to the White Sea, with 5–10%. ***Copy seen:*** DLC.

53749. OLENIN, A. S., *and* **P. N. EFIMOV.** Torfiânye resursy Zapadnoĭ Sibiri i perspektivy ikh ispol'zovaniâ. (Akademiâ nauk SSSR. Sibirskoe otdelenie. Izvestiâ, 1958, no. 4, p. 3–12, tables, diagr., map.) Text in Russian. ***Title tr.:*** Peat resources in Western Siberia and their developmental prospects.

Fifty percent of Soviet peat resources are located in Western Siberia, chiefly in the Ob' basin; 2672 deposits, covering over 16 million hectares, contain over 412 billion cu. m. of peat. Problems of developing these resources for fuel and fertilizers, including production and transportation costs, potential local consumption, etc. are discussed; and plans for further exploration of the deposits are noted. ***Copy seen:*** DLC.

53750. OLKKONEN, EERO, *and* **E. PALOSUO.** A resistance gauge for measurement of ice pressure. (Geophysica, 1958. v. 5, no. 4, p. 221–25, illus., diagr.) 2 refs.

The gauge, consisting of several steel membranes attached to strain gauges, is placed in a hole drilled in the ice, and allowed to freeze. When the membranes bend, the pressure components are measured directly with an external standard bridge. Temperature changes are compensated for by special arrangements, and the device is painted white to reduce effect of solar radiation. One disadvantage is that the gauge melts loose with high surface temperatures.

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53751. OLLENDORF, AAGE. Skogplanting med skolebarn. (Tidsskrift for skogbruk, June 1950. årg. 58, hefte 6, p. 232–36.) Text in Norwegian. ***Title tr.:*** Forest planting by school children.

In Troms province two days are set aside in the school year for forest planting: in 1949, 185,000 seedlings were planted, or 40–70/child in 4–5 effective working hours. "Operation Forest Planting" requires detailed advance planning. Special courses should be given for teachers; and theoretical background materials should be taught in the schools.

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53752. OLONKIN, G. N. Gjennom Nordostpassasjen med Roald Amundsen, noen spredte erindringer. (Polarboken 1957. p. 100–105, illus.) Text in Norwegian. ***Title tr.:*** Through the North East Passage with Roald Amundsen, some memories.

Recollections of how the author joined the *Maud* in Aug. 1918, daily life on board, some minor expeditions, etc.

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53753. OLSEN, JOHANNES, 1894– . Hvad studiet af jordmagnetisme og nordlys fortaeller om ionosfaeren. (Elektroteknikeren, May 1958. årg. 54, nr. 9, p. 157–60, illus., graphs.) Text in Danish. ***Title tr.:*** What the studies of earth magnetism and auroras tell about the ionosphere.

Explains the compass's daily and yearly movements, the magnetic storms' influence on the ionosphere and the earth, and conclusions to be drawn from analysis of the auroral spectrum. Observations made at Godhavn, West Greenland, are mentioned. Magnetic conditions there depend on which side of the sun faces the earth. Danish observation stations at Godhavn, Julianehâb, Scoresbysund, and station Nord will produce five km. of film of the auroras during the IGY. ***Copy seen:*** DLC.

53754. OLSEN, JOHANNES, 1894– . Med Knud Rasmussen til Østgrønland. (Grønland, Nov. 1958, nr. 11, p. 431–37.) Text in Danish. ***Title tr.:*** With Knud Rasmussen to East Greenland.

Recollections of the Sixth Thule Expedition, in which the author, a meteorologist, took part: the 13-day voyage in the *Dagmar* from Julianehåb, Aug. 1931, to Angmagssalik and return to West Greenland again in October. Navigation difficulties, meetings with the Greenlanders, etc., are described.

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53755. OLSEN, JOHANNES, 1894– . Nekrolog: Direktør Helge Petersen, 3. april 1886–26 september 1958. (Grønland, Nov. 1958, p. 440, port.) Text in Danish. ***Title tr.:*** Obituary: Director Helge Petersen, 3 April 1886–26 September 1958.

Contains notes on the life and activities of this physicist, former director of Meteorologisk Institut (Copenhagen). He had particular interest in Greenland and was responsible for setting up a network of meteorological stations there. He was a member of Kommissionen for videnskabelige undersøgelser i Grønland (The Commission for Scientific Exploration in Greenland) and secretary of the Danish national committee for the International Geophysical Year.

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53756. OLSEN, JOHANNES, 1894– . Seks måneders eventyrlig drift med isen ned langs Vestgrønlands kyst. (Grønland, Oct. 1958. nr. 10, p. 397–400.) Text in Danish. ***Title tr.:*** Six months' hazardous drifting with the ice along the West Greenland coast.

Recounts an incident during the Hall expedition of 1871–73 in which a party of ten Americans and nine Greenlanders became separated from their ship, the *Polaris*. They drifted Oct. 1872 to Apr. 1873 with the ice from Smith Sound to a point in the North Atlantic 600 km. south of Greenland. The author met at Diskofjord a Greenlandic woman, Augustine, who in her childhood was a member of the drifting party.

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OLSEN, NORMAN STANLEY, *see* Gollan, F., *and others*. Electrolyte transfer . . . hypothermia . . . anoxia in dogs. *1957*. No. 51252.

53757. OLSEN, WILFORD O. Hookworms, *Uncinaria lucasi* Stiles, 1901, in fur seals *Callorhinus ursinus*, Linn. on the Pribilof Islands. (North American Wildlife Conference, 23rd. Transactions, 1958. p. 152–75, illus., tables.) 30 refs.

A study of the biology and ecology of hookworms in fur seals, with the aim of ascertaining their role in pup mortality and of developing means of control. Of 553 dead pups examined, two thirds had light to heavy infections. No infection was found in 1426 seals over a year old, but a sea-lion, among 70 grown-up animals, was found infected with *U. lucasi*. No other hookworms were found in either group examined. The pathology of uncinariasis is described, as well as several disinfectants and sprays and their effects. ***Copy seen:*** DI.

OLSON, SIGURD T., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

53758. OLSONI, BÖRJE. Sällsynta växter. (Finlands natur, 1941. no. 1, p. 18–21, illus., 3 text maps.) Text in Swedish. ***Title tr.:*** Rare plants.

Stresses need for protection of small, characteristic localities where rare plants are still found, in order to preserve natural landscape types. Protection of plants is inadequate without protection of place. Species (26) protected in Finland and one whose sale is forbidden are listed, many of them arctic varieties.

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OLSSON, PER I., *see* Senning, Å., *and* P. I. Olsson. Changes . . . vascular tonus . . . hypothermia. *1957*. No. 54694.

53759. OLSSON-SIKARE, SIXTEN. Lapplandsäventyr i kanot. (Till fjälls, 1957. årg. 29, p. 56–63, illus.) Text in Swedish. ***Title tr.:*** Lapland adventures in a canoe.

Describes a 250-km. canoe trip from Fauske (67°16′ N. 15°15′ E.) north Norway, to Norra Bergnäs (approx. 66°20′ N. 18°10′ E.) in Swedish Lapland.

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OLSZEWSKI, J., *see* Hawkins, A., *and* J. Olszewski. Glia/nerve cell index . . . cortex . . . whale. *1957*. No. 51637.

OMAROVSKIĬ, A. G., *see* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . Îakutskoĭ ASSR. *1958*. No. 49171.

O'MEARA, DAVID, *see* Clark, G. M., *and others.* An epizootic among eider ducks . . . *1958.* No. 50278.

53760. OMRE, ARTHUR, 1887– . En sommer i det høye nord. (Polarboken 1957. p. 66–75.) Text in Norwegian. ***Title tr.:*** A summer in the far North.

Reminiscences of the summer of 1905 on the north coast of the south island of Novaya Zemlya, where the author as a young boy helped the Swedish botanist Otto Ekstam with plant-collecting.

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53761. OMURA, HIDEO. Report on two right whales caught off Japan for scientific purposes under article VIII of the International Convention for the Regulation of Whaling. (Norsk hvalfangst-tidende, July 1957. årg. 46, nr. 7, p. 374–79, 382–86, 389–90, illus., tables.) Text in Norwegian and English.

Contains preliminary results of the examination of two right whales caught in 1956 with the object of clarifying the taxonomic status, using skeletons and various organs for comparison with other species and studying the nervous system, sense organs, larynx and heart. Details are given on color of the body (dark blue-black) and external parasitism (whale-louse), proportional measurements (table), baleen, food, weight of body parts, reproductive organs and skeleton. Fully illustrated. ***Copy seen:*** DLC.

53762. O'NEILL, J. B. The "Eliason" motor toboggan. (Polar record, Sept. 1958. v. 9, no. 60, p. 267–68, plate.)

Describes the toboggan found most useful by the Canadian Topographical Survey Division, Dept. of Mines and Technical Surveys, for trail-breaking and load-pulling in deep, soft snow along the tree limit. The single-track vehicle (2.3 m. long, 0.8 m. wide, and 1 m. high) is mounted on two skis and powered by a 9-hp., single-cylinder, air-cooled gas engine with magneto ignition; it has a maximum speed of 25 mph., a fuel consumption of 25 mi./gal., and a towing capacity of 1,000 lb., depending on snow conditions. The toboggan can be operated at 50° or more below freezing. Its advantages are lightness and trail-breaking ability; it can be used on floating ice. The drawbacks are: it lacks a driver's cabin, and the track and gears become iced up in slush.

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53763. ONENKO, SULUNGO N. O chastiſsakh v nanaĭskom ſazyke. (Akademiſa nauk SSSR. Institut ſazykoznaniſa. Doklady i soobshcheniſa, 1958. no. 11, p. 95–106.) 15 refs. Text in Russian. ***Title tr.:*** Particles in the Gold language.

Discusses the lexic properties and emotion-nuance value expressed by grammatic particles used in Gold either as link-words or suffixes.

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53764. ONISHCHENKO, OLEG. Dorogi vedushchie k schast'ſu. (Na severe dal'nem, 1957, kniga 7, p. 4–15.) Text in Russian. ***Title tr.:*** Roads to happiness.

Sketch of life in Chukotka: a reindeer-sled trip from Nunyamo (65°35′ N. 170°35′ W.) to Inchoun (Inchovyn, 66°15′ N. 170°10′ W.); the Stalin collective farm and its development under its Russian chairman, Aleksandr Nikolaevich Nazarov. The Chukchis who collect drift-wood along the sea shore are learning wood-working; houses are replacing yarangas; farm income has risen nearly one million rubles a year.

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53765. ONNERFELT, STIG E. Val av trädslag vid plantering i övre Norrland. (Skogen, *Stockholm,* Mar. 21, 1958. årg. 45, nr. 6, p. 171.) Text in Swedish. ***Title tr.:*** Selection of trees for planting in upper Norrland.

Spruce has been preferred to pine for high altitude and other hard regenerative areas in Norrland, as better adapted to fall planting and because the seedlings are more resistant to snow and the climate generally. Older spruce stands in the area, however, do not thrive. Frozen ground is deeper and lasts longer in spruce than in pine or mixed stands. Hence the vegetation period and viability of spruce are lower than in pine. Pine is more resistant to root injuries at planting, and to damage from reindeer trampling and melting snow, preconditions for tree-killing fungi. The viability of spruce in high altitude areas should be studied further.

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53766. ONTARIO. DEPT. OF LANDS AND FORESTS. Ontario resources atlas. Toronto, Oct. 15, 1958. 36 text maps, in color.

Portrays forest, watershed, wildlife and other natural resources distribution as of May 31, 1958; also indicates extent of forest resources inventory by aerial photographic and ground survey coordination,

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and present status of mosaic coverage. Maps (20) showing all or part of northern Ontario include those on geological formations, forests, principal watersheds, altitudes, soils, map coverage, snowfall, moose, caribou, marten, and fisher.

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53767. OOSTEROM, M. G. En hornblenderik sone i Seiland-peridotitten; foreløbig meddelelse. (Norway. Geologiske undersøkelse. Årbok, 1953. nr. 188, p. 51–53, text map.) 2 refs. Text in Norwegian. Summary in English. ***Title tr.:*** A hornblende-rich zone in the Seiland peridotite.

Hornblende crystals, 2–5 cm. long, represent 40–50% of the rock in a zone within the peridotite outcrop on Seiland island (70°25′ N. 23°10′ E.) off northern Norway. It is believed that metasomatic alteration in a zone of tectonic weakness in the hornblende-pyrozene-peridotite has produced the enriched rock elsewhere called cortlandite. The accompanying minerals are olivene and pyrozene.

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53768. OPLER, MARVIN KAUFMANN, 1914– . Culture, psychiatry and human values; the methods and values of social psychiatry. With a foreword by Thomas A. C. Rennie. Springfield, Ill., C. C. Thomas, 1956. 13, 242 p. 165 refs.

A "résumé of mental illness as seen in the broad framework of cultural differences and determinants." Part 1, deals with the social and cultural backgrounds of mental illness; pt. 2 (p. 168–218) with psychology of cultures and peoples. Occasional illustrative references are made to Eskimos, Alaskan and Greenland, and some peculiar patterns of their disorders, personality and certain habits; also to Northwest Coast Indians, Salteaux, Cree, etc. Arctic hysteria of Lapps, Eskimos and Siberian tribes, is also cited to illustrate certain points.

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53769. OPPEDAL, MAGNE. Thor Iversen 1873–1953. (Polarboken 1957. p. 45–49.) Text in Norwegian.

Sketch of the life and work of this prominent figure in Norwegian fishery research. He joined the *Michael Sars* in 1900, became fishery adviser in 1912 and by 1923 was the leader of fishery research in polar waters (cf. No. 7916–7923).

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53770. OPSAHL, WALDEMAR. Våre polare furuskoger. (Tidsskrift for skogbruk, Mar., Apr. 1934. årg. 42, nr. 3, 4, p. 67–71, 123–31, illus.) Text in Norwegian. ***Title tr.:*** Our polar pine forests.

The scattered growths of pine found in inland areas of Norway north of the Arctic Circle are remnants of continuous, fertile pine forests which covered the area more than 2,500 years ago, when the climate was milder and drier. With colder and damper climatic conditions, the forests receded from coastal and exposed areas, and the remaining forests have degenerated. Low regeneration is not chiefly due to scarcity of seed, which does ripen in warm summers, but to mice, reindeer, and, above all, degeneration of the soil. Work done during recent years for the preservation and regeneration of these valuable forests is described and recommendations are given for care of arctic pine forests. ***Copy seen:*** DA.

53771. ORDING, ASBJØRN. Klimaforandringer og de polare furuskoger. (Tidsskrift for skogbruk, June 1935. årg. 43, hefte 6, p. 171–77, maps.) Text in Norwegian. ***Title tr.:*** Climatic changes and polar pine forests.

Reviews the literature on the relation between climatic changes and pine forests in Finnmark and Troms provinces, with emphasis on J. G. Juel's *Furuens utbredelse i Finnmark og Troms*, pub. 1925 (copy not seen). Juel attributes the degeneration and recession of former fertile forests to the inability of seed to ripen in the present cold climate and to degeneration of the soil. From pollen studies in Troms marshland, Ording shows climatic change to be the main cause of local pine forest recession. The pollen diagrams, however, do not show whether the present pine forests are within the natural, climatic limits, or are relict from an earlier warmer and dryer period, with degeneration still going on. ***Copy seen:*** DA.

53772. ORLANDO, HENNING. Nya bostäder i Norrland. (Tidning för byggnadskonst, Dec. 1952. årg. 44, nr. 23, p. 927–29, illus.) Text in Swedish. ***Title tr.:*** New dwellings in Norrland.

Contains a brief survey of housing projects under construction in northern Sweden, including several large apartment buildings in Luleå and Kiruna. The conventional construction of one- and two-story buildings is criticized; better utilization of space in the small apartments is suggested. ***Copy seen:*** DLC.

53773. ORLOV, BORIS PAVLOVICH. Problema Kaspiia. (Nauka i zhizn', Sept. 1957. god 24, no. 9, p. 13–16, maps incl. 1 col.) Text in Russian. ***Title tr.:*** The Caspian Sea problem.

Due to the warming of climate and to the use of large water masses in irrigation and of hydroelectric station reservoirs, the Volga River discharge has diminished considerably and the water level of the Caspian Sea by 1957 was already 2.5 m. lower than in 1930. This has serious implications for fisheries and the economy of large coastal areas. Several plans to remedy the situation are outlined; one (advanced by G. V. Dmitriev) involves diversion of part of the Pechora and Severnaya Dvina waters into the Volga; another suggested is M. M. Davydov's plan to utilize Ob' and Yenisey River waters. ***Copy seen:*** DLC.

53774. ORLOV, FEDOR BORISOVICH. Intensivnost' vyzhimaniia vskhodov i vliianie nekotorykh faktorov na nee v usloviiakh Severa. (Izvestiia vysshikh uchebnykh zavedenii. Lesnoĭ zhurnal, 1958, no. 4, p. 65–70, illus., tables.) 5 refs. Text in Russian. ***Title tr.:*** The intensity of frost pressure on seedlings and the influence therein of certain factors under conditions of the North.

In Arkhangel'sk Province, up to 50% of the pine and 80% of the spruce seedlings are winter-killed, being forced out of the ground by frost action. Factors involved in this phenomenon (weather conditions, soil, moisture, moss cover, etc.) were studied by the Arkhangel'sk Forestry Institute in 1955–57; the results are reported and discussed. Effective means for counteracting this process are not yet devised. ***Copy seen:*** DLC.

53775. ORLOV, FEDOR BORISOVICH. Osobennosti ukhodov za lesnymi kul'turami na Severe. (Lesnoe khoziaĭstvo, May 1957. god 10, no. 5, p. 23–26, tables.) Text in Russian. ***Title tr.:*** Special care in forest culture in the North.

Methods and technique used in care of the young forest since 1940 are discussed, with consideration of climatic and soil conditions and of top soil dynamics in relation to other factors in tree growth. The main concern in such forest care are cultivation, weed removal, loosening the soil for higher moisture absorption, etc., and frost protection of young sprouts. In each case, attention should be given to the biological and ecological properties of the species, to local climatic and soil characteristics, to age, etc. The softening of the ground must be stopped at mid-August to avoid early frost damage to the sprouts. Forest care operations are carried out manually; the application of machine methods is not widely developed as yet.

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53776. ORLOV, G. A. Zabolevanie nog posle povtornykh okhlazhdeniĭ v vode. (Khirurgiia, June 1957. god 33, no. 6, p. 91–96.) 12 refs. Text in Russian. Summary in English. ***Title tr.:*** Ailment of feet following repeated chills in water.

Account of investigation into this condition in 34 patients among northern fishermen and seamen. Early symptoms were not pronounced; in prereactive and reactive stages, inflammation and anoxia of the tissue develops followed by vegetative neuritis and endovasculitis.

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53777. ORLOV, M. A. Kamchatskaia oblast' v shestoĭ piatiletke. (Dal'niĭ Vostok, July–Aug. 1957. god 25, no. 4, p. 178–87.) Text in Russian. ***Title tr.:*** Kamchatka Province in the sixth five-year-plan.

Condensed outline of the present state of the economy of Kamchatka Peninsula and plans for development: coal, peat and forests; fisheries and their mechanization; agriculture, vegetable-growing, livestock, fur trade and fur farming; development of industry; growth of Petropavlovsk; improvement of transportation and communications; schools, scientific institutions and welfare. Statistical data are presented. The arable land area is to be doubled during the sixth five-year-plan, to 18,000 hectares, and cattle increased 30 percent above 1956 to 12,000 head. ***Copy seen:*** DLC.

53778. ORLOV, VLADIMIR. Atomnyĭ ledokol "Lenin." (Ogonëk, Sept. 1958. god 36, no. 37, p. 1–4, illus.) Text in Russian. ***Title tr.:*** Atomic ice-breaker *Lenin*.

Describes this 16,000 ton vessel, 134 m. long and 30 m. wide, under construction in the Leningrad shipyard. The combined power of the three screws amounts to 44,000 hp. or 2¾ hp./ton, which exceeds considerably that of any other ice-breaker. The principals in the construction, headed by Academician A. P. Aleksandrov, are noted, also the three

water-type nuclear reactors, comfort of the cabins and other accommodations.

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53779. ORLOVA, V. V. Granit͡sy boreal'nykh klimatov ravninnoĭ chasti SSSR; pod red. E. S. Rubinshteĭn. (Leningrad. Glavnai͡a geofizicheskai͡a observatoriĭa. Trudy, 1938. vyp. 19, p. 1–184, diagrs., maps (3 fold.), tables.) 98 refs. Text in Russian. Summary in English. ***Title tr.:*** The boundaries of boreal climates in the plains region of the U.S.S.R.; E. S. Rubinshteĭn, editor.

Monographic study on climatic zones. A critical survey is given of methods and systems of climatic zoning, from ancient times to present-day theories of A. Supan, W. Köppen, E. Ravenstein, T. Bergeron, L. S. Berg, A. Kaminskiĭ, and others. Meteorological conditions, chiefly air circulation, at the border of the taiga zone (termed zone of "boreal climate") are analyzed for three areas: (1) between the Yenisey and Lena basins, where the taiga zone divides into humid western and dry eastern parts, with typical conditions around Dudinka and Turukhansk on one side and around Yakutsk and Bulun on the other (p. 75–120); (2) the northern taiga border region next to the tundra zone, characterized by conditions at several arctic and subarctic meteorological stations, mainly in European U.S.S.R.: Kola, Mezen', Malyye Karmakuly, etc. (p. 120–69); (3) the southern and western border of the taiga zone (p. 169–77). Consideration of air circulation helps considerably in understanding and establishing the boundaries of climatic zones.

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53780. ORMA, E. J. The effects of cooling the feet and closing the eyes on standing equilibrium; different patterns of standing equilibrium in young adult men and women. (Acta phsyiologica scandinavica, 1957. v. 38, fasc. 3–4, p. 288–97, tables.) 20 refs.

Women standing with their soles in ice water and eyes closed were found to sway significantly wider than men in similar conditions. The difference is attributed to differing muscle strength between the sexes. ***Copy seen:*** DNLM.

53781. O'ROURKE, CALVIN O. Electronic trail-finding. (Control engineering, May, 1957. v. 4, no. 5, p. 117+, illus. diagrs.)

A system of navigating Weasels along trails in the Arctic during poor visibility, is described. The trail consists of two wires forming a loop, buried 75 ft. apart in snow, and connected to a 60 cps. transformer system at one of the terminals. The Weasel is equipped with an antenna assembly, formed as a spherical configuration, an electronic receiver, a control panel, and a power supply. Energy induced in the antenna at various angles by the trail wires, is fed to a phase detector, which converts the signals to dc current and feeds it to a panel meter. The relative phase between the vertical and horizontal signal defines the meter's dc polarity and presents (visually) the vehicle's position on the trail. A buzzer and a warning light, included in the circuit, warn the driver if the vehicle goes off the trail or if the current in the trail wires is disconnected.

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ORR, KENNETH D., *see* Blair, J. R., *and others.* Sequelae to cold injury . . . *1957.* No. 49766.

53782. ORTENBURGER, LEIGH. Climbs and expeditions, northern St. Elias Range. (American alpine journal, 1957. v. 10, no. 2, issue 31, p. 151–52.)

Contains short account of Sierra Club St. Elias expedition, Aug. 19–Sept. 6, 1956, 25 members in all, to the peaks at the head of the Wood and Brabazon glaciers, viz, Mt. Wood (15,880 ft.), Mt. Craig (13,250 ft.), and several unnamed peaks. Attempts on Mt. Wood and Mt. Craig, and ascents of a few peaks, about 10,000 ft., near Wood Glacier-Wolf Creek Glacier divide, are reported.

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ORTHMAYR, ALAJOS, *see* Csalay, L., *and others.* Hipotermia . . . *1957.* No. 50399.

53783. ORVIG, SVENN, 1920– . McGill in the International Geophysical Year 1957–58. (McGill news, Autumn 1957. v. 38, no. 4, p. 22–23, 3 illus.)

Notes participation by McGill graduate students in Canadian IGY work. Study of micro-meteorological conditions on the icecap north of Lake Hazen, on Northern Ellesmere, with a glaciological expedition, led by G. Hattersley-Smith, in summer 1957; a wintering (1957–58) party of four at Lake Hazen will take regular weather observations and study vegetation, terrain, and lake ice, In summer 1958, meteorological work will be continued at

this base, as well as field work of various Canadian scientists. ***Copy seen:*** DLC.

53784. ORVIG, SVENN, 1920– . McGill University, et center for arktisk forskning i Canada. (Polarboken 1957, p. 91–99, illus., port.) Text in Norwegian. ***Title tr.:*** McGill University, a center for arctic research in Canada.

Reviews arctic interests and studies with details on the field laboratory at Knob Lake and on the Arctic Institute of North America. ***Copy seen:*** DLC.

ORVIG, SVENN, 1920– , *see also* Hare, F. K., *and* S. Orvig. The arctic circulation. *1958.* No. 51584.

ORVIG, SVENN, 1920– , *see also* Nebiker, W. A., and S. Orvig. Evaporation and transpiration . . . *1958.* No. 53521.

53785. ORVILLE, HOWARD T., *and* **J. A. MORRIS.** Stand by for climate control. (Saturday evening post, Nov. 29, 1958. v. 231, no. 22, p. 19–21, illus.)

Four theoretical possibilities in eventual weather control are sketched, one of them, modification of the north polar ice and of the low temperatures of Siberia by atomic-powered engineering projects. A Russian plan for weather modification is noted, which includes damming the Ob and the Yenisey, and building earth dams across the Pechora, Vychegda, and Sukhona, creating huge lakes. Russians' discussion of building a dam across Bering Strait, and pumping warm water from the Pacific into the Arctic is also noted. ***Copy seen:*** DLC.

53786. ORVIN, ANDERS KRISTIAN, 1889– . Harald Ulrik Sverdrup, 15. november 1888–21. august 1957. (Naturen, 1958. årg. 82, nr. 3, p. 131–35, illus.) Text in Norwegian. ***Title tr.:*** Harald Ulrik Sverdrup, November 15, 1888–August 21, 1957.

Obituary, with outline of Sverdrup's training and scientific achievements.
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53787. ORVIN, ANDERS KRISTIAN, 1889– . The place-names of Svalbard; supplement 1, dealing with new names 1935–55. Oslo, 1958. 133 p. (Norway. Norsk Polarinstitutt. Skrifter nr. 112) Refs. (Cf. No. 12566.)

Lists approx. 2500 new names, with information as in No. 12566. Some 1,300 of these names derive from six sheets, pub. 1948–1955, of the map of Svalbard (1:100,100) in preparation by the Norsk Polarinstitutt. ***Copy seen:*** DGS.

53788. OSARA, N. A. Valtion metsämaiden verotus. Helsinki, 1954. 14 p. tables. (Acta forestalia fennica, v. 61, no. 29.) Text in Finnish. Summary in English. ***Title tr.:*** Taxation of state woodlands.

Taxation of state-owned forest property is analyzed and found nominal when compared with that of private owners and/or operators, both corporate and individual. Comparison is made of tax returns in northern and southern Finland, 68% of the state forests being in Lapland County. State taxation of small-farm woodlands is also considered. It is lower than that on state forests. Such holdings have been increasing in number as state forests are broken up for land settlement purposes.
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53789. OSAULENKO, P. L. Sovershenstvovanie prîmykh vrubov na rudnikakh kombinata Apatit. (Gornyĭ zhurnal, May 1958, no. 5, p. 26–28, illus.) Text in Russian. ***Title tr.:*** Perfection of the straight cut-ins at the Apatite Combine mines.

Depth and arrangement of straight cut-ins are discussed, their positive and negative characteristics considered. The arrangement of the holes are analyzed and illus. ***Copy seen:*** DLC.

53790. OSGOOD, CORNELIUS, 1905– . Ingalik social culture. New Haven, Yale University Press, 1958. 289 p. illus., maps, tables. 2 refs. (Yale University. Dept. of Anthropology. Yale University publications in anthropology, no. 53.)

An ethnographic reconstruction of the life and customs of the Anvik-Shageluk group on the Yukon River, based on author's field work and data provided by an Ingalik informant, Billy Williams. The communal activities of the men in the kashim (hunting and fishing, sports and games, trade and warfare, ceremonies, religious rites and shamanism) and individual family life (housing, food and providing of food, marriage, child bearing and care, travel and transportation, etc.) are discussed in turn and the aboriginal (now disappearing) behavior pattern analyzed. Notes from Rev. J. W. Chapman's daily weather observations, Sept. 1887–June 1888, are appended.
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53791. OSHANIN, LEV. Dorogoĭ kraĭ iunosti. (Sovetskaia zhenshchina, Oct. 1957, no. 10, p. 34–35, illus.) Text in Russian. ***Title tr.:*** Beloved land of our youth.

Reminisces about the Komsomol labor brigades helping to build Kirovsk in the first five-year plan; it is now the center of the Kola Peninsula apatite industry.

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53792. OSIBA, SUSUMU. The seasonal variation of basal metabolism and activity of thyroid gland in man. (Japanese journal of physiology, 1957. v. 7, p. 355–65, illus., tables.) 19 refs.

Account of one or two year studies of Japanese male adults. Metabolism was found to fluctuate with the seasons, increasing with the cold. There is, however, a lag behind environmental temperature, metabolism being higher in the spring than in the fall. Serum P.B.I. also showed seasonal variations, both sets of experiments indicating a thyroid activity underlying these changes.

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53793. OSIPOV, PETR OSIPOVICH. Novyĭ sposob razrabotki merzlykh gruntov. Leningrad, Gos. izd-vo literatury po stroitel'stvu i arkhitekture, 1957. 26 p. illus., tables, diagrs. 3 refs. Text in Russian. ***Title tr.:*** A new method for working frozen ground.

Describes a ground-cutting device designed by the author, and summarizes operating experiences under various conditions. The cutter (named ZIO–1) consists essentially of a toothed steel disc of 80–90 cm. diameter, driven by an electromotor and rotating at a speed of 800–1750 rpm, depending on the soil type. Connected to an external power source, the 170–200 kg. device may be operated by two men; average progress is 2 cm./sec. Other methods of working frozen ground are briefly outlined.

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53794. OSIPOV, S. Taezhnaia neft'. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 16, illus., 2 plates incl. 1 col.) Text in Russian. ***Title tr.:*** Taiga petroleum.

Notes on the town of Ukhta and the oil fields. More than half the soot for the rubber industry is produced in Ukhta factories using local natural gas, and new rich deposits have been found at Dzhebol, 230 km. away. Photos. of Ukhta and of the Dzhebol gas fields are included.

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53795. OSIPOV, VALERIĬ. V kraiu almazov. (Oktiabr', Apr. 1958. god 35, no. 4, p. 173–82.) Text in Russian. ***Title tr.:*** In the land of diamonds.

Story of the discovery of kimberlite pipes in the Vilyuy River basin: diamond-prospecting methods used by the Amakinskaia Expedition, especially its method of following the pyrope occurrence; discovery of the first pipe "Zarnitsa" by L. Popugaeva in 1954; discovery (by IU. Khabardin in 1955) and industrial development of "Trubka mira" (Peace Pipe) in the Malaya Botuobiya River basin.

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53796. OSIPOV, VALERIĬ. V kraiu almazov; putevoĭ dnevnik. (Druzhba narodov, Mar. 1957, no. 3, p. 128–46.) Text in Russian. ***Title tr.:*** In the land of diamonds; a travel diary.

A popular yet detailed, account of the Tungus (later called Amakin) expedition's search for diamonds on the Siberian platform from 1947; scattered finds in 1949 along the Vilyuy River; discovery of the first diamond-bearing kimberlite pipe Zarnitsa in 1954, subsequent finds of other pipes and, in 1955, of Trubka mira, the richest of all Yakut diamond deposits, in the Khabardin ravine. The beginning of its commercial exploitation and living conditions at the settlement Mirnyy are described.

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53797. OSIPOVA, G. N. Skarny nizov'ev reki Indigirki i sviazannaia s nimi rudonosnost'. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958. vyp. 9, p. 66–72.) Text in Russian. ***Title tr.:*** Skarns in the lower Indigirka basin and their ore-bearing capacities.

Presents characteristics of skarns in the Ulakhan-Sis Ridge (approx. 68°45′–70°20′ N. 148°–153° E.) and adjacent massifs. The structure and composition of the Ulakhan-Sis are reviewed. The predominantly Paleozoic deposits are divided into three series. Intrusions of granitoids are treated. Mineral appearances in skarns are discussed. The importance of skarn studies for locating useful minerals is considered. It is noted that Paleozoic calcareous rocks and acid intrusions may provide the most promising results.

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OSIPOVA, Z. V., *see* Sychev, V. I͡A., *and* others. O stratigrafii mezozoĭskikh . . . Zhiganskogo . . . *1957.* No. 55291.

53798. OSMININ, P. Chto meshaet promyslu? (Okhota i okhotnich'e khoz͡iaĭstvo, Feb. 1957, no. 2, p. 54, illus.) Text in Russian. ***Title tr.:*** What hampers the trade?

Kamchatka is rich in fur-bearers and has able hunters; but development of fur hunting is impeded by shortcomings in supplying hunters with equipment, weapons and traps. ***Copy seen:*** DLC.

53799. OSSIANNILSSON, FREJ, 1908– . *Acyrthosiphon calvulus,* n. sp., a new aphid (Hem. Hom.) from Spitzbergen. (Entomologisk tidskrift, 1958. årg. 79, häfte 1–2, p. 66–68, 3 illus.)

Describes: Acyrthosiphon calvulus n. sp., collected on *Poa arctica* f. *vivipara* in Sassendalen, Vestspitsbergen, Aug. 1, 1954. by A. Holm. ***Copy seen:*** DA.

53800. OSSIANNILSSON, FREJ, 1908– . On the psyllid of the marsh marigold, *Aphalara calthae* (Linn.). (Finska vetenskaps-societeten. Commentationes biologicae, 1951. t. 12, no. 13, p. 1–8, 7 illus., table.) 7 refs.

Contains a key to the Swedish species of the *Calthae* group of jumping plant-lice, a table of measurements and distributional data, *Aphalara calthae* occurring in Swedish and Russian Lapland, and *A. borealis* in northern Finland.

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OSTENFELD, CARL EMIL HANSEN, 1873–1931, *see* Böcher, T. W. *Hieracium acranthophorum* var. *isortoquense* . . . *1957.* No. 49798.

OSTROUKHOVA, V. A., *see* Kuznet͡sova, L. N., *and others.* Vliiȃnie okhlazhdeniȃ . . . obmen piridinovykh i tiaminovykh . . . *1956.* No. 52596.

53801. OSTROUMOV, ÉSPER ALEKSANDROVICH. Raspredelenie margant͡sa v donnykh otlozheniȃkh Okhotskogo moriȃ. (Akademiȃ nauk SSSR. Izvestiȃ, ser. geologicheskaȃ, Sept.–Oct. 1955, no. 5, p. 83–88, text map, table.) 33 refs. Text in Russian. ***Title tr.:*** Distribution of manganese in the bottom sediments of the Sea of Okhotsk.

Presents results of Institute of Oceanology investigations over many years. Five groups of sediments are distinguished according to percentage of manganese and mapped. The different zones are characterized and explained. The origin and sources of manganese are considered. Terrigenous, volcanic and biological factors are outlined, and manganese content of the Okhotsk is compared with other seas. ***Copy seen:*** DLC.

53802. OSTROUMOV, ÉSPER ALEKSANDROVICH. Raspredelenie titana v otlozheniȃkh Okhotskogo moriȃ. (Geokhimiȃ, 1956, no. 1, p. 90–95, table, maps incl. 1 fold.) 21 refs. Text in Russian. ***Title tr.:*** Titanium distribution in sediments of the Sea of Okhotsk.

Presents results of investigation by the Institute of Oceanology of the U.S.S.R., using 209 stations. Four depressions of the Sea are reviewed, and TiO_2 distribution (percentage data) and its zonality are mapped. The zones of titanium content are characterized and the unequal distribution is explained as variation in volcanic and terrigenous sediments and biological processes.

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53803. OSTROUMOV, ÉSPER ALEKSANDROVICH. Soedineniȃ sery v donnykh otlozheniȃkh Okhotskogo moriȃ. (Akademiȃ nauk SSSR. Institut okeanologii. Trudy, 1957, t. 22, p. 139–57, illus., tables, maps.) 23 refs. Text in Russian. ***Title tr.:*** Sulfur compounds in the bottom deposits of the Okhotsk Sea.

Following an introduction on the place of sulfur compounds in marine sediments in general, information and data are presented on the material and methods; distribution of sulfides and of free hydrogen-sulfide; forms of sulfur compounds at various stations: sulfides, sulfates, organic sulfur, free sulfur, etc. ***Copy seen:*** DLC.

OSTROUMOV, ÉSPER ALEKSANDROVICH, *see also* Petelin, V. P., *and* É. A. Ostroumov. O nekotorykh osobennostiȃkh raspredeleniȃ zheleza . . . *1958.* No. 53951.

53804. OSTROVSKIĬ, DMITRIĬ NIKOLAEVICH. Putevoditel' po sĕveru Rossii: Arkhangel'sk, Bĕloe more, Solovet͡skiĭ monastyr', Murmanskiĭ bereg, Novaȃ Zemlȃ, Pechora. Izd. vtoroe. S.-Peterburg, Tip. A. Benke, 1899. 145 p. fold. col. plans and maps. Over 60 refs. Text in Russian. ***Title tr.:*** A guidebook for the Russian North: Arkhangel'sk, White Sea, Solovetskiy Monastery, Murman coast, Novaya Zemlya, Pechora. 2d ed.

Handbook for travelers, with a brief sketch of railroad and river routes northward from Petersburg and Moscow, a general outline of Arkhangel'sk Province then including Kola Peninsula (p. 16–27). Descriptions follow of various places: Arkhangel'sk city and side trips to Kholmogory and the western ("summer") shore of Dvinskaya Bay (p. 27–52); to Solvetskiy Monastery, along Onezhskaya Bay to Onega, Suma, Soroka, Solovetsk and Kem', also along Kandalaksha Bay to the Monastery, Kem', Keret', Kovda, Kandalaksha, Umba and Kuzomen' (p. 68–81); in Kem' District "by the Karelians," from Kandalaksha across the Peninsula to Kola "by the Lapps" and along the Murman coast to Norway (p. 81–110); in Varangerfiorden (p. 110–115); to Belush'ya Bay, Malyye Karmakuly and Matochkin Shar on Novaya Zemlya (p. 115–20); along the north coast to the Pechora and Yugorskiy Shar Strait (p. 120–27). Each route is described with local maps and information on travel facilities, general character of the area, its physical features, settlements, population, economic conditions, history and references to basic literature. Appended are: list of 188 small lakes on Solovetskiye Islands (cf. map 1:168,000, at p. 52–53); glossary of local terms, and index of names. ***Copy seen:*** DLC.

53805. O'SULLIVAN, J. B., *and others.* Geology and bituminous stabilization of soil materials at Point Barrow, Alaska. Ames, Iowa, June 30, 1958. 96 p. 13 illus., 3 maps incl. 2 fold., 18 diagrs., 16 tables. (Iowa. State College. Engineering Experiment Station. Final report III, Project 320–S. Contract NONR–530(04).) 56 refs. *Other authors:* D. T. Davidson, K. M. Hussey, R. L. Handy *and* C. J. Roy.

Field studies of soil materials in Alaska were begun in 1954, to determine areal extent, geologic and engineering properties, and the trafficability characteristics of soils in the Matanuska, Big Delta, Fairbanks, and Point Barrow areas. Deficiencies of mechanical stabilization, and need for a satisfactory waterproof surface course, indicated a study of bituminous stabilization, using an available Alaskan crude oil as waterproofing and binding agent. Climatic factors, geology, and geomorphology of the Point Barrow area are described; the study of the crude oil and asphaltic residue is outlined; tests, and recommended pavement design are discussed. Conclusions (among others): bituminous stabilization of base and surface courses can be effected by available crude oil only after blowing; the beach is the most favorable location for roads and runways; construction on the tundra proper should be avoided. ***Copy seen:*** DGS.

53806. O'SULLIVAN, J. B., *and* **K. M. HUSSEY.** Problems associated with soils stabilization in the vicinity of Point Barrow, Alaska. (Iowa Academy of Science. Proceedings, 1957. v. 64, p. 429–42, illus., profiles, maps.) 5 refs.

Presents a part of results of research carried on by Dept. of Geology and Iowa Engineering Experiment Station, both of Iowa State College. Three parties visited Barrow in 1954 and 1955 with participation of engineers: Dr. D. T. Davidson, R. L. Handy, J. O'Sullivan, and geologists: C. J. Roy, Dr. K. Hussey. Location, settlements, climatic factors, and nature of soils are described; the need for soil stabilization is discussed. Silt, gravel, and sand, clay, ancient beach ridge coarse gravel, and natural asphaltic crude oil are available; their composition, quantity and quality, suitability and accessibility are noted. Mechanical stabilization is stressed as the most practical approach. Bituminous stabilization using asphaltic crude oil is a possibility. The most applicable solution may be combination of these two. ***Copy seen:*** DGS.

53807. OSWALT, WENDELL H., 1927– . A new collection of old Bering Sea I artifacts. (Alaska. University. Anthropological papers, May 1957. v. 5, no. 2, p. 91–96, illus.) 2 refs.

A description of one flinteous and 24 ivory artifacts, presumably from the Okvik site on Punuk Island, decorated in Old Bering Sea I style and rediscovered in a warehouse of the University of Alaska Museum: human figurines, harpoon heads, a socket piece with zoomorphic design, boat hook, crimping tool, etc. Several items belong to as yet unreported forms: a hermaphroditic figurine, a small wingless harpoon shaft weight, a flaking tool handle with a hooked end, etc. ***Copy seen:*** DLC.

53808. OSWALT, WENDELL H., 1927– . A western Eskimo ethnobotany. (Alaska. University. Anthropological papers, Dec. 1957. v. 6, no. 1, p. 17–36.) 15 refs.

An outline of botanical knowledge and

of plant use among the inhabitants of Napaskiak, on the lower Kuskokwim, seven miles below Bethel; with notes on ethnobotanical knowledge among Alaskan Eskimos generally. The inhabitants' ideas about plants in general and the species (68) from the vicinity in particular; their use of plants as food, as fuel or artifacts, and medical, ceremonial and cosmetic use are discussed in detail. The native name is given and explained and plants not utilized are also described. A short review of the place of plants in Eskimo diet concludes the account.

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OSYKO, T. I., *see* Aleskerova, Z. T., *and others.* Stratigrafiîa . . . *1957.* No. 49247.

53809. OSZACKI, JAN., *and others.* Objętość wątroby, nerek i jelita cienkiego oraz ruchy serca w przebiegu hipotermii u kotów. (Polski przegląd chirurgiczny, Apr. 1957. t. 29, no. 4, p. 333–38, illus.) 9 refs. Text in Polish. Summary in English. *Other authors:* J. Maj, *and* M. Cegielski. ***Title tr.:*** Volume of liver, kidneys and small intestine, and cardiac movement during hypothermia in cats.

In addition, records were studied of respiration, pulse and arterial pressure. With increasing hypothermia respiration became slower and shallower, arterial pressure decreased, heart action slowed down with amplitude at first increased and then decreased. There was no change in organ volume.

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53810. OSZACKI, JAN, *and others.* Wpływ krwotoku i przetaczania krwi na zachowanie się objętości narządów i ruchów serca u kotów w hipotermii. (Polski przegląd chirurgiczny. Apr. 1957. t. 29, no. 4, p. 325–31, illus.) 7 refs. Text in Polish. Summary in English. *Other authors:* J. Maj *and* M. Cegielski. ***Title tr.:*** Effect of hemorrhage and blood transfusion upon the volume of organs and cardiac action in hypothermic cats.

Account of experiments with cats cooled down to about 27° C. No differences were observed in circulatory regulation or reaction to hemorrhage and transfusion between the hypothermic and normothermic animals.

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53811. OTIS, ARTHUR BROOKS, 1913– , *and* J. R. JUDE. Effect of body temperature on pulmonary gas exchange. (American journal of physiology, Feb. 1957. v. 188, no. 2, p. 355–59, illus., tables.) 9 refs.

Account of measurements of the arterial-alveolar CO_2-gradient and pulmonary diffusing capacity in normal and hypothermic dogs. At low body temperature, diffusing capacity was reduced, but still adequate for transfer of both CO_2 and O_2, because the metabolic requirements for gas exchange are also reduced. ***Copy seen:*** DLC.

53812. OTTOSEN, PETER H. The *Vitiaz* in the Okhotsk Sea. (Navigation, Spring 1957. v. 5, no. 5, p. 224–30, diagrs., chart, maps.) 3 refs.

Oceanographic data obtained by Admiral Makarov on his voyage of 1886 (cf. No. 10760) are summarized and discussed. Oceanographic stations maintained by the vessel in this area are mapped. The temperature-depth and density-depth structures of the cold current passing east of Kamchatka are illustrated together with similar relationships with the Okhotsk Sea. A modern temperature-salinity plot is given for several stations in the Sea. A similar plot of stations maintained in Tatary Strait is given to illustrate the flow of Amur River water. ***Copy seen:*** DLC.

53813. ÔURA, HIROBUMI, *and* **S. KINOSITA.** On the measurements of the bending and compressive strengths of the frozen soil, the sea ice and the pond ice. (Teion kagaku, 1956. ser. A, no. 15, p. 137–47, illus., tables.) 12 refs. Text in Japanese. Summary in English.

Tests on beams and cubes of frozen soil with horizontal ice layers at 0° to −2° C., and sea and pond ice at 0° C. are described. Bending and compressive strength of standard samples of the three substances are determined and discussed. Larger samples exhibited the same bending strength as the smaller ones, while their compressive strength was three times that of the small samples.

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53814. ÔURA, HIROBUMI. A study on the settling force of snow by models of photoelastic material; the lines of principal stress in the snow around the horizontal beam. (Teion kagaku, 1956. ser. A, v. 15, p. 185–91, illus.) Text in Japanese. Summary in English.

Account of experiments with gelatin

aimed to determine by analogy the elastic stresses developing in snow settling on a horizontal beam. The stresses developed in the gelatin were observed between two polaroid plates and photographed hourly. Photographs of the isoclinic lines are presented and lines of principal stress are reproduced.

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53815. OUTHWAITE, LEONARD, 1892– . The Atlantic: a history of an ocean. New York, Coward-McCann, 1957. 479 p. illus., maps.

Combines oceanography, geography, and history in describing the structure, behavior, influence, and significance of the Atlantic Ocean. Located in the center of the earth's land mass, the Atlantic proper is extended by three large mediterranean seas, one of them the arctic. Winds and currents are described, and their effects traced on voyages and discoveries. On an assumption that the course of explorations over the North Atlantic sea routes has been neglected, the author deals in some detail with the early Viking voyages and colonizations, and the French and English discoveries in northeastern Canada; experiences of arctic whalers at a later date are also recounted. The Atlantic's importance as a food source and transportation route is considered, as well as its wartime strategic significance. The nation or nations controlling the Atlantic will control the heart of the world. ***Copy seen:*** DGS.

53816. OVCHINNIKOV, NIKOLAĬ MIKHAĬLOVICH, 1906–1958. Ėkspeditsii uchenykh. (Okhota i okhotnich'e khozi͡aĭstvo, Feb. 1958. god 4, no. 2, p. 30–31.) Text in Russian. ***Title tr.:*** Scientists' expeditions.

General survey of work done in 1957 by 16 parties sent out by the All-Union Scientific Research Institute of Animal Raw Materials and Peltry (Vsesoi͡uznyĭ nauchno-issledovatel'skiĭ institut zhivotnogo syr'i͡a i pushniny), of which the author was head. Scientific workers (76) of the Institute and (nearly 200) of other organizations participated in these expeditions; the natural conditions of 27 provinces of the R.S.F.S.R. and several Soviet Republics were studied. Prospects are said to be good in many areas for a considerable rise in returns of the hunting industry, including the Evenki and Yamal National Districts.

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53817. OVCHINNIKOV, V. Kapronovyĭ tral. (*In:* Na promyslakh v Barent͡sovom more, 1956. p. 28–44, illus.) Text in Russian. ***Title tr.:*** The capron trawl.

Description of the Mikhov trawl most commonly used in Soviet arctic fisheries, and made of a synthetic yarn, capron. Advantages of the latter, assembling a trawl from capron, with detailed measurements, etc., are also discussed.

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53818. OVERÅ, JOHANNES SIMON, 1899– . Fiskerigrensespørsmålet og det Nordenfjeldske Norge. (Polarboken 1958, p. 95–100). Text in Norwegian. ***Title tr.:*** The fishing zone limit and northern Norway.

Norway should proclaim a 12-mile fishing limit at once, to aid its own cod fisheries. Foreign trawlers are taking most of the catches in north Norwegian waters. ***Copy seen:*** SPRI.

53819. OVERBYE, ERIK JOHANNES, 1905– . Flyvningens grønlandspremiere, et 25 års jubilaeum. (Grønland, July 1957, nr. 7, p. 261–73, illus.) Text in Danish. ***Title tr.:*** The beginning of flying in Greenland, a 25th anniversary.

Flying activities were introduced in Greenland in 1932 by the Danish Navy, Army and Geodetic Institute with three Heinkel He–8's (three-seater monoplane) for air photography, ice reconnaisssance, etc. One aircraft was attached to the seventh Thule expedition in southern Greenland and two to Lauge Koch's three-year expedition in East Greenland. Details are given on preparations, equipment, personnel, transport to Greenland and on work carried out. The air photography covered the areas from Kap Farvel to Pikiutdleq south of Angmagssalik and from Danmarkshavn to Scoresbysund. ***Copy seen:*** DLC.

53820. OVERBYE, ERIK JOHANNES, 1905– . Flyvningerne paa dansk Pearyland-ekspedition 1947. (Flyv, Jan. 1948. årg. 21, nr. 1, p. 3–5, illus.) Text in Danish. ***Title tr.:*** Flights to the Danish Pearyland-expedition, 1947.

Describes Danish Navy's supply flights with Catalina-type amphibians to Jørgen Brønlunds Fjord (82° 10′ N. 31° 20′ W.). Intermediate base was established at Zackenberg (74° 29′ N. 20°48′ W.); ice observations were carried out for two Danish ships enroute to the same destination. ***Copy seen:*** DLC.

OVEY, CAMERON D., *see* Wiseman, J. D. H., *and* C. D. Ovey. Proposed names of features . . . deep-sea floor. *1955.* No. 56088.

53821. OWREN, LEIF, *and* **C. G. LITTLE.** Arctic radio wave propagation; task A, analysis of C–W data; final report. Fort Monmouth, N.J., Mar. 1958. 101 p. tables, graphs. (Alaska. University. Geophysical Institute.)

Relation between polar black-outs and signal outages on short high frequency paths of "Experiment Aurora" are analyzed for a year of high solar activity (1949–50) and compared with an analysis for a year of low solar activity (1954). In both years there were pronounced peaks in the signal outage time during the equinoctial periods. Comparative study of received signal strength over the long transmission paths and usable frequencies for these paths for the period 1949–55 showed no correlation. The combined effect of ionospheric irregularities and absorption on the transmissions over the 4 mc./s. short paths is investigated in detail for the year 1954–55, showing a reversal of the relative strength of mid-day signals recorded over the south-north and east-west paths during the spring equinox of 1955 compared with the winter 1954–55 and summer 1955. Results are explained by taking into account the effect of irregularities in the reflecting layer. Two models of the reflecting layer are studied, one represented by a surface having a one-dimensional corrugation parallel to the east-west direction, the other consisting of a reflecting screen with a grating of parallel circular cylinders in front. An analysis of the monthly median midnight and noon f_0F2 and h'F2 values at College for a 15½-year period is graphed; the monthly median values of the hourly received signal strength in log microvolts are tabulated for June 1949–Dec. 1950 and Jan. 1954–Oct. 1955. ***Copy seen:*** DGS.

53822. OXAAS, ARTHUR, 1888– . Svalbard var min verden. Oslo, Aschehoug, 1955. 224 p. illus. plates, map. Text in Norwegian. ***Title tr.:*** Svalbard was my world.

Autobiography of a hunter who first went to Vestspitsbergen in 1902, and spent 30 years there with an interval during World War II, also a winter on Bjørnøya, another on Jan Mayen. Working first on a share basis, sometimes alone, often as group leader, he accounted for over 1,800 blue and white foxes and 300 polar bears. He recounts events of his local trips, describes the regions traversed, weather, ice, living, and hunting conditions, cases of scurvy, etc. Important flights are noted. The scorched earth treatment of Vestspitsbergen in World War II is described. There is also discussion of coal mining, the Russian colony, attempts at quarrying marble, other test mining, and collecting of geological specimens on commission. ***Copy seen:*** DLC.

53823. OZEROV, LEV. Pevets zemli ĭAkutskoĭ. (Sibirskie ogni, Jan. 1958. god 37, no. 1, p. 184–87, port.) Text in Russian. ***Title tr.:*** The bard of Yakutia.

Biography of the blind Yakut poet, Mikhail Nikolaevich Timofeev-Tereshkin, born 1883 near Suntar (62°10′ N. 117°40′ E.) who died in 1957 at Angarsk. Excerpts from his poems are given in Russian translation. ***Copy seen:*** DLC.

PÄTIÄLÄ, RISTO, *see* Sarajas, S. *and* R. Pätiälä. Köldverkan på utvecklingskapaciteten . . . Diphyllobothrium latum ova. *1958.* No. 54549.

53824. PACHYNSKI, ALVIN L. The Air Force views over the horizon techniques. (Signal, Apr. 1958. v. 12, no. 8, p. 28–30, illus.)

Describes forward propagation ionospheric scatter systems established by the U.S. Air Force from Massachusetts and Loring Air Force Base to Goose Bay in Labrador, Thule and Søndre Strømfjord in Greenland; also in Alaska (White Alice) and in the DEW Line chain. Problems in reliability and performance experienced during initial operation of these multiplex voice and teletype installations are reviewed and their solution described. A system of long range tropospheric propagation is to be installed over an unidentified 690-mi. path in the Arctic, using 20-kw. single-sideband transmitters in the 350–450 mc. range, 120-ft. antennas and quadruple diversity. Two of the 24 voice-frequency channels will be multiplexed to provide 24 teletype channels. ***Copy seen:*** DLC.

53825. *PACIFIC BUILDER AND ENGINEER.* Bulk cement for isolated Alaska airstrip. (Pacific builder and engineer, Oct. 1958. v. 64, no. 10, p. 86–87, 146, illus.)

Describes hauling operation from

Seattle, Wash., and Sitka, southeast Alaska, to Bethel. Construction materials (200 tons) and 10,000 bbl. of bulk cement, housed in large steel containers welded to the deck were moved by barges. The contractor, Morrison-Knudsen Co., is to use the cement for expanding the Bethel airfield with a 4,000 ft. runway, a taxiway, and a parking apron, then utilize the airstrip in airlifting the construction materials to two unidentified construction projects in northern Alaska.
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53826. ***PACIFIC BUILDER AND ENGINEER.*** Drills on platforms sample bottom for Anchorage pier. (Pacific builder and engineer, Mar. 1958. v. 64, no. 3, p. 92–93+, illus.)

Holes were drilled and 300 samples taken Oct.–Dec. 1957, over a 900 x 350 ft. area of the harbor, using equipment mounted on 20 x 20 ft. platforms atop two movable towers, 50 and 30 ft. high. The towers were moved by barge at high tide; equipment and the upper ten ft. of the 50-ft. tower were removed, the tower was lifted four ft. off bottom by the barge crane and tied to the bow of the barge, which then winched itself along by hoists and anchors to the next location. The sampling indicated a relatively firm bottom; bids for the first section of the pier are to be called in Mar. 1958.
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53827. ***PACIFIC BUILDER AND ENGINEER.*** [News notes.] (Pacific builder and engineer, 1957–1958, v. 63–64.)

Includes several brief accounts of construction activities in Alaska not otherwise listed in this Bibliography, viz:

Highway program of $21½ million approved for 1957–58 (Apr. 1957, p. 17).

Summary of road constructions, reconstructions, improvements, and surveys scheduled for 1957 by the Bureau of Public Roads (Apr. 1957, p. 95).

Plans for a 1,100,000-kw. hydro project on Copper River; other hydro projects scheduled (Aug. 1957, p. 81).

Protection by metal collars on pilings to be tried on a project at Bethel (Dec. 1957, p. 86).

Reconstruction and realignment of Sterling Highway from Anchor River to Homer, and Ninilchik to Anchor River (Dec. 1957, p. 86).

Blue Lake $4 million hydroelectric and water supply project on the Medvetcha River to have two 3,000-kw. generators (Feb. 1958, p. 17).

Naval contracts for 1958 estimated at $3 million (Feb. 1958, p. 17).

Defense construction in remote areas to total $20 million in 1958 (Feb. 1958, p. 17).

Nuclear power plant to be built at Fort Greely (Feb. 1958, p. 17).

$4,102,000 aviation facility program scheduled for 1958–59 (Mar. 1958, p. 112, 114).

Projects of the Alaska Public Works Dept.'s 1958 program (Apr. 1958, p. 104).

List of 50 projects in the 1958 highway program (Apr. 1958, p. 104).

Construction of Kodiak small boat harbor ahead of schedule (May 1958, p. 132).

Blue Lake (Sitka) project underway (July 1958, p. 102).

Work started on nuclear power plant at Fort Greely, (July 1958, p. 102).

Statistics of construction budgets (1950–58) and predictions for future development (Aug. 1958, p. 76–77).

Missile detection base to be constructed at Clear, 320 mi. north of Anchorage (Sept. 1958, p. 9).

Construction on a nuclear reactor of 10,000 kw. at the Knik Arm power plant, near Anchorage, to start in 1961 (Dec. 1958, p. 12).

Road budget to exceed $7 million in 1959 (Dec. 1958, p. 12).
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53828. PACIFIC SCIENCE CONGRESS. 9th, *Bangkok, Thailand.* Ninth Pacific Science Congress of the Pacific Science Association; abstracts of papers. Bangkok, 1957. 265 p.

Contains abstracts of the several hundred papers presented, dealing with problems in 20 scientific fields, some, e.g., geology and geophysics, oceanography, etc. represented in northern areas of the Pacific Basin; 21 of these abstracts are listed in this Bibliography under their authors' names, viz: R. Austerlitz, T. P. Bank (2), K. V. Beklemishev, P. L. Bezrukov, V. G. Bogorov, S. V. Bruevich, V. I. Budanov, C. S. Chard, A. K. Gel'nrikh, G. S. Gorshkov (2), G. S. Gorshkov and I. I. Tovarova, V. F. Kanaev, P. N. Kropotkin, T. S. Rass, G. I. Semina, J. P. Tully and A. J. Dodimead, J. O. Wheeler, and L. A. Zenkevich (2). ***Copy seen:*** DLC.

PADGET, PETER, *see* Holmsen, P., *and others.* The Precambrian . . . Vest-Finnmark . . . *1957.* No. 51790.

53829. PAGÉ, EDOUARD, 1909– . Body composition and fat deposition in rats acclimated to cold. (Revue canadienne de biologie, June 1957. v. 16, no. 2, p. 269–78, illus., tables.) 14 refs.

A summary of research dealing with the possible role of fat in physical and chemical thermoregulation. Specifically, the effects of diet and acclimation on chemical composition of the body and distribution of fat, and metabolic changes associated with cold-exposure, are reviewed. The preferential intake and utilization of fat during cold as crucial problem is discussed.

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53830. PAGÉ, EDOUARD, 1909– . Low temperature considerations. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 183–91, illus., tables.) 25 refs.

Deals with the major food components (proteins, fats, carbohydrates) as producers of body heat in cold environment; the role of vitamins; food and acclimatization; cold exposure as prerequisite to following cold resistance; vitamins and acclimatization. ***Copy seen:*** DNLM.

53831. PAGE, F. A. All is not snow and ice in the Yukon. (Weather, Apr. 1958. v. 13, no. 4, p. 128, diagr.)

Notes occurrence of perfect flying weather for month of June 1957 at Whitehorse: no ceilings less than 3,000 ft., no visibilities less than ten miles.

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PAGE, L. B., *see* Kuhn, L. A., *and others.* The effect . . . cold on resistance to hemorrhage . . . dogs. *1957.* No. 52543.

PAGE, WILLIAM B., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

PAGE, WILLIAM B., *see* Fournelle, H. J., *and others.* Experimental ground water pollution at Anchorage . . . *1957.* No. 50961.

53832. PAINE, ROBERT. Changes in the ecological and economic bases in a Coast Lappish district. (Southwestern journal of anthropology, Summer 1958. v. 14, no. 2, p. 168–88, map, table, graph.) 19 refs.

A study of the economy, movements and activities of the Coastal Lapps based on materials collected in Revsbotn Fjord, west Finnmark. Their past fishing and whaling, reindeer hunting and herding, and present fishing and farming economies are described. Their changed economy, also the discovery of peat and coal, has affected their mode of life, and these influences are discussed. Their contacts with the Mountain Lapps, whose summer reindeer pastures they occupied, and their trade relations with Russia (to 1917) and Norway are dealt with. The Lapps' cultural and economic progress since the initiation of the North Norway Plan in 1945 is noted. The relation of fuel supply (wood, peat, coal) to movement, activity and type of settlement is tabulated and the annual climatic and economic data graphed.

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53833. PAINE, ROBERT. Coast Lapp Society I; a study of neighbourhood in Revsbotn Fjord. Tromsø, 1957. xvii, 341 p. illus., graphs, diagrs, tables, sketch maps incl. fold. (Tromsø. Museum. Skrifter, v. 4.) 157 refs.

Study of a typical small-group Coast Lapp unit, based on author's investigations during sojourns, 1951 and 1952, in Revsbotn, also among a neighboring Mountain Lapp group in 1953. Ecological situations and cultural relations are dealt with (p. 3–161): the general geography, topography and history of the locality (approx. 70°35′ N. 24°36′ E.) on the North Norwegian coast are described; trade relations and cultural contacts with Norwegians and Russians, influence of missions, settlement of the fiordal region, etc., are discussed. Present-day changes in the economy: peat and coal mining, fishery, agriculture, and cultural relations with other Lapps and non-Lapps are described. In the second part of this volume (p. 161–317) the social structure, kinship system and affinity, name system, marriage customs, neighbor relations, settlement problems, etc., are discussed. The gradual evolution of a new Coast Lapp sociological pattern is outlined: a fiordal village society emerges, taking the place of individual homestead units and creating administrative changes, etc. Account of Coast Lapp markets, translated and summarized from J. Falkenberg's 1941 paper, a list of Lappish terms, and a subject index are appended. A second volume is planned to deal with the family and its role among the people of Revsbotn Fjord. ***Copy seen:*** DGS.

53834. PAINE, ROBERT. A meeting with Laestadians. (Norseman, Mar.–Apr. 1957. v. 15, no. 2, p. 112–17.)

Laestadianism has replaced shamanism as a means of expressing the "Lappish spiritual essence"; a sectarian meeting in northern Norway is described.

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53835. PAINE, ROBERT. The Russian trade in Finnmark. (Norseman, Mar.–Apr. 1958. v. 16, no. 2, p. 73–80.) 7 refs.

Recounts trading of grain for fish along the Finnmark-Troms coast, 1796–1917, by Russian peasants from the Kola Peninsula. This trade, previously carried on illegally, was declared lawful by the Royal Resolution of Aug. 5, 1796. It was a significant factor in the culture and economy of the area: frequently prevented famine, influenced the pattern of settlement along the coast, tied the people more closely to the sea, encouraged pastoralism as a secondary economy, and gave rise to numerous sagas and legends of "the Russian times". The economic and political background of the coastal area where the trading occurred is discussed. ***Copy seen:*** DLC.

PAKHOMOV, A. S., *see* Gorodet͡skiĭ, P. I., *and others.* Razvitie sistem razrabotki . . . *1958.* No. 51295.

53836. PALENICHKO, Z. G., *and* M. N. TIMAKOVA. Gidrobiologicheskai͡a kharakteristika guby Kuz pomorskogo poberezhi͡a Belogo mori͡a. (Akademii͡a nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniiû Belogo mori͡a, 1957. vyp. 1, p. 381–90, illus. maps.) 14 refs. Text in Russian. ***Title tr.:*** Hydrobiological character of Kuz Bay on the Pomor coast of the White Sea.

Report on investigation of this center of extensive and varied fisheries (64°30′ N. 35° E.), covering physical conditions, including temperature regimen; the seaweeds; plankton; benthos; fishes and fisheries. ***Copy seen:*** DLC.

53837. PALENICHKO, Z. G. Itogi kompleksnykh issledovaniĭ v Onezhskom zalive Belogo mori͡a. (Akademii͡a nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniiû Belogo mori͡a, 1957. vyp. 1, p. 15–43, tables, maps.) 51 refs. Text in Russian. ***Title tr.:*** Results of complex investigations in the Onega Bay of the White Sea.

Account of investigations conducted in 1951–52 concerning the main food fish of this area, viz: herring, navaga and smelt. Nature of the White Sea, its physical conditions and life, as well as those of the Onega Bay are outlined. The fishes of the Bay and fishing areas are outlined. Seasonal changes in biology, including that of the fishes, reproduction and movements; development and growth are discussed. Comparison is made with conditions and fishes of the Barents Sea. Prospects of introducing new species are mentioned. ***Copy seen:*** DLC.

53838. PALENICHKO, Z. G. Osnovnye zakonomernosti razvitiia belomorskoĭ ikhtiofauny. (Voprosy ikhtiologii, 1957. vyp. 9, p. 19–28, tables.) 24 refs. Text in Russian. ***Title tr.:*** Basic regularities in the development of the White Sea fish fauna.

Results of a study made in Onega Bay to ascertain the reserves of edible fishes. Specific characteristics of small seas, tides and currents and their effects on young are described. Biotic zones in the White Sea, propagation and development of its fishes, their biology, life span, productivity, ecological factors, etc. are considered. ***Copy seen:*** DLC.

53839. PALLADINA, OL'GA MIKHAĬLOVNA. Teoriia korabli͡a; ukazatel' literatury na russkom i͡azyke za 1774–1954 gg. Leningrad, Gos. soiûznoe izd-vo sudostroit. promyshl., 1957. 370 p. Text in Russian. ***Title tr.:*** Ships' theory; a guide to literature in Russian, 1774–1954.

Lists 2,123 publications, most with brief abstracts; in a section headed: Resistance of ice to ship motion (p. 184–85) appear 12 titles pub. 1901–1955.

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PALIĬ, V. D., *see* Gorodet͡skiĭ, P. I., *and others.* Razvitie sistem razrabotki . . . *1958.* No. 51295.

53840. PALLIN, HUGO NIKOLAUS, 1880– . Till anfall mot Kebnepakte. (Svenska turistföreningen. Årsskrift, 1925. p. 287–300, illus.) Text in Swedish. ***Title tr.:*** Assault on Kebnepakte.

A small party's late winter attempt on summits of the Kebnekaise massif is described. Use of rope and ice ax, the near conquest of the previously climbed Kebnepakte summit, weather hazards, etc. are recounted. ***Copy seen:*** DGS.

53841. PALM, THURE, 1894– . Anteckningar om svenska skalbaggar, XII. (Entomologisk tidskrift, 1957. årg. 78,

häfte 1, p. 41–47, 2 illus.) Text in Swedish. ***Title tr.:*** Notes on Swedish beetles, XII.

Contains critical notes and distributional data on 24 species; at least nine of them native to Swedish Lapland and Norrbotten. For earlier parts see No. 47232. ***Copy seen:*** DLC.

53842. PALM, THURE, 1894– . Die nordischen *Hypocyptus* Mannerh., Coleoptera-Staphylinidae, mit Beschreibung zweier neuen Arten. Göteborg, Elanders boktr., 1935. 127 p. 10 illus., 2 text maps (Göteborgs k. vetenskaps- och vitterhetssamhälle. Handlingar, 5. följden, ser. B, bd. 4, no. 13.) 15 refs. Text in German. ***Title tr.:*** The northern *Hypocyptus* Mannerh., Coleoptera-Staphylinidae, with description of two new species.

Eleven species of these rove beetles are described, two from the Fennoscandian far North: *Hypocyptus pulicarius* Er. found at Målselv, Norway, and *Hypocyptus laeviusculus* Mannerh. of wider distribution, 15 locations being mapped. ***Copy seen:*** DLC.

PALM, THURE, 1894– , *see also* Lindroth, C. H., *and* T. Palm. Bidrag . . . coleopterfaunan . . . Norrlands kustland . . . *1934*. No. 52844.

53843. PALMER, E. LAURENCE. Marine mammals. (Nature magazine, Jan. 1956. v. 49, no. 1, p. 25–32, illus., tables.)

Outline of the many aspects of these animals, economic, historical, literary, is followed by illus. of 22 common marine mammals and their more peculiar skeletal structures. Description, taxonomy and distribution; biology of reproduction, ecology, and economy of all these forms is presented in tabular form. ***Copy seen:*** DLC.

PALMER, R. L., *see Oil in Canada.* Northern . . . muskeg . . . *1958*. No. 53714.

53844. PALMGREN, PONTUS, 1907– . Enzio Reuter; minnestal vid Finska vetenskapssocietetens möte den 15 September 1952. Helsingfors, 1953. 11 p. port. (Finska vetenskaps-societeten. Årsbok-Vuosikirja, 1952–53, v. 31, C, no. 1.) Text in Swedish. ***Title tr.:*** Enzio Reuter, memorial address at the Finnish Scientific Society's meeting Sept. 15, 1952.

The scientific career and contributions of Enzio Reuter, 1867–1951, are reviewed. He was state entomologist, and professor of zoology. His early study of butterflies was succeeded by that of destructive insects, their life cycles, broader aspects of life processes, etc., and latterly by study of chromosome division and cytology. His major works are briefly summarized and the range of his publications stressed. ***Copy seen:*** DGS.

53845. PALONIEMI, MIKKO. Rovaniemen Kolpeneen meripihkakoru. (Suomen muinaismuistoyhdistys. Suomen museo, 1955. v. 62, p. 107–109, illus.) 3 refs. Text in Finnish. Summary in German. ***Title tr.:*** An amber ornament from Kolpene at Rovaniemi.

Describes a spatula-shaped pendant found during the 1955 excavations of the stone site at Kolpene, Rovaniemi district (No. 50767). Of East-Prussian origin, like all Finnish amber finds, the pendant is dated by the site's comb ceramic into the time of the so-called Äyräpää II,1 style and is, therefore, the oldest amber ornament discovered as yet in Finland. ***Copy seen:*** DLC.

53846. PALOSUO, ERKKI. Methods used in the ice service in the Baltic. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 239–43, text map, diagr.) 11 refs.

Reviews and evaluates methods used to predict exact time of initial freezing, based on energy exchange considerations; and to predict growth and decrease in size of ice area, by statistical means. Duties of the ice prediction service of Finland are outlined; its importance to shipping is stressed. ***Copy seen:*** DN–HO.

53847. PALOSUO, ERKKI. Über verschiedene Vereisungstypen im Finnischen Meerbusen. (Deutsche hydrographische Zeitschrift, 1956. Jahrg. 9, Heft 5, p. 222–25, diagr., maps, table.) Text in German. Summary in English and French. ***Title tr.:*** On different types of ice formation in the Gulf of Finland.

Static and dynamic ice formation in this area are described: the former occurs in the absence of wind or during light northeast winds; the latter in the presence of strong winds, when ice builds along the coast and drifts out to sea in a continuous sequence until the entire Gulf is frozen. Lower temperatures are required for dynamic ice formation than for static to cover the entire surface. A map indicates the progress of drift ice in Feb. 1953. Freezing temperature sums and type of ice formation 1947–56,

also the relation between ice formation, wind, and temperatures at various locations in the Gulf are tabulated and graphed. ***Copy seen:*** DLC.

PALOSUO, ERKKI, *see also* Olkkonen, E., *and* E. Palosuo. A resistance gauge . . . *1958*. No. 53750.

PANAGOS, SYLVIA S., *see* Masoro, E. J. *and others.* Effect of prolonged cold exposure on hepatic lipogenesis. *1957*. No. 53175.

53848. PANCHENKO, E. Ob obrazovanii Anadyrskoĭ okrugi. (Na severe dal'nem, 1957, kniga 7, p. 194–97.) Refs. Text in Russian. ***Title tr.:*** Organization of the Anadyr' District.

Based on unpublished material. Chukotka was nominally part of the Gizhiga District, till 1899 when the Anadyr' District was established comprising all Chukotka, with Markovo as center and Leonid Grinevet͡skiĭ its head.

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53849. PANFILOV, V. Z. Grammaticheskoe chislo sushchestvitel'nykh v nivkhskom i͡azyke. (Akademii͡a nauk SSSR. Institut i͡azykoznani͡a. Doklady i soobshcheni͡a, 1958. no. 11, p. 46–61.) Text in Russian. ***Title tr.:*** Grammatical number in nouns of the Gilyak language. 4 refs.

Discusses the grammatical means (suffixes, repetition of stemword) used to express plural and singular forms of nouns, and notes certain inconsistencies in verbal and adjectival agreement.

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53850. PANFILOV, V. Z. Slozhnye sushchestvitel'nye v nivkhskom i͡azyke i ikh otlichie ot slovosochetaniĭ; k probleme slova. (Voprosy i͡azykoznani͡a, Jan.–Feb. 1958. god 7, no. 1, p. 105–111.) 10 refs. Text in Russian. ***Title tr.:*** Compound nouns in Gilyak and their differentiation from word combinations; the problem of the word.

Discusses the morphological, syntactic and semantic structure of Gilyak compound words. Though constructed by joining basic words, the meaning of the compound differs from that of its components. ***Copy seen:*** DLC.

53851. PANIJEL, J., *and others.* Effets de la congélation sur les bactériophages. (Institut Pasteur, Paris. Annales, Aug. 1957. t. 93, no. 2, p. 183–93, illus., tables.) 8 refs. Text in French. Summary in English. *Other authors:* J. Huppert *and* E. Barbu. ***Title tr:*** Effects of freezing on bacteriophages.

Account of investigation on the effects of freezing phages (4 types). Two main results were noted after freezing below a certain, type specific, temperature: inactivation of phage and release of DNA. Generally, the two processes run parallel, but within a narrow temperature range, slightly above that producing both effects, inactivation took place without release of DNA.

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53852. PANKOV, V. A., *and others.* Chuma pest͡sov. (Karakulevodstvo i zverovodstvo, Nov.–Dec. 1957. god 10, no. 6, p. 59–60.) Text in Russian. *Other authors:* S. I͡A. Li͡ubashenko *and* V. N. Mezht͡siems. ***Title tr.:*** Polar-fox pest.

Description of an epizootic, affecting young and adult animals, during 1955 and 1956. Symptoms, losses (10%), pathological anatomy, bacteriology, etc. are dealt with. ***Copy seen:*** DLC.

53853. PANOFSKY, HANS ARNOLD ALBERT, 1917– , *and others.* A study and evaluation of relations between tropospheric and stratospheric flow. University Park, Pa. Aug. 1, 1958. 91 p. 15 tables, 32 graphs, 9 text maps. (Pennsylvania State University. Mineral Industries Experiment Station, Dept. of Meterorology. Prepared for the Naval Weather Research Facility under Contract no. N189(188) 34785A. Final report.) 6 refs. *Other authors:* L. Krawitz, *and* P. R. Julian.

Results of a project to study the relationship between tropospheric flow, particularly at 500 mb. and stratospheric flow below 50 mb. to: (1) devise a method to specify 100 mb flow, given 500 mb. charts; (2) obtain some understanding of the relationships between tropospheric and stratospheric flow. The winters of 1953–54 through 1956–57, and the summers 1955 through 1957 were studied with data from 11 stations, including seven in arctic Canada, and two in Alaska. Properties of the Polar Regime Boundary (approximately the boundary between polar and middle-latitude circulation) and the Polar Vortex are described; the effect of the position of the Polar Vortex on the stratospheric westerlies of North America is outlined; a relation is suggested between observed

(tropospheric) and calculated (stratospheric) wind speeds and directions.
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53854. PANOV, NIKOLAĬ NIKOLAEVICH. "Gremi͡ashchiĭ;" otryvok iz dokumental'noĭ povesti. (Sovetskiĭ mori͡ak, June 1955. god 15, no. 11, p. 18–20, illus.) Text in Russian. ***Title tr.:*** Gremi͡ashchiĭ; fragment from a documentary novel.

Sketch of operations of the destroyer *Gremi͡ashchiĭ* in Aug. 1941 in Barents Sea off the north coast of Kola Peninsula: attack upon the Soviet military forces by German submarines and airplanes; bombardment of the German shore positions from the destroyer hidden in a fiord, etc. ***Copy seen:*** DLC.

53855. PANOV, NIKOLAĬ NIKOLAEVICH. Severomort͡sy; Severnyĭ flot v Velikoĭ otechestvennoĭ voĭne 1941–1945; literaturnyĭ sbornik. Moskva, Voennoe izd-vo, 1956. 399 p. illus., ports., plates. Text in Russian.

Title tr.: Northern mariners; the Northern Fleet in the Great Patriotic War 1941–1945; a collection of writings.

A miscellaneous collection of 78 sketches by various authors in prose and verse, including fragments of novels and fiction stories, excerpts from diaries of particiipants, etc. They all relate to military activities of the sailors of the Soviet Northern fleet in the Barents and White Seas and include characterizations of outstanding officers, descriptions of episodes in destroyer, torpedo-boat, submarine and airplane operations. The Northern Fleet defended the Kola Peninsula against German forces during World War II. ***Copy seen:*** DLC.

53856. PANTENBURG, VITALIS, 1901– . Die Arktis in der Gegenwart. (Orion, Mar. 1957. Jahrg. 12, no. 3, p. 185–93, illus., map.) Text in German. ***Title tr.:*** The Arctic at present.

Contains popular information on the geographic, magnetic, and the so-called cold pole; limits of the arctic region, the sub-Arctic, ice islands; aviation, mapping, and exploration; IGY work, weather service and stations, air routes, etc. ***Copy seen:*** DLC.

53857. PANTENBURG, VITALIS, 1901– . Jan Mayen, Orkan-Eiland in der Arktis. (Kosmos, Dec. 1956. Jahrg. 52, Heft 12, p. 545–53, illus., map.) Text in German. ***Title tr.:*** Jan Mayen, hurricane-island in the Arctic.

Reviews the island's history, topography and prevailing weather conditions, stressing importance of the Norwegian meteorological station established in 1921. Catching of sea birds and fox trapping by station personnel are noted. Jan Mayen sealing nets 60,000–80,000 seals annually.
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53858. PANTENBURG, VITALIS, 1901– . Eine Stadt wird verlegt: Aklavik, Kanadas erste moderne Stadt in der Arktis. (Kosmos, Dec. 1957. Jahrg. 53, Heft 12, p. 569–75, 9 illus., map.) Text in German. ***Title tr.:*** A town is relocated: Aklavik, Canada's first modern town in the Arctic.

Outlines development of the settlement around a Hudson's Bay Co. trading post, established in 1912 at 68°13′ N. 135°01′ W. During 1919–1926, churches, Royal Canadian Mounted Police post, and a radio station were introduced, but ground conditions ("a muddy sandbank") restricted construction and lack of year-round aircraft landing facilities in post-war years, made impossible any development of Aklavik into an administrative and communications center for northwest Canada. Another site, on more stable ground, was found for this town of 700 inhabitants, on the east bank of an eastern arm of the Mackenzie delta, 56.5 km. from the old location. On the new site, named Inuvik, at 68°21′ N. 133°42′ W., the buildings are erected on 6–9 m. piles, frozen 5–8 m. into the ground. Water supply and electric power lines are laid in a utilidor, a well-insulated main on piles well above the ground. The installations are kept frost-free by a hot-water pipe in the same main. Work at the new location started in 1955, foundation construction in 1956. The new town planned for 2,500–3,000 inhabitants, is to be completed by 1961. Illus. include photo of buildings being moved by tractor sleds from old to new site. ***Copy seen:*** DLC.

53859. PANTENBURG, VITALIS, 1901– . Svalbard, Inselland vor dem Pol. (Orion, Aug. 1957. Jahrg. 12, no. 8, p. 645–52, illus. map.) Text in German. ***Title tr.:*** Svalbard, islands before the Pole.

Presents photographs with brief account of the archipelago, midway between Nordkap and the North Pole: physiography, geology, exploration, climate, flora and fauna. Barendsz's discovery of the islands and its effect on whaling; recent history and Norway's sovereignty;

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the coal deposits and their exploitation, shipping connections, other mineral resources are noted; also Russian interests in Svalbard coal as compared with those of Norway, and the rights of other nations.
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PANTIDOU, MARIA, *see* Groves, J. W., *and others.* Notes on fungi . . . northern Canada, III . . . *1958.* No. 51404.

53860. PAPANIN, IVAN DMITRIEVICH, 1894– . Pervaîa dreĭfuîshchaîa stanîsiîa "Severnyĭ Poluîs." (*In:* Burkhanov, V. F. Cherez okean na dreĭfuîshchikh l'dakh, 1957. p. 50–65, illus.) Text in Russian. ***Title tr.:*** The first drifting station "North Pole."

Brief account of the main events of the 1937–38 expedition headed by the author: the setting-up of the ice-floe station in May 1937; its equipment and supply; conditions for living and carrying out scientific observations; drift of the station, and its evacuation on Feb. 19, 1938; scientific significance of the undertaking.
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PAQUETTE, R. G., *see* Fleming, R. H., *and others.* NORPAC 1955 . . . Preliminary data report. *1956.* No. 50926.

53861. PARAMONOV, B. Kalany, pereselenîsy. (Okhota i okhotnich'e khozîaĭstvo, Mar. 1958. god 4, no. 3, p. 30.) Text in Russian. ***Title tr.:*** Sea otters, the migrants.

Nine sea otters were caught on the Commander Islands in 1937 to be transferred to Kola Peninsula; seven perished in the first days of captivity and only two reached Yarnyshnaya Bay (69°05′ N. 36° E.) on the Murman coast; one of them was liquidated at beginning of the war; the other escaped and was killed by inadvertence in 1944. Nevertheless, the experiment in acclimatization carried out by I. I. Barabash-Nikiforov, is regarded as successful.
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PARHOFER, R., *see* Tauber, K., *and others.* Stoffwechseluntersuchungen . . . *1957.* No. 55338.

PARISOT, JACQUES, *see* Raymond, V., *and* J. Parisot. Le pied de tranchée . . . *1958.* No. 54247.

53862. PARKER, RALPH D. Moak Lake program increasing tempo. (Precambrian, June 1957. v. 30, no. 6, p. 16–18, port.)

Outlines four-year program to develop nickel deposits in Mystery-Moak Lakes (55°51′ N. 97°46′ W.) region of northern Manitoba: two mines, mill, smelter, and a new town (Thompson) for 8,000 people; also a spur line to the Hudson Bay Railway, and hydroelectric plant at Grand Rapid. Nickel production is to start in 1960 and reach an annual 60,000,000, eventually 75,000,000 pounds. Exploration (by International Nickel Co. of Canada) is outlined; the Thompson orebody was discovered in Feb. 1956.
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53863. PARKER, ROBERT R., *and* **W. KIRKNESS.** King salmon and the ocean troll fishery of southeastern Alaska. Juneau, Sept. 1956. 64 p. illus., tables, maps. (Alaska. Dept. of Fisheries. Research report no. 1.) 28 refs.

A study of yields since 1900, of racial composition, stock characteristics, and regulations in this fishery. Production reached a peak in 1937 with 17 million lb. of dressed fish, but subsequently declined to 9 million lb. due to destruction of spawning and rearing areas, principally by dams built on the Columbia River. Three stocks of fish were found in the outside waters, the characteristics of which are given. The potential effects of fishing regulations upon these stocks are analyzed and discussed.
Copy seen: DI.

PARKER, ROBERT R., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53864. PARKES, ALAN STERLING, 1900– . Viability of ovarian tissue after freezing. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 520–28, illus., tables.) 23 refs.

A study in survival of cumulus cells of the follicular granulosa, as determined by tissue culture. A majority of these cells survived when cooled slowly in homologous serum to −79° C. and thawed rapidly at +40° C.; very few survived rapid freezing. Addition of glycerol improved survival from slow, but not from rapid freezing. Cells suspended in saline did not survive any of the two freezing methods and addition of glycerol promoted survival after slow cooling only.
Copy seen: DNLM.

PARKES, ALAN STERLING, 1900– , *see also* Deanesly, R., *and* A. S. Parkes. Delayed development of grafts from frozen ovarian tissue. *1957.* No. 50472.

PARKES, ALAN STERLING, 1900– , *see also* Royal Society of London. A discussion . . . viability . . . cells and tissues . . . freezing . . . *1957*. No. 54420.

PARKES, M. W., *see* Davison, A. N., *and others*. The antagonism of reserpine hypothermia by iproniazid. *1957*. No. 50465.

PARKES, M. W., *see* Lessin, A. W., *and* M. W. Parkes. The relation . . . sedation and body temperature . . . mouse. *1957*. No. 52774.

53865. PARKINS, WILLIAM MILTON, 1907– , *and others*. Induced visceral hypothermia in acute hemorrhage and hemorrhagic hypotensive shock. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 97–98.) *Other authors:* S. J. Le Brie *and* M. L. Coady.

Account of three sets of experiments with visceral cooling down to 25° C. In all three variants of hemorrhage and shock, the survival of hypothermic animals was greater than in controls.

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53866. PARMELEE, JOHN AUBREY, 1924– . Some foliicolous fungi of the Pyrolaceae. (Canadian journal of botany, Nov. 1958. v. 36, no. 6, p. 865–81, illus., 2 plates, 2 tables.) 30 refs.

Reviews some of the fungi that parasitize hosts in the wintergreen family. Two species are described as new and living on *Pyrola* species. *Mycosphaerella chimaphilae* is considered to be synonymous with *M. chimaphilina*. *Ovularia pyrolae* is transferred to the genus *Colletotrichum* and new hosts and range extensions are listed for other fungi. *Leptosphaeria marginata* from Yakutat Bay, Alaska, is included.

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53867. PARMUZIN, ﬁU. P. Ėkzoticheskaiâ gal'ka Srednei Sibiri. (Moskva. Universitet. Uchenye zapiski, 1956, vyp. 182, Geomorfologiiâ, p. 187–91. map.) Text in Russian. ***Title tr.:*** Exotic pebble in Central Siberia.

Since the mid-19th century, explorers have drawn attention to pebbles and boulders in various areas of Central Siberia which do not belong to the local geological formations and had evidently been transported from distant mountain regions (Stanovoy, Sayanskiy, Anabarskiy, and other ranges). Deposits of such "exotic" pebbles are reported from the Taymyra, Pyasina, Yenisey, Kotuy, Lena, Vilyuy, Olenek, Angara, Katanga (=Podkamennaya Tunguska) and Nizhnyaya Tunguska basins; they are found not only in valleys, but on watersheds as well, and study of them is important for any reconstruction of paleogeographic features and the ancient (Tertiary) river system.

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53868. PARMUZIN, ﬁU. P. O zonal'noi prirode polûsa kholoda. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiiâ, Sept.–Oct. 1958. t. 90, vyp. 5, p. 472–74, map.) Text in Russian. ***Title tr.:*** The zonal nature of the cold pole.

Outlines the character of the cold pole and reasons for its relocation in northeast Siberia. For a net of meteorological stations in the area 63°31′–68°30′ N. 93°31′–160°30′ E., three zones of absolute minimum temperature (−67° to −71° C., −65° to −66° C., and from −60° to −64° C.) are mapped; the lines of lowest temperature for the Northern Hemisphere, and coldest anticyclonic winds are drawn. The zone is thus shown to be more relevant geographically and climatologically for the cold pole than a point. Hence the forty-year concept of Verkhoyansk as the cold pole because it registered an absolute minimum of −67.6° C. in 1892, should be changed. Extreme continentality, cold winter anticyclones, and relief produce the conditions for such a zonal cold pole.

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53869. PAROLLA, D. I. Registraﬁsiiâ temperatury otdel'nykh tochek kory golovnogo mozga u sobak. (Fiziologicheskiĭ zhurnal SSSR, Mar. 1958. t. 44, no. 3, p. 261–63, illus.) 6 refs. Text in Russian. ***Title tr.:*** Recording of temperature at separate points of the cerebral cortex of dogs.

Description of apparatus enabling continuous recording of temperature in this area. It consists of a thermocouple fastened in the skull and reaching the cortex, a potentiator and a recording mechanism. ***Copy seen:*** DNLM.

53870. PAROVSHCHIKOV, V. ﬁA., *and* V. F. LARIONOV. Zalety golenastykh ptiﬁs na Arkhangel'skoĭ Sever. (Okhota i okhotnich'e khozﬁaĭstvo, May 1958. god 4, no. 5, p. 24.) Text in Russian. ***Title tr.:*** Occurrence of wading birds in the Arkhangel'sk North.

Notes: Botaurus stellaris, a bittern killed Oct. 10, 1950, in the Chayach'i

Islands region in Severnaya Dvina delta; and a common heron (*Ardea cinerea cinerea* L.) killed Aug. 11, 1953 in the Onega River basin. Both species are native to more southerly regions and occurrence in these northern localities is explained by these localities' ecological similarity with the birds' breeding grounds. ***Copy seen:*** DLC.

53871. PARRIAT, H. Une poignée de mousses de l'Alaska. (Revue bryologique et lichénologique, 1954. n. sér. t. 23, no. 1–2, p. 163–64.) Text in French. ***Title tr.:*** A handful of mosses from Alaska.

Contains notes on about 30 species in a small collection made by Mrs. Frances Baker at Ketchikan, Sept.–Oct. 1952.

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53872. PARSONS, WILLARD HALL, 1911– . Prospecting in the Canadian Eastern Arctic. (Earth science digest, July–Aug., Sept.–Oct. 1957. v. 10, no. 4, p. 11–16; no. 5, p. 9–12, illus., text map.)

Popular description, by leader of three-man party in June–July 1956, of flight from Winnipeg to Churchill, Man., and along the west coast of Hudson Bay to Wager Bay, Keewatin District (65°30′ N. 89° W.). The town and surroundings of Churchill, tidal flats along the coast, work at the Rankin Inlet nickel mine, and the countryside at Wager Bay are briefly described. Advantages and disadvantages of the North for prospecting are stated.

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PASCH, BRUNO, *see* Fraerman, R. I., *and* P. D. Zaĭkin. Elmsfeuer . . . Reisen und Abenteuer . . . Golownin. *1955.* No. 50963.

53873. PASCOE, J. E. The survival of the rat's superior cervical ganglion after cooling to −70° C. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 510–19, illus.) 14 refs.

The isolated superior cervical ganglion withstood brief cooling to −10° C. with but little damage, as shown by the size of the transmitted action potential. Cooling to −70° C. abolished all excitability; this could be prevented however, by pretreatment with 15% glycerol, provided freezing did not exceed 24 hrs.

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53874. PASECHNIK, I. P. Seĭmicheskie i vozdushnye volny, voznikshie pri izverzhenii vulkana, Bezymi͡annyĭ 30 marta 1956 g. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geofizicheskai͡a, 1958. no. 9, p. 1121–26, tables, diagrs.) 11 refs. Text in Russian. ***Title tr.:*** Seismic and air waves which arose from the eruption of Bezymyannyy volcano, March 30, 1956.

Presents data worked up on waves registered by Russian stations: those on seismic waves from 13 stations, give position of epicenter, depth of earthquake center and wave energy; those on air waves from five stations: occurrence, length, speed and energy. These data are discussed as contribution toward understanding of earthquakes caused by volcanic activity. ***Copy seen:*** DLC.

53875. PASEt͡SKIĬ, VASILIĬ MIKHAĬLOVICH. Zachinatel' kompleksnykh issledovaniĭ Arktiki; k 100-letiiu so dni͡a rozhdeniia E. V. Tolli͡a. (Priroda, Mar. 3, 1958. god 47, no. 3, p. 64–69, illus.) 4 refs. Text in Russian. ***Title tr.:*** Initiator of complex arctic investigations: the centenary of the birth of E. V. Toll.

Reviews the arctic activities of Toll (1858–1903?) as the first Russian geographer to conduct exploration in several coordinated fields: climate and ice conditions, hydrography, geology, flora and fauna, etc. His expeditions to Bol'shoy Lyakhovskiy and the New Siberian Islands, 1886–1893, his last with the *Zari͡a* in 1900, seeking Sannikov Land, are discussed, also his aid to Nansen's expedition. ***Copy seen:*** DLC.

PASEt͡SKIĬ, VASILIĬ MIKHAĬLOVICH, *see also* Frolov, V. V., *and* V. M. Paset͡skiĭ. t͡SSentr issledovaniĭ Severnogo Ledovitogo okeana. *1958.* No. 51012.

PASEt͡SKIĬ, VASILIĬ MIKHAĬLOVICH, *see also* Treshnikov, A. F., *and* V. M. Paset͡skiĭ. Solomon Andrė. *1957.* No. 55509.

PASSAR, ANDREĬ, *see* Smelĭakov, I͡A. V. Molodye poėty . . . *1958.* No. 54969.

53876. PASTERNAK, F. A. Kolichestvennoe raspredelenie i faunisticheskie gruppirovki bentosa Sakhalinskogo zaliva i prilezhashchikh uchastkov Okhotskogo mori͡a. (Akademiĭa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 23, p. 237–68, maps.) 24 refs. Text in Russian. ***Title tr.:*** Quantitative distribution and faunistic grouping of the benthos in Sakhalin Bay and adjacent parts of the Okhotsk Sea.

A study of the distribution of echinoderms, molluscs, polychaetes, etc. and the benthic biomass in general. This is fol-

lowed by outlines and descriptions of areas with a certain species predominating (e.g., zone of *Ophiura sarsi*) or such with a more general group, as areas of large or small bivalves. Some zones are earmarked by the way of feeding of their fauna, such are the zones of detritus feeders, ground feeders, water filterers, etc.

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53877. PATERSON, W. S. B. The position of markers on the Greenland Ice Sheet. (Journal of glaciology, Oct. 1958, v. 3, no. 24, p. 321.)

Reports latitude, longitude, altitude, etc. of seven markers, erected by the British North Greenland Expedition 1952–54. They are intended for use in a decade or two by future expeditions to determine the rate of movement of the ice sheet and net snow accumulation.

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53878. PATON, JAMES, *and* **B. McINNES.** Auroral activity 1954. (Observatory, Feb. 1955. v. 75, no. 884, p. 39.) Ref.

Summarizes observations of auroral activity made by members of the British Aurora Survey. The magnetic disturbance was, judged by K-indices, markedly noticeable, and it is concluded that aurora is the more sensitive indicator of the presence of solar M-regions.

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53879. PATON, JAMES, *and* **B. McINNES.** Auroral notes. (Observatory, Feb. 1954. v. 74, no. 878, p. 46–48.) Ref.

Summarizes auroral observations made during 1953 in Great Britain and Ireland, and by the British North Greenland Expedition at 80° N. A marked decrease in frequency from 1952 was recorded; max. frequency was in Dec. 1952. A stream of M-region origin that swept across the earth, Oct. 15–19, seemed to be reinforced at times by emissions from solar flares.

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53880. PATON, JAMES. Polar and tropical aurorae. (Endeavour, Jan. 1957. v. 16, no. 61, p. 42–47, illus.) 11 refs.

Reviews auroral phenomena and studies of it by Størmer and others. The need for further knowledge of low-latitude displays to amplify understanding of auroral processes is emphasized.

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53881. PATON, JAMES. The polar aurora. (Royal Meteorological Society. London. Quarterly journal, Oct. 1956. v. 82, no. 354, p. 396–408, 6 photos, 2 diagrs.) 43 refs. Symons Memorial Lecture, Apr. 11, 1956.

Reviews "slow accumulation of knowledge by observation through the centuries, . . . its culmination in the great work of Carl Størmer," and surveys current developments. Ionospheric relations are complex, and little progress has been made in the correlation of radio echo and visual observations. Solar relations are more clearly understood. Theoretically, it is possible to determine temperatures of the upper atmosphere at auroral levels from spectral characteristics; but a satisfactory theory of the cause of aurora has not been derived. Numerous observations have been made and analyzed.

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PATTERSON, HELEN R., *see* Patterson, W. B., *and others.* Growth of human tumors in hibernating hamsters. *1957.* No. 53882.

53882. PATTERSON, W. BRADFORD, 1921– , *and others.* Growth of human tumors in hibernating hamsters. (Society for Experimental Biology and Medicine. Proceedings, Oct. 1957. v. 96, no. 1, p. 94–97.) 13 refs. *Other authors:* C. P. Lyman *and* H. R. Patterson.

Report of investigation on the effects of lowered temperature on growth of heterologous tumor from a homeotherm. During hibernation (with a body temperature of ±6° C.) tumor growth was markedly inhibited but was otherwise unaffected. It returned to normal growth when the hamsters were returned to a warm environment.

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PATTERSON, W. BRADFORD, 1921– , *see also* Fletcher, W. S., *and* W. B. Patterson. The growth of human tumors . . . freezing . . . *1958.* No. 50930.

53883. PATTON, W. J. H. Mississippian succession in South Nahanni River area, Northwest Territories. (*In:* American Association of Petroleum Geologists. Jurassic and Carboniferous of Western Canada, 1958. p. 309–326, illus., maps.) 17 refs. Abstract previously listed: No. 47275.

From fossil evidence, rocks of Kinderhook, Osage, Meramec, and Chester age are known to be present in a thick section of Mississippian rocks exposed west of Jackfish River in the La Biche Range of the Mackenzie Mts. near the South

Nahanni River (61°06′ N. 123°59′ W.). Strata with a Kinderhook fauna equivalent in age to the Banff formation are lithologically similar to it, but equivalent Rundle strata with Osage, Meramec and Chester fossils consist of interbedded argillaceous limestone and calcareous shale overlain by a great thickness of sandstones with minor shale and coal beds. Fossil plants *Stigmaria* sp. and *Lepidodendron* sp. and coal were found in sandstones below the Meramecian *Spirifer* cf. *pellaensis* zone. Microspores indicate a Lower Carboniferous flora (cf. No. 40196). Spores in the coal are not like those found in Mississippian coal of Utah, but similar to those described from the Carboniferous of the Ukraine.

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53884. PATTON, WILLIAM WALLACE, 1923– . A new Upper Paleozoic formation, central Brooks Range, Alaska. Washington, D.C., U.S. Govt. Print. Off., 1957. p. 40–45, 2 text maps. (U.S Geological Survey. Professional paper 303–B. Exploration of Naval Petroleum Reserve No. 4 and adjacent areas, northern Alaska, 1944–53. Part 3, Areal Geology.) 3 refs.

Identifies and describes the Siksikpuk formation, a new Upper Paleozoic (probably Permian) sequence of shale and siltstone; in mapped area from the Anaktuvuk River (approx. 68°30′ N. 151° W.) west to the Kiligwa on the Chandler L. quadrangle; a type section near Tiglukpuk Creek (approx. 68°17′ N. 151°50′ W.) is treated in detail. Disconformities separate the Siksikpuk from the Lisburne (Mississippian) below, and the Shublik (Triassic) above. The Siksikpuk is intensely faulted and folded; exposures are limited to small, scattered cutbanks along the streams. Age determination was chiefly made on the basis of coral fauna, occurring in the basal 50 ft. of the formation. ***Copy seen:*** DGS.

PATTON, WILLIAM WALLACE, *Jr.*, 1923– , *see also* Bickel, R. S., *and* W. W. Patton. Preliminary geologic map . . . Nulato and Kateel Rivers . . . *1957*. No. 49714.

PATTY, ERNEST NEWTON, 1894– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

PAULAHARJU, SAMULI, *see* Sainio, M. A. Anteckningar och källor till L. L. Laestadii biografi. *1958*. No. 54503.

PAULS, FRANK P., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

53885. PAULY, HANS. Igdlukunguaq nickeliferous pyrrhotite; texture and composition, a contribution to the genesis of the ore type. København, C. A. Reitzel, 1958. 167 p., 20 plates, illus., maps, diagr., sections. (Meddelelser om Grønland, bd. 157, nr. 3.) 58 refs.

Contains description of a pyrrhotite deposit on the northeast coast of Disko (approx. 70° N. 53° W.), the only such deposit found in Greenland. It is a block of about 28 metric tons, discovered by Steenstrup in 1872, in a dike rock of the basalt complex covering most of Disko and the nearby mainland. The ore has the composition of normal nickeliferous pyrrhotite, but presents a remarkable variety of phases and exsolution structures, ranging from chalcopentlandite, formed at near 850° C., to a form of pyrrhotite formed at near 140° C. A three-stage development is disclosed: initial, from which the primary oxides came as a result of gases originally held within the molten sulphide mass; main stage, where consolidation of the sulphides took place together with the solidification of oxidic material; third stage, dominated by hydrothermal processes. Microscopic study of the ore and chemical analyses of rocks and ore are discussed in detail; mineral and chemical content are summarized in tables. Evolution of the ore is traced; comparison is made with other nickel-bearing deposits. The relation of this ore to preceding geological phenomena is treated. Plates show 79 polished sections. ***Copy seen:*** DGS.

53886. PAUS, KJELD. Anläggningsarbeten vintertid. (Svenska vägföreningen. Tidskrift, July 1957. årg. 44, häfte 7, p. 276–78, illus.) Text in Swedish. ***Title tr.:*** Winter road construction.

Contains some comparative notes on the increase in cost of road construction during winter and causes of this increase. Certain types of construction work are suggested for the winter season, such as blasting and constructions across swamps and rivers. ***Copy seen:*** DLC.

53887. PAVLOV, I. P. Mery predokhraneniîâ travostoîâ ot izrezhivaniîâ v usloviîâkh zimneĭ èkspluatatsii letnykh poleĭ. (*In:* U.S.S.R. Armiîâ. Upravlenie Voenno-vozdushnykh Sil. Sbornik materialov po stroiteľstvu . . . aèrodromov.

Moskva, 1942. vyp. 1, p. 64–69, table.) Text in Russian. ***Title tr.:*** Measures for preservation of sod from destruction during winter use of airfields.

The airfields were seeded in the summer of 1940 with a mixture of various grasses, and three test plots were selected: a section with an accumulation of 10 cm. of snow solidly packed, another with snow subjected to repeated packing and mixing, and a section with an undisturbed snow cover. In the spring of 1941, the first plot was found to have its grass 40% killed, the second area was 12.6 to 36% grass-killed, and that under the natural snow cover 16.3 to 19.9%. The hardiness of the grass can be improved by the use of fertilizers and adequate timing between mowings.

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53888. PAVLOV, N. Baĭkal'skiĭ meridian. (Vokrug sveta, Dec. 1958, no. 12, p. 1–7, illus., maps.) Text in Russian. ***Title tr.:*** Baykal meridian.

Outlines the resources and industrial development plans for Eastern Siberia, the territory between the Yenisey and Lena Rivers, including all Krasnoyarsk Province and Yakut A.S.S.R., located on both sides of the meridian of Lake Baykal. This "storehouse" of the Soviet Union contains 70% of its coal, 36% of the nickel, 56% of the tin, 90% of the mica, 99% of the diamonds (see maps), great amounts of gold, iron ores, salt and almost inexhaustible resources of timber and of water power. Plans to build up a "third metallurgical center" around Tayshet in the Angara basin, and a "fourth" in the Aldan basin are discussed; results expected of 10–15 years' development are depicted.

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53889. PAVLOV, NIKOLAĬ VASIL'EVICH, 1893– . Voprosy genezisa ėndogennykh magnetitovykh rud Tungusskoĭ sinekliza Sibirskoĭ platformy. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Sept. 1958. god 23, no. 9, p. 3–24, 7 text maps, diagr.) 18 refs. Text in Russian. ***Title tr.:*** The problems of the endogenous magnetite ore genesis in the Tungusska syncline of the Siberian platform.

The main literature on this question is reviewed. Basic features of the structure are outlined. The endogenous ore localities of the region (over a million sq. km. in area) and their development with respect to tectonic zones and various phases of trap volcanism are discussed. Development of magnetite ores is dependent on ore-containing solutions from basaltic magma which is determined by the stage of eruption and depth of the volcano. Magnetite ore occurrences in veins, dikes and other forms are outlined. Two magmatic phases are distinguished and their age considered. Besides the Angara-Ilim area, already known, other iron ore fields in the Podkamennaya Tunguska, Kureyka, Bakhta, etc. basins are reviewed, and their mineralic composition are summarized.

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53890. PAVLOV, V. V. Palinologicheskoe obosnovanie vozrasta uglenosnykh otlozheniĭ Sangarskogo kamennougol'nogo mestorozhdeniîa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1958. vyp. 10, p. 22–27, diagr.) 4 refs. Text in Russian. ***Title tr.:*** The palynological basis for the age of coal-bearing deposits of the Sangar Carboniferous layers.

Presents the results of the spore and pollen studies of two coal-bearing series. From 95 samples, various fossil plant spores and pollen were identified, and from pollen spectra, the stratification and age of these series is determined. Comparison is made with other regions.

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53891. PAVLOVSKIĬ, EVGENIĬ NIKANOROVICH, 1884– . Quelques considérations sur les conditions écologiques de l'existence du mammouth. (*In:* International Congress of Zoology, 14th. *Copenhagen*, 1953. Proceedings, 1956. p. 61–63.) Text in French. ***Title tr.:*** Some considerations on the ecological conditions of the mammoth's life.

Deals with the mammoth discovered on the Mamontova River, on Taymyr Peninsula, in 1948. The vegetation of the region is divided into five zones: tundra with *Ereophorum angustifolium* and mosses; tundra with *E. angustifolium* and *Carex hyperborea;* flat moss marshes; tundra with *Dryas punctata, C. hyperborea* and mosses; and mosses. In a plant collection from the region, 115–120 species are represented. The climate seems to have been less cold in the mammoth's epoch than at present.

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53892. PAVSHTIKS, E. A. Plankton survey from the Norwegian Sea in 1956. (International Council for the Study of

the Sea. Annales biologiques, 1956, *pub.* 1958. v. 13, p. 40–41, table.)

Analysis of zooplankton components during June–July in waters of different origin. Also qualitative and quantitative comparisons between different periods and areas, with *Calanus finmarchicus* and *C. hyperboreus* as main objects of study.

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53893. PAVSHTIKS, E. A. Sezonnye izmeneniia v planktone i kormovye migratsii sel'di. (Murmansk. Polârnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozâĭstva i okeanografii. Trudy, 1956. vyp. 9, p. 93–123, illus. tables, maps.) 47 refs. Text in Russian. ***Title tr.:*** Seasonal changes in plankton, and the feeding migrations of herring.

Account of investigations conducted in the Norwegian and Greenland seas, 1948–1955. Older herring, after spawning in the spring, continuously move northward following the spring mass development of crustaceans. Young fish feed on red *Calanus*. In general, herring were found to shun the "water bloom." Deviations from the normal seasonal cycle may cause confusion of feeding grounds. Factors responsible for plankton development, relation between zoo- and phytoplankton, etc. are also discussed.

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53894. PAYER-WEYPRECHT-GEMEINDE. Österreich in der Arktis: Payer und Weyprecht entdecken das Franz-Joseph-Land; die österreichisch-ungarische Nordpol-Expedition vor fünfundsiebzig Jahren, 1872–1874. Wien, Hölder-Pichler-Tempsky, 1949. 96 p. illus., facs., ports, maps (1 fold.) Text in German. ***Title tr.:*** Payer-Weyprecht. Austria in the Arctic: Payer and Weyprecht discover Franz Joseph Land; the Austrian-Hungarian North Pole Expedition seventy-five years ago, 1872–1874.

Popular account of Julius Payer and Karl Weyprecht's expedition on the *Admiral Tegetthoff*, 1872–74, based chiefly on its leaders' published accounts (cf. No. 12730, 13204, etc.). This was the first Austrian expedition into arctic regions; it made a major discovery and carried out scientific observations. Biographical sketches of Payer and Weyprecht (p. 84–90) are added. Maps (p. 95–96) show southeast Franz Joseph Land and track of the *Tegetthoff*. The main arctic expeditions prior to this one are shown (fold. map) and discussed (p. 11): of 92, one was Italian, two (each) Danish, Swedish, German, three Norwegian, seven North American, eight Dutch, 13 Russian, 54 British in origin.

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PAYNE, THOMAS GIBSON, 1915– , *see* Miller, D. J., *and others*. Geology . . . petroleum provinces . . . *1957*. No. 53294.

53895. PAZIŬK, L. I. Granofirovye porody i ognelsovannye kvartsevye metakeratofiry svity Imandra-Varzuga na Kol'skom poluostrove. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii i mineralogii Kol'skogo poluostrova 1958, p. 111–25, illus., tables, map.) 8 refs. Text in Russian. ***Title tr.:*** Granophyric rocks and gneissic quartzite metakeratophyres from the Imandra-Varzuga series in Kola Peninsula.

Features of metakeratophyres are considered and description is given of the metasomatic processes of the rocks, and the petrographic and mineralogical properties of metakeratophyres on Vite Peninsula on Lake Imandra. These metakeratophyres are compared with imandrites south of Imandra station. Chemical analyses and numerical characteristics of both are presented. What Ramsay described as imandrite 1 (No. 14143) is actually changed keratophyre and should be called metakeratophyre.

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53896. PAZIŬK, L. I. Subshchelochnye granity Dolomitovoĭ varaki, k iugu ot Khibinskogo massiva. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Shchelochnye granity Kol'skogo poluostrova, 1958. p. 180–89, illus., tables, text maps.) Text in Russian. ***Title tr.:*** Subalkaline granites of Dolomitovaya Varaka, south of the Khibiny massif.

The Dolomitovaya Varaka granite intrusion (approx. 67°30′ N. 33°40′ E.) is 4 km. south of the Apatity railroad station and southeast of Lake Imandra. Its geologic characteristics are presented and petrographic properties outlined. Mineral composition of these subalkaline biotite granites is characterized by quartz, microcline-perthite, albite, biotite-lepidomelane and the accessory minerals: borax-orthite, apatite, titanite, magnetite, and xenotime (?). In these granites, results of widespread processes of alkaline and quartzitic autometasomatosis are observed and also the related albitisation of plagioclase and petrification of microcline. Occurrence of aegirite, arf-

vedsonite, natro-tremolite, nepheline, albite and phlogopite results from contact-metasomatic reaction.

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53897. PEACOCK, J. H. Vasodilatation in the human hand. Observations on primary Raynaud's disease and acrocyanosis of the upper extremities. (Clinical science, 1958. v. 17, no. 4, p. 575–86, tables.) 17 refs.

A comparative study of vasodilatation in ten patients with primary Raynaud's disease, of subjects with acrocyanosis and of normal controls. Vasodilatation was impaired in the majority of cases of severe Raynaud's disease. It was normal in mild cases and in acrocyanosis.

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53898. PEACOCK, LELON J., *and* **R. A. MARKS:** Behavioral concomitants of cold adaptation, 1; rate of responding at 2.5° C. June 7, 1957. 7 p. illus., table. (U.S. Army Medical Research Laboratory, Fort Knox, Ky. Report no. 283.) 11 refs.

Report on behavior studies with rats. It was found that animals acclimatized to cold (2.5° C.) responded in a much higher degree to a reward stimulus, than not acclimatized controls. Possible explanations for this behavior are offered.

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53899. PEACOCK, LELON J., *and* **R. A. MARKS.** Behavioral concomitants of cold adaptation, 2; rate of responding at −5° C. June 10, 1957. 4 p., illus. (U.S. Army Medical Research Laboratory. Fort Knox, Ky. Report no. 284.) 2 refs.

Experiments at this temperature produced results similar to those in the first part of this study (*supra*), in that acclimatized rats showed higher response to a reward stimulus, than controls. It is assumed that similar behavior will prevail at other low environmental temperatures.

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53900. PEACOCK, LELON J., *and* **R. A. MARKS.** Behavorial concomitants of cold adaptation, 3; temporal development of behavioral differences. July 31, 1957. 5 p. illus. (U.S. Army Medical Research Laboratory, Fort Knox, Ky. Report no. 298.) 5 refs.

Report on investigation of differences in response of normal and cold-exposed rats to a radiant heat reward. The development of behavioral differences was found to "correspond temporarily to the development of certain physiological indices of acclimatization."

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53901. PEARSALL, NELSON E., *and* **W. O. McCLUNE.** Army vies with nature to heat arctic air base. (Heating, piping and air conditioning. Dec. 1957. v. 29, no. 12, p. 77–81, illus.)

Describes the design of foundations and the heating system of buildings at Thule Air Force Base, both of proven efficiency. In order to neutralize heat radiation through the floors and thus prevent the buildings from settling into the permafrost, air circulation was arranged under the ground floor. Heating of the buildings is by warm, humidified air, heated by steam coils. The steam from 40 strategically located boilers is distributed through an 8-mi. network of insulated surface pipes constantly patrolled by a maintenance crew.

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53902. PEARSALL, W. H., *and* **P. J. NEWBOULD.** Production ecology, 4; standing crops of natural vegetation in the sub-Arctic. (Journal of ecology, July 1957. v. 45, no. 2, p. 593–99, tables.) 14 refs.

Estimates of standing crops in Aug. 1956 from Swedish and Norwegian Lapland (Abisko, 68°15′ N. and Gratangen, 68°39′ N. regions) at 250–350 m. altitude. The vegetation of the Abisko region is analyzed: subarctic birch forest and ground flora, *Carex* in swamps. Their annual production was found to be low, averaging about 2,500 kg./hectare against some 6,900 kg. for northern Britain. Despite the greater daily light energy in Lapland, the low temperature limits the duration of growing season to about half that in Britain, studied in earlier parts of this series.

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53903. PEARSON, WILLIAM HENRY, 1849– . List of Canadian Hepaticae. Montreal, Wm. Foster Brown & Co., 1890. 31 p. 12 plates. (Geological and Natural History Survey of Canada.)

Annotated systematic list of 150 liverworts from collections made by J. M. Macoun and others, at least 25 of the species recorded from Alaska, Greenland and northern Canada.

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53904. PECHENIK, L. N. Povysit' êffektivnost' ispol'zovaniîa melkogo promyslovogo flota na dobyche dal'nevostochnoĭ treski. (Rybnoe khozîaĭstvo, Apr.

1958. god 34, no. 4, p. 32–35, tables.) Text in Russian. ***Title tr.:*** Increase the effectiveness of the small fishing fleet for the catch of Far-Eastern cod.

The occurrence and movements of this fish, and the methods and quantities of catch in Kamchatka and adjoining waters are outlined. Time lost on boat overhaul is analyzed. Ways of increasing the yield are presented: by extending the fishing season, selecting better personnel and better equipment, etc.

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53905. PECK, CHARLES HORTON, 1833–1917. New species of fungi. (Torrey Botanical Club. Bulletin, May 15, 1895. v. 22, no. 5, p. 198–211.)

Describes 36 species, six native to Newfoundland and Labrador, and one from Hudson Bay region. ***Copy seen:*** DLC.

53906. PEDERSEN, ALWIN, 1899– . Der Eisbär, rastloser Wanderer im Nordpolargebiet. (Kosmos, Dec. 1956. Jahrg. 52, Heft 12, p. 554–59, illus., map.) Text in German. ***Title tr.:*** The polar bear, restless wanderer in the Arctic.

Describes its nutrition, hunting and fishing, hibernation, reproduction, and recent population decrease. It generally follows a circumpolar route, wandering on the ice in search for seal; it may sojourn a while on the coast of Franz Joseph Land, Spitsbergen, and East Greenland, etc.; it seldom goes north of 84° N. and its southern limit is about 60° N. (cf. map). Some examples of the polar bear's attitude toward man are given. ***Copy seen:*** DLC.

53907. PEDERSEN, ALWIN, 1899– . L'instancabile orso polare. (Vie del mondo, Sept. 1958. anno 20, no. 9, p. 955–60, illus., map.) Text in Italian. ***Title tr.:*** The indefatigable polar bear.

The polar bear roams the coasts and across frozen seas, following the westward drift of ice, in the Arctic (mapped); it is rarely found outside 60°–84° N. Its hunting and feeding habits, food preference (seal), hibernation and propagation, etc., are described. Though attracted to humans by curiosity, it seldom attacks man, unless provoked or starved; it does not feed on human corpses (e.g., explorers', Eskimo burials). To prevent the polar bear's extinction through indiscriminate slaughter by fur hunters, various protective laws have been adopted since the 1930's in Greenland, Spitsbergen and northern America

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53908. PEDERSEN, ALWIN, 1899– . Meister Lampes grönländischer Vetter. (Kosmos, July 1957. Jahrg. 53, Heft 7, p. 320–24, illus.) Text in German. ***Title tr.:*** Br'er Rabbit's Greenlandic cousin.

Numerous flocks of arctic hare (*Lepus arcticus*) were observed during a hunting trip in the valleys along Ardencaple Fjord (approx. 75°14′ N. 22° W.), and on a sledge-trip. In winter they move to the uplands (800 m.) and feed on vegetation frozen while fresh, and retaining most of its nutritive value. They are easy to hunt (and the meat is tasty); their fur remains white the year round, only the young have a greyish color for about three weeks. ***Copy seen:*** DLC.

53909. PEDERSEN, ALWIN, 1899– . Riesen des Eismeeres. Leipzig, Brockhaus, 1957. 199 p. plates. Text in German. ***Title tr.:*** Giants of the arctic sea.

Account of walrus based largely on personal observations in Northeast Greenland. Earlier ideas about the animal, effect of overexploitation, breeding grounds, behavior and social attitudes, hunting experiences, walrus and polar bear, migrations, vanishing populations, are among the main topics discussed. Excellent and rare photographs (34) illustrate the work. ***Copy seen:*** DLC.

53910. PEDERSEN, EINAR SVERRE. Polar route navigation. (Navigation, summer 1958. v. 6, no. 2, p. 79–85, illus., map.) Ref.

Describes geography and meteorology along the Scandinavian Airlines System's route Copenhagen-Tokyo, and reviews experience with the navigational equipment in some 26,000 flying hours over the Arctic. Radar and astro-fixation are used concurrently with the Polar Path gyro; there is no immediate need for telemetric aids over the Arctic Ocean. Photo reconnaissance of ice conditions is carried out between 80° N. and 85° N. for the Danish Arctic Institute's forecast. Occurrence of jet streams is reported; recordings of magnetic deviation were made for a period of one year. A connection between ice coverage in the Arctic Ocean and weather conditions in Scandinavia is noted. ***Copy seen:*** DLC.

53911. PEDERSEN, ELSA. Seldovia. (Alaska sportsman, July 1958. v. 24, no. 7, p. 6–11, 37–38, illus.)

Reviews history of this town (59°26′ N. 151°43′ W.) on the Kenai Peninsula from

its origin as an Alaska Commercial Co. trading post, shortly after the purchase of Alaska in 1867. The town, and the development of fishing, hunting, mining and industry are described. A brief review of Russian hunting and trading activities in Alaska in the 18th-19th centuries is included. ***Copy seen:*** DI.

53912. PEDERSEN, GUNNAR S. Anlegg av flyplasser på evig tele. (Teknisk ukeblad, Jan. 17, 1957. årg. 104, nr. 3, p. 49–56, illus., diagrs., text map.) 26 refs. Text in Norwegian. ***Title tr.:*** Construction of airfields on permafrost.

Describes such phenomena as frost mounds, naleds and ring formations, and discusses construction problems. Preliminary surveys for airfields, detailed investigations, planning and construction: buildings, roads, water and sewage systems, etc. are dealt with in turn. Preliminary investigation for construction of Norwegian civil airfields on Svalbard, Jan Mayen, and in the Antarctic is suggested. ***Copy seen:*** DLC.

53913. PEDERSEN, SVEND, 1898– . Quartermaster subsistence problems in arctic and sub-arctic regions. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, 1952. (n.s.) v. 4, no. 4, p. 273–77, illus., map.)

Includes information on Alaska's food production, food imports into the area and their nature, the problem of fresh milk supply, various ways of preserving or concentrating milk and its restitution, preparing overseas menus, rations; water supply. ***Copy seen:*** DNLM.

53914. PEDRESCHI, L. Spedizioni canadesi all' Isola di Ellesmere. (Rivista geografica italiana, June 1956. annata 63, fasc. 2, p. 223.) Text in Italian. ***Title tr.:*** Canadian expeditions to Ellesmere Island.

Reports on the 1953 and 1954 expedition headed by G. Hattersley-Smith for the Canadian Defence Research Board. Their scope and areas of investigation are noted. ***Copy seen:*** DLC.

53915. PEEBLES, P. J. E. Ionospheric absorption measurements on a frequency of 2 mc./s. at Baker Lake and Churchill. Ottawa, 1956. 8 p., 27 p. graphs. (Canada. Defence Research Telecommunications Radio Physics Laboratory. Project report, 3–6–3. PCC No. D48–95–11–02.)

An analysis of absorption data obtained during the period May 1955 to July 1956 is presented. Absorption data obtained in this auroral zone are graphed and analyzed. Mathematical expressions are evolved for the median daylight diurnal absorption and for night absorption. A close correlation was found between individual absorption periods and certain types of short-term magnetic disturbances. A correlation was also found between magnetic disturbance (K) and absorption disturbance (N) for large magnetic disturbances. The winter anomaly effect was greater on and inside the maximum auroral region than outside the region. ***Copy seen:*** DNRL.

53916. PÉGUY, CHARLES PIERRE, 1915– , *and* J. CORBEL. Chronique arctique. (Norois, July–Sept. 1957. année 4, no. 15, p. 395–409, map, diagrs., graphs.) 36 refs. Text in French. ***Title tr.:*** Arctic chronicle.

Reviews recent work and publications on: glacier and ice studies (by American, French and Russian scientists), the Soviet Arctic, and, briefly, French activities of 1956 in Labrador, Greenland and Lapland. Russian investigations in the Arctic Basin, on problems of continental physical geography (effects of snow cover on soil temperature and moisture preservation, permafrost, periglacial morphology, etc)., and on northern aboriginals are outlined. The seeming population growth of the industrial far North is ascribed to imported Russian labor. A project for developing the Northern Sea Route with atomic icebreakers is mentioned as superseding an earlier plan of a Lena River–Okhotsk Sea canal.

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53917. PÉGUY, CHARLES PIERRE, 1915– , *and* J. CORBEL. Chronique arctique. Compte rendu, Section de Géographie, au quatorzième Congrès des Sociétés savantes du Centre-Ouest, St. Jean-Angély, 3, 4 & 5 mai 1958. (Norois, July–Sept. 1958. année 5, no. 19, p. 351–72, 3 text maps, table.) 67 refs. Text in French. ***Title tr.:*** Arctic chronicle. Review, Geography Section, 14th Congress of Learned Societies of the Mid-West, St. Jean-d'Angely, May 3–5, 1958.

Reviews developments in connection with the International Geophysical Year, citing work of the various countries in turn, organizations supporting it, etc. Research on arctic Scandinavia, Green-

land, Svalbard, Lapland is treated at length; data are given on arctic Scandinavia: area, that in glaciers, population, its density, and mean annual temperature. ***Copy seen:*** DGS.

PEHKONEN, EERO, *see* Holmsen, P., *and others.* The Precambrian . . . Vest-Finnmark . . . *1957.* No. 51790.

53918. PEHRSON, ROBERT NIEL, 1926–1955. The bilateral network of social relations in Könkämä Lapp District. Bloomington, Ind., 1957. 128 p. tables, diagrs. (International journal of American linguistics, Jan. 1957. v. 23, no. 1, pt. 2.) 73 refs. *Also issued as:* Indiana University, Research Center in Anthropology, Folklore and Linguistics, Publication 3.

Dissertation presented to University of Chicago, 1955, based on work in 1948–49 and 1951–52 with Swedish Mountain Lapps, reindeer herders, of this district in Karesuando Parish. Their social organization is dealt with as based on the paternal-maternal kinship pattern. The consanguineal relationship, genealogical structure and sociological ramifications are analyzed and kinship terminology tabulated. The bearing of bilateralism on inheritance and marriage customs, selection of leaders, working partners, herders, etc., are discussed. The characteristically Könkämä Lappish flexibility and variability in social organization as well as the absence of extensive corporate groups, except for the sibling group, is traced to bilateralism, a structural form apparently best suited to large-scale reindeer herding. The similarity to the bilateralism of the extensive reindeer-herding Chukchis and Koryaks is noted and opposed to the unilateralism of the Ostyaks and Tungus with their more limited reindeer economy. Favorably reviewed by D. B. Shimkin in *American anthropologist,* Aug. 1957, v. 59, no. 4, p. 734–36. ***Copy seen:*** DLC.

53919. PEIPONEN, VALTO. Über das Wegtragen von künstlichen, besonders von gefärbten Kotballen beim rotsternigen Blaukelchen, *Luscinia s. svecica.* (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Tiedonannot (Archivum), 1957. v. 12, no. 2, p. 146–55, illus., 3 tables.) 24 refs. Text in German. ***Title tr.:*** On the carrying away of artificial, in particular colored, dung-balls by the bluethroat *Luscinia s. svecica.*

Contains account of this warbler, as observed in the summers 1954–1957, near Kilpisjärvi (69°03′ N. 21°49′ E.) in southwest Lapland: its breeding biology, and the procedure used by both females and males to clean the nest of the chicks' droppings. Swallowed by the parent birds during the first three days, the excreta are later dropped 5–25 m. from the nest. Differently colored artificial pellets of wet cotton were used to determine the effect of color on this cleaning instinct. On females white had the strongest effect, then blue and black, yellow-orange and red; green was least effective. Results were different for the males: their preference was blue, then white, yellow, orange, red, and last, a black and green. At twilight choices were different, but irrespective of lighting, the real excreta were always removed first, then the cotton balls of color nearest that of the chick droppings. ***Copy seen:*** DLC.

53920. PEIPONEN, VALTO. Wechselt der Birkenzeisig, *Carduelis flammea* (L.), sein Brutgebiet während des Sommers? (Ornis fennica, 1957. v. 34, no. 2, p. 41–64, text map, diagr.) 30 refs. Text in German. Summary in English and Finnish. ***Title tr.:*** Does the redpoll change its breeding area during the summer?

Contains results of an investigation carried out in 1955 in southern and central Finland and in the northern fjeld, birch and alpine regions (Kilpisjärvi district, 69°03′ N. 21° E.): the redpolls breed in spring in the coniferous forest zone, then move with their young to the fjeld regions where the adult birds start to breed again. ***Copy seen:*** DA.

53921. PEĬVE, A. V. Tektonika Severoural'skogo boksitovogo poîasa. Moskva, Izd-vo Moskovskogo obshchestva ispytateleĭ prirody, 1947. 207 p. illus., cross-sections, text maps. (Materialy k poznaniiû geologicheskogo stroeniiâ SSSR. nov. ser., vyp. 4(8).) 155 refs. Text in Russian. Summary in English. ***Title tr.:*** The tectonics of the Northern Ural bauxite belt.

Presents the results of author's investigation with the Academy of Sciences' expedition in 1941–45, a two-fold study of the tectonic structure of bauxite fields lying between the Tura and Loz'va Rivers, and of the petrology and mineralogy of aluminous bauxites in the section between the Sos'va and Vagran Rivers, where they have been known since 1931 and are under development at Krasnaya Shapochka, Kal'mskoye, Cheremukhov-

skoye. The tectonic history and structural forms are outlined. Occurrences and types are discussed with special attention to Devonian bauxites widely distributed in the Northern Ural. Mineralogical and chemical properties are treated. The general theory of bauxite development is considered inapplicable to the Northern Ural. ***Copy seen:*** DGS.

53922. PEJLER, BIRGER. On variation and evolution in planktonic Rotatoria. (Uppsala. Universitet. Zoologiska bidrag från Uppsala, 1957. bd. 32, p. 1–66, 106 illus., 6 tables.) 97 refs.

Contains descriptions and analysis of the variation in rotifers occurring in lakes and small waterbodies in Swedish Lapland and Central Sweden (Uppland and Närke). Different types of variation are distinguished and exemplified, viz: (a) ecoclinal variation, (b) geographic variation in which no clines could be perceived, (c) discontinuous variation within a single water body, and (d) non-adaptive variation. The planktonic forms represent isolated terminations of branches of the ancestral rotatorian tree, and they play a subordinate role in the interpretation of the main phylogenetic lines within the group. The planktonic rotifers possess special adaptive structures for a pelagic life. ***Copy seen:*** DSI.

53923. PEKARSKAÏA, N. K. K metodike opredeleniïa soprotivleniïa merzlykh gruntov sdvigu. (*In:* Materialy po laboratornym issledovaniïam merzlykh gruntov, sbornik 3, 1957. p. 274–79, graphs.) 5 refs. Text in Russian. ***Title tr.:*** Methods of determining the shear strength of frozen ground.

"The effects of composition, structure, and temperature of frozen ground on its mechanical properties, and shear strength in particular, are discussed as well as a method of shear-strength measurement which takes into account the great variations of instantaneous and continuous shear strength with time. The experimental study at the Institute of Permafrostology showed that the Maslov and Lur'e apparatus for shear-strength measurement can be used profitably after modification for loads to 10 kg./sq. cm. or more as against the 5 kg./sq. cm. of the original design. The T̂Sytovich apparatus for pressing spheres into frozen ground was found applicable for determining the instantaneous shear strength." —SIPRE. ***Copy seen:*** DLC.

53924. PEKARSKAÏA, N. K., *and* N. A. T̂SYTOVICH. O roli treniïa i stsepleniïa v obshchem soprotivlenii sdvigu pri bystrom vozrastanii nagruzki. (*In:* Materialy po laboratornym issledovaniïam merzlykh gruntov, sbornik, 3, 1957. p. 255–73, tables, graphs.) 18 refs. Text in Russian. ***Title tr.:*** Role of friction and cohesion in actual shear stress of frozen ground for cases of rapid load increase.

"The recent state of the problem is outlined, and the insufficiency of the data for theoretical conclusions is noted. Laboratory measurements of the shear strength of frozen ground and the effects of loading and compaction before freezing on its variations are discussed. Data on friction and cohesion of frozen clay under loading from 4–12 kg./sq. cm. are tabulated and compared with similar data for rock. Maximum effects of cohesion forces on the shear strength of frozen clay appeared under moderate loads and decreased as the load increased. Cohesion and friction were factors of primary importance in rating the discontinuous strength of frozen ground. The decrease in shear strength with increased temperature is related to the lowered cohesion and friction with rising temperatures."— SIPRE. ***Copy seen:*** DLC.

53925. PEKELIS, V. Vse flagi v Igarke. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 30, illus.) Text in Russian. ***Title tr.:*** All flags in Igarka.

Loading timber on Soviet, East German, Norwegian, British, and other ships in Igarka harbor is sketched. The high quality of Angara pine and the port's loading facilities are noted.

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53926. PEKKARI, ALBERT. De nordligaste förekomsterna av *Alnus glutinosa* i Sverige. (Svensk botanisk tidskrift, 1957. bd. 51, häfte 1, p. 344–46, text map.) 7 refs. Text in Swedish. ***Title tr.:*** The northernmost localities for *Alnus glutinosa* in Sweden.

Notes recent finds of this alder species in the Haparanda-Risujärvi area (ca. 65°55′ N.). ***Copy seen:*** DSI.

PEKKARI, ALBERT, *see also* Hedlin, B., *and others. Stratiotes*-sjöar . . . *1957.* No. 51645.

53927. PELLUET, D. The effect of low temperature on the ascorbic acid content of the ovotestis of the slug, *Arion subfuscus,* Draparnaud. (Canadian journal

of zoology, Oct. 1957. v. 35, no. 5, p. 609–613, illus., tables.) 7 refs.

Animals exposed to near freezing temperatures showed a significant reduction of the amount of ascorbic acid in the ovotestis during the first eight days. These findings are compared with the cytological picture, which does not parallel the biochemical results.

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53928. PENGELLEY, ERIC T., *and* **K. C. FISHER.** Onset and cessation of hibernation under constant temperature and light in the golden-mantled ground squirrel, *Citellus lateralis.* (Nature, London, Dec. 1957. v. 180, no. 4598, p. 1371–72.)

Account of preliminary experiments with this and other species of squirrels, a number of them kept at constant low temperature of 30°–42° F. The animals showed normal behavior as if in the possession of "some form of 'internal seasonal clock' which determines the periods of hibernation and activity, and which is independent of the normal seasonal fluctuations of temperature and light, and is not governed by the food supply." ***Copy seen:*** DNLM.

53929. PENNER, EDWARD. The nature of frost action. (Roads and engineering construction, Apr. 1958. v. 96, no. 4, p. 61–66, illus., table, graphs.)

Describes extensive investigations on frost heaving carried out at the Division of Building Research, Ottawa. Soil temperatures, and the relation between maximum depth of freezing and climatic features such as air temperatures and snow cover were studied, and the possibility of deriving a climate index as an indicator of the severity of spring breakup of highways, was explored. The mechanism of ice-lens formation is described. The effect of snow cover on frost penetration is graphed; frost action on various textures, and the use of additives are discussed.

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53930. PENNIMAN, T. K. Pictures of ivory and other animal teeth, bone and antler; with a brief commentary on their use in identification. Oxford, University Press, 1952. 40 p. 20 plates. (Oxford. University. Pitt Rivers Museum. Occasional papers on technology, 5.) 22 refs.

Discusses the appearance of cut ivory and other bone and antler material which can be observed by the naked eye or with a lens. Specimens (30) from the museum collection, including mammoth ivory, walrus and narwhal tusks, reindeer and elk antlers are shown in photographs with, for most, longitudinal transverse or tangential sections. Differences between bone and ivory are pointed out. ***Copy seen:*** DSI.

53931. PEPPER, JAMES F. Potential mineral resources of the continental shelves of the Western Hemisphere. (U.S. Geological Survey. Bulletin 1958. no. 1067, p. 43–65, 5 text maps.) 43 refs.

Third of four papers, includes (p. 63) brief notes on potential oil, gas, and gold resources of the Alaskan coast, emphasizing difficulties of access due to storms and ice. ***Copy seen:*** DGS.

53932. PERCIVAL, F. G. Les ressources mondiales en minerai de fer. (*In:* International Geological Congress. 19th. *Algiers,* 1952, t. 1, p. xvii-xxxi, tables.) 4 refs. Text in French. ***Title tr.:*** The world's iron ore resources.

For practical purposes, the present iron resources are those deposits which are economically exploitable by virtue of mineral quality, deposit size, and geographic location. Quality, impurities and concentration are briefly explained. The Kiruna magnetite from Swedish Lapland is cited as one of the richest ores. Sedimentary deposits, described geologically as Precambrian (including the Labrador ores) and non-Precambrian (including Wabana ores in Newfoundland) account for over 90% of current production. The famous deposits of of Kiirunavarre and Gällivare in Swedish Lapland are of igneous origin. In Sydvaranger and Dunderland, northern Norway, exploitable concentrations of iron are found in banded gneisses. Consideration is given to other sources currently supplying the principal world markets.

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53933. PERETRUKHIN, N. A. Nekotorye voprosy proektirovaniя zheleznykh dorog v raĭonakh vechnoĭ merzloty. (Transportnoe stroitel'stvo, Feb. 1958. t. 8, no. 2, p. 21–22.) 4 refs. Text in Russian. ***Title tr.:*** Certain problems in designing railroads in permafrost regions.

"Technical standards for railroad construction in permafrost regions currently in force in the U.S.S.R. are discussed, and several examples of their inadequacy are given. The standards were devel-

oped 17 years ago without proper consideration for ground deformations associated with permafrost and with thermal changes after roadbed construction. New technical specifications should specify types of roadbeds in the light of limits for the length and depth of cuts and minimum embankment elevations. Maximum deformations usually appear in depressed areas because of the increased moisture and deeper thawing of clay after removal of the vegetation cover. Areas with fossil ice and ice mounds should be avoided, and the design should provide protection from naleds. Full account should be taken of changes in thermal conditions produced by the roadbed and destruction of the vegetation cover."—SIPRE. ***Copy seen:*** DLC.

53934. PERGAMENT, T. S. Raspredelenie bentosa v pribrezhnoĭ zone vostochnogo Murmana. (Akademiĭa nauk SSSR. Murmanskaĭa biologicheskaĭa stant͡siĭa. Trudy, 1957. t. 3, p. 75–89, illus. tables, maps.) 23 refs. Text in Russian. ***Title tr.:*** Distribution of benthos in the coastal zone of the eastern Murman.

A study of the bottom fauna from a 20-mile-wide zone and 147 samples: distribution according to species or larger taxa, quantitative distribution of the larger groups, distribution per haul, frequency of individual species; zoogeographic origin of forms: circumpolar (47%), North Atlantic (and North Pacific) 16%, Arctic (8%), and of dubious origin 27%. The role of currents, especially those from the Atlantic in the distribution of the local benthos, is discussed. ***Copy seen:*** DLC.

PERKOVSKE, B., *see* Aleksandrowicz, J., *and* B. Perkowske. Hémo-myélosplénogrammes . . . *1956.* No. 49238.

PERLMAN, H., *see* Fernández, C., *and others.* Effect . . . hypothermia on cochlear responses. *1958.* No. 50880.

53935. PEROV, V. F. Pervyĭ lednik v Khibinakh. (Priroda, July 1958. god 47, no. 7, p. 88, illus.) Text in Russian. ***Title tr.:*** The first glacier in the Khibiny.

Description of a small glacier 300 x 80 m., located in the northern part of the Lyavochorr massif in central Kola Peninsula, its upper end is at an absolute altitude of 1073.2 m. Its inclination, structure and conditions of formation are also discussed. ***Copy seen:*** DLC.

53936. PERRY, WILLIAM FRANCIS, 1919– . Acetate utilization by liver and adipose tissue of rats fasted in the cold. (Canadian journal of biochemistry and physiology, Feb. 1958. v. 36, no. 2, p. 237–41, tables.) 8 refs.

Report on investigation of the *in vitro* incorporation of $1\text{–}C^{14}$ and $2\text{–}C^{14}$ acetate into fatty acids and carbon dioxide by liver and adipose tissue of rats fasted for 24 hours at 5° C. Fed rats kept at room temperature served as controls. The effect of various incubation media was also studied. ***Copy seen:*** DNLM.

53937. PERSHIT͡S, ABRAM ISAAKOVICH. Problemy istorii pervobytnogo obshchestva v sovetskoĭ ėtnografii. Moskva, Izd-vo Akademii nauk SSSR, 1956. 32 p. (Doklady sovetskoĭ delegat͡sii na V mezhdunarodnom kongresse antropologov i ėtnografov.) Refs. Text in Russian and English. ***Title tr.:*** The problems of the history of primitive society in Soviet ethnography. (Papers presented by the Soviet delegation at the Fifth International Congress of Anthropological and Ethnological Sciences).

Includes Soviet investigations of primitive clan society (matriarchy, patriarchy, dual organization) among the Tungus (Evenki, Ul'chi,) the Ostyaks (Khanty), Voguls (Mansi), etc. The early Soviet idealistic approach to the clan-community system of the peoples of the North is censured and the feudal and class character of the clan structure stressed.

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PERSKY, LESTER, *see* Stueber, P., *and others.* Regional renal hypothermia. *1958.* No. 55207.

53938. PERSSON, HERMAN, 1893– . Arctic bryophytes mainly collected by the Rev. J. Lagerkranz. (Svensk botanisk tidskrift, 1942. bd. 36, häfte 4, p. 444–50.) 13 refs.

Lists with notes 20 liverworts collected by J. Lagerkranz in western Spitsbergen in 1925, 1926 and 1932, and in Greenland in 1934, 1936 and 1938; all the Greenland localities on the west coast.

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53939. PERSSON, HERMAN, 1893– , *and* O. GJAEREVOLL. Bryophytes from the interior of Alaska. Trondheim, 1957. 74 p. 4 illus. (Norske videnskabers selskab, Trondheim. Skrifter, no. 5.) 70 refs.

Contains an annotated systematic list of 184 species (139 mosses, 8 species of

Sphagnum and 37 hepatics). One species, *Encalypta longicolla*, is new to America; four are new to Alaska, viz: *Grimmia tenuicaulis*, *Leskeella tectorum*, *Pseudostereodon procerrimum* and *Splachnum rubrum;* and a further 28 species are new to the interior of Alaska-Yukon. The collection was made by Gjaerevoll, summer 1953, mainly in the White Mts. on the southeast side of Beaver Creek, one of tributaries of Yukon River, and later in the Alaska Range.

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PERSSON, HERMAN, 1893– , *see also* Ando, H., *and others.* The first record of *Gollania . . . 1957.* No. 49301.

53940. PERSSON, PER INGE. A revision of the family Trypetidae in Zetterstedt's "Diptera Scandinaviae." (Opuscula entomologica, 1958. bd. 23, häfte 1–2, p. 105–121.) 18 refs.

Revision of 56 species of Trypetidae, giving Zetterstedt's number and name, then the valid name, citation and list of localities. Valid names of species published by Zetterstedt are added separately. Many of these flies (fruit pests, etc.) are native to Swedish and Norwegian Lapland. ***Copy seen:*** DA.

53941. PERVAGO, V. A. Aldanskaîa zhelozorudnaîa provintsiîa, raîonirovanie i perspektivy. (Sovetskaîa geologiîa, Aug. 1958. god 1, no. 8, p. 3–26, tables, cross-sections, maps incl. 2 fold.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** The Aldan iron ore province, its districts and prospects.

Reports results of the southern Yakutia expeditions of the Ministry of Geology and of Mineral Resource Conservation in 1952–1957. The Aldan iron ore province located mainly in the Olekma-Aldan and Aldan-Timpton interfluves (58°–60° N. 120°–122° E.), is composed mainly of Archean metamorphic and intrusive rocks; and divided in four series. Each series is characterized in turn, its distribution and thickness outlined. Five genetic types of iron ore occurrences are distinguished: magnetite ore in a productive horizon of Archeozoic Fedorov series; magnetite ore of the Archeozoic Timpton-Uchur series; iron quartzite ore of Archeozoic and Proterozoic age; contact-metasomatic magnetite ore affected by post-Jurassic intrusions; hydrothermal hematite ore of Proterozoic age. Ore types and their areas are indicated. Of these, only Fedorov series in the Legliyer, Sivagli and Emel'dzhak areas is of economic importance. The average iron content is 40–46%. Ores in the Sivagli deposits have an increased sulphur content (to 3.5%) and 0.12% phosphorus; both impurities can be separated easily. The iron ore reserves are estimated at 1.6 billion tons; further discoveries are predicted.

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53942. PERVUSHIN, S. Kompleksnoe ispol'zovanie mineral'nogo syr'îa v promyshlennosti i ego ėkonomicheskaîa ėffektivnost'. (Planovoe khozîaĭstvo, May 1957. no. 5, p. 23–36.) Ref. Text in Russian. ***Title tr.:*** Full utilization of mineral raw materials in industry and its economic efficiency.

Discusses the recovery of by-products in ore processing, and the construction of new metallurgical plants in various parts of the U.S.S.R., including Kola Peninsula and Krasnoyarsk Province; these plants are to operate on the principle of full utilization of secondary components of ores. ***Copy seen:*** DLC.

53943. PERZYNA, TADEUSZ, *and others.* Wpływ hipotermii na zachowanie się elektroforetycznych frakcji białek surowicy krwi u królików. (Polski przegląd chirurgiczny, Feb. 1958. t. 30, no. 2, p. 103–110, tables.) 10 refs. Text in Polish. Summary in English. *Other authors:* I. Bowbelska and S. Sojka. ***Title tr.:*** The influence of hypothermia on the behavior of the electrophoretic fractions from serum proteins of rabbit blood.

Account of experiments on rabbits made hypothermic with "lytic mixture." Lowering of total protein in the serum depended on the dose of the drugs and the degree of hypothermia, an increase of both resulting in a fall of the serum protein. Increased administration of drugs and hypothermia had "a beneficial influence on the stability of relations" between the fractions of the serum protein. ***Copy seen:*** DNLM.

53944. PESCHANSKIĬ, IVAN STEPANOVICH. O nekotorykh problemakh arkticheskogo ledovedeniîa. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 161–70, graphs.) Text in Russian. ***Title tr.:*** Some problems of arctic ice science.

Results of studies on the physical and mechanical properties of ice and ice covers in the Arctic since 1946 are out-

lined and discussed to elucidate the basic problems of ice science. Freshwater and sea ice must be studied as materials distinct from ice cover as a geographical phenomenon. The physical and mechanical properties of ice can be studied comprehensively under laboratory conditions with due regard for the comparability of data obtained under field conditions; standardization of sample size and reduction factors is required. Studies of electromagnetic, thermal, and radiation properties continue.—From SIPRE. ***Copy seen:*** DLC.

53945. PESCHANSKIĬ, IVAN STEPANOVICH. Physical and mechanical properties of arctic ice and methods of research. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 100–104.) 7 refs.

The properties of sea ice are examined on the basis of recent studies in the U.S.S.R. The elastic limit of ice is not constant but depends on temperature. Strain velocity increases at high pressure velocities (approaches infinity), while at low pressure velocities it remains constant and there is plastic flow. Ice growth does occur under dynamic compression, and under static compression due to external forces acting on immobile ice. Complicated fluctuations of the ice cover were observed, "rest" cycles alternating with violent cycles of varying intensities ranging in frequency from 0.01 sec. to 1 min. Fluctuations resembling earthquakes were also noted. When fluctuations caused critical sagging, the ice cover broke up. The modulus of elasticity of the natural ice cover was determined by seismic measurements as 60,000 kg. per sq. cm. Seasonal strength characteristics are outlined.

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53946. PESCHANSKIĬ, IVAN STEPANOVICH. Stikhiĭa l'da. Moskva, Izd-vo "Morskoĭ transport," 1957. 119 p. illus., table, graphs, diagr., map. Text in Russian. ***Title tr.:*** The element of ice.

Physical and mechanical properties of ice and various phenomena related to its formation, also the stresses, and crushing force developed in movement or expansion, and methods of combatting them are described in popular form. Freezing and thawing processes in general, and of glacier sea and river ice, are explained, with pertinent terminology. Origin of glaciers, icebergs, ice islands is discussed. The crushing process is associated with dynamic and static forces. Theories of ice drift are reviewed, with account of Sverdrup's theory of wind and current effects and Shulelkin's correction on Coriolis force and resistance of ice and water (p. 32); and with experience of various arctic expeditions, from that of Payer and Weyprecht in 1872–74 to drifting station North Pole-7, cited (p. 25–50). Altberg's hypothesis on anchor ice and sludge (shuga) formation is discussed in relation to the stream's super-cooled surface layer and water-mixing during turbulent motion. Transformation of super-cooled water into ice is considered as self-acting in contrast with V. V. Lavrov's concept and experiments indicating initiation of crystallization by external stimuli (p. 57–58). Methods for preventing sludge formation and eliminating its effects are outlined. Mechanical stresses of the ice cover as they affect cargo loading are analyzed with tabulated experimental data for different seas (p. 72) and graphical illus. of ice and strength in relation to load and load distribution (p. 77). Ice stresses are discussed as affected by moving or concentrated loads, salinity, and temperature of the ice, presence and direction of cracks, and character of ice formation (p. 79). Practical problems are considered, among them the use of ice in the depth-freezing method for removing rocks and restrictions from river bottoms, the dry-dock method, melting of the surface ice by ash dusting. ***Copy seen:*** DLC.

53947. PESTALOZZI, MARKUS. Forsøk med bygg i Nordland fylke. Sortforsøk 1937–1955. Gjødslingsforsøk 1949–1955. (Forskning og forsøk i landbruket, 1956. bd. 7, hefte 7, p. 529–46, 7 tables.) 8 refs. State Experiment Station Vågones, report no. 27. Text in Norwegian. Summary in German. ***Title tr.:*** Trials with barley in Nordland province: variety trials 1937–1955; fertilizer trials 1949–1955.

Experiments near Bodø, northern Norway, are reported. Research techniques, soil and its management, weather, growing season, production, and quality are considered. Five varieties are recommended on the basis of location and length of growing season.

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53948. PESTALOZZI, MARKUS. Vurdering av de klimatiske vilkår for havredyrking i Nordland fylke; sortforsøk 1938–1954. (Forskning og forsøk i landbruket,

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1956. bd. 7, hefte 5–6, p. 417–39, 10 tables, 2 graphs.) 14 refs. State Experiment Station Vågones, report no. 25. Text in Norwegian. Summary in German. ***Title tr.:*** Evaluation of climatic conditions for oats cultivation in Nordland province; variety experiments 1938–1954.

The northern limit of profitable oats cultivation lies in Nordland, northern Norway. Experiments with 23 varieties during the period 1938–1954 indicate that the growing period is shortened with increased temperature and with decreased precipitation. Variety yields vary with location, soil, and fertilization; in general: inferior quality grain is produced in unfavorable weather, but no specific line is drawn as the limit of cultivation. ***Copy seen:*** DA.

53949. P'ESY ĪAKUTSKIKH DRAMATURGOV. ĭ Moskva, Gos. izd-vo Iskusstvo, 1957. 224 p. Text in Russian. ***Title tr.:*** Plays by Yakut dramatists.

Three plays on modern and historical themes, one on the discovery of diamonds in Yakutia. ***Copy seen:*** DLC.

53950. PETELIN, VENIAMIN PETROVICH. Mineralogiîa peschano-alevritovykh frakt͡siĭ osadkov Okhotskogo morîa. (Akademiîa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 22, p. 77–138, illus., tables, maps.) 83 refs. Text in Russian. ***Title tr.:*** The mineralogy of the aleuro-sandy fractions in the sediments of the Okhotsk Sea.

Account of investigation based on materials collected during 1949–52 by the *Vitiaz'*. Successive sections deal with the scope and methods of study; geological outline of the coastal areas; characteristic of the deposits; mineralogical composition of the aleuro-sandy fractions; distribution of minerals, of the heavy subfraction, etc. (with maps for the main mineral components); distribution of autogenous minerals; mineralogical regions of the Okhotsk Sea. ***Copy seen:*** DLC.

53951. PETELIN, VENIAMIN PETROVICH, *and* **È. A. OSTROUMOV.** O nekotorykh osobennostîakh raspredeleniîa zheleza v osadkakh Okhotskogo morîa. (Moskovskoe obshchestvo ispytateleĭ prirody. Bûlleten', nov. ser, 1958. t. 63, otd. geologicheskiĭ, t. 33, vyp. 2, p. 93–102, table, maps.) 31 refs. Text in Russian. ***Title tr.:*** Some features of the distribution of iron in the Sea of Okhotsk sediments.

Presents the results of investigation by expeditionary vessel *Vitiaz'* in 1949–50 on concentration and origin of iron in the bottom sediments. Average concentration is 5% and maximal 11%. Largest concentration is found in sandy sediments near the Kuril Islands and in some areas close to Kamchatka shores. Maps show variation of iron (in percentage) and types of sediments. The iron is brought mainly with river-transported materials and with products of active volcanoes. The Sea of Okhotsk, it is suggested, in view of its unusually high percentage of iron should be excluded from general classification of the world seas.

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53952. PETERSEN, GÜNTHER. Die Genitalien der paläarktischen Tineiden; Lepidoptera: Tineidae. (Beiträge zur Entomologie, Mar. 1957. Bd. 7, no. 1–2, p. 55–176, 149 illus., 4 plates.) 160 refs. Text in German. Summaries in English and Russian. ***Title tr.:*** The genitalia of palaearctic Tineidae; Lepidoptera: Tineidae.

Contains a critical revision of the genera of tineid moths, the larvae of which infest stored foods such as mushrooms and dried animal and vegetable products; based on investigations of male and female genital organs. A systematic annotated list of some 120 species includes descriptions of four new genera, twelve new species, as well as data on the taxonomy, biology, geographic distribution and larval food of others. Many species are reduced to synonyms. Three: *Elatobia montelliella*, *Tinea bothniella* and *Monopis spilotella*, are recorded from Finnish and Swedish Lapland.

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53953. PETERSEN, JOHAN CHRISTIAN AUGUST, 1867– . Ujuâts dagbøger fra Østgrønland 1894–1935; uddrag med en indledning og kommentar ved B. Rosenkilde Nielsen. 1957. 209 p. illus., ports, maps. (Grønlandske Selskab. Skrifter 19.) 55 refs. Text in Danish. ***Title tr.:*** Ujuât's diaries from East Greenland 1894–1935; extracts with an introduction and commentary by B. Rosenkilde Nielsen.

Contains selected day-to-day notes of Johan Petersen, called Ujuât by the Greenlanders; he was factor at Angmagssalik 1894–1909, 1911–14 and 1923–24, and at Scoresbysund 1925–26 and 1934–35, and his notes cover all aspects of life at these settlements. A short biography of

the author, whose father was Danish, mother Greenlandic, is given in the introduction. He took part in Gustav Holm and V. Garde's (so-called umiak) expedition of 1883–85, and from his intimate knowledge of East Greenland he made notable contributions to works dealing with the region. Nielsen's comments include information supplied by Petersen himself. The text has been edited and provided with additional commentaries by Dan Laursen. ***Copy seen:*** SPRI.

53954. PETERSEN, JOHANNES BOYE, 1887– . Studies on the biology and taxonomy of soil algae. (Dansk botanisk arkiv, 1935. v. 8, no. 9, p. 1–180, 7 illus., 41 tables.) 293 refs.

Attempt is made to give a more precise classification to the term "soil algae". In Danish soils, a subterranean algal flora is found on cultivated as well as uncultivated land. In East Greenland in absolutely virgin soil, subterranean algae are present. Seeping water, especially during showers, carries a large number of spores down into the soil, and the presence of earthworms aids the process. All the algae are not killed at the surface by frost and heat. The soil nutrients seem to determine the luxuriance of the algal vegetation. A sharp distinction must be drawn between the epiterranean and the subterranean algae; the former are producers, the latter, consumers. The algal flora of Danish soils, also the algae met with in East Greenland are listed with taxonomic and biological notes on each species.

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53955. PETERSEN, K. W. On some Medusae from the North Atlantic; papers from the *Dana* oceanographical collection, no. 48. (Dansk naturhistorisk forening. Videnskabelige meddelelser, 1958. bd. 119, p. 25–45, 4 illus., 2 tables.) 20 refs.

Contains an annotated list of 33 bathypelagic medusae, some collected on the east coast of Greenland, off Cape Farewell or off southeast Greenland. Two species are described as new to science. The material was collected by the research-vessel *Dana* belonging to the Danish Institute for Fisheries and Marine Research. ***Copy seen:*** DLC.

53956. PETERSEN, KAARE, 1911– . Hermetikkindustriens geografiske fordeling. (Tidsskrift for hermetik-industri, Apr. 1935. årg. 21, nr. 4, p. 113, table.) Text in Norwegian. ***Title tr.:*** The canning industry's geographic distribution.

The Norwegian canning industry is located almost entirely along the coast. Production data are given; output of the far northern canneries represents about 2½% (in value) of the whole.

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53957. PETERSEN, ROBERT. Hvad "erqigdlit" utvivlsomt betyder. (Grønland, Apr. 1958, nr. 4, p. 159–60.) Text in Danish. ***Title tr.:*** What "erqigdlit" undoubtedly means.

Comment on No. 53572, disclosing, on linguistic grounds, that the word "erquigdlit" used to denote an enemy people, means "person who is full of louse eggs."

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53958. PETERSEN, ROBERT. J. P. Jacob Olsen, en grønlaender i arktisk Canada. (Grønland, Aug. 1958, nr. 8, p. 295–302, illus., ports.) Text in Danish. ***Title tr.:*** J. P. Jacob Olsen, a Greenlander in arctic Canada.

Contains notes on J. P. J. Olsen (1890–1936), particularly his experiences in 1921–23 while interpreter and secretary with the Fifth Thule Expedition; his diaries are cited. Olsen established good relations with the natives and later described in detail their way of life, stressing the differences from life in Greenland; the book (No. 12804) was published in Greenlandic in 1927. ***Copy seen:*** DLC.

53959. PETERSEN, ROBERT. Det problematiske ord qavdlunâq. (Grønland, Mar. 1958. nr. 3, p. 111–13.) Text in Danish. ***Title tr.:*** The problematical word qavdlunâq.

Presents theory that this word (in Canada="white man" in Greenland="Dane") comes from the Greenlandic word "qablunârp-" (=red seaweed fades when rotting in fresh water) and originated in the Norse period.

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53960. PETERSIL'E, I. A. Uglevodorodnye gazy intruzivnykh massivov tsentral'noĭ chasti Kol'skogo poluostrova. (Akademiîa nauk SSSR. Doklady, Oct. 21, 1958. god 26, t. 122, no. 6, p. 1086–89, tables, diagrs.) Text in Russian. ***Title tr.:*** Hydrocarbonic gases in intrusive massifs of the central part of the Kola Peninsula.

Reports gas discovered in micro-cracks of covered pores of rocks in the alkali massif of Khibiny tundra. Fuel gas,

found in Khibiny and the Imandra-Varzuga series was also partly investigated in 1–1.5 m. bore holes. The gas occurrences are described and graphed. Chemical composition of the gases is given. The fuel gas is of insignificant amount and the hydrocarbonic gas is of mineralic rather than organic origin. Occurrence of bitumen in the effusive rocks of the Khibiny is mentioned.

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PETERSON, ALVIN E., *see* Powell, D. E., *and* A. E. Peterson. Experimental fishing . . . salmon . . . Pacific. *1957.* No. 54116.

PETERSON, BOBBIE V., *see* Davies, D. M., *and* B. V. Peterson. Observations on . . . adult black flies . . . *1956.* No. 50450.

PETERSON, D. G., *see* Wolfe, L. S., *and* D. G. Peterson. A new method . . . blackfly larvae . . . *1958.* No. 56095.

53961. PETERSON, RANDOLPH LEE, 1920– . A new subspecies of moose from North America. Toronto, 1950. 7 p., illus., text map (Toronto. Royal Ontario Museum of Zoology and Palaeontology. Occasional papers, no. 9.) 2 refs.

Contains a description of *Alces americana andersoni* n. ssp., occurring in Manitoba (type specimen), Yukon Territory and the Mackenzie delta. Distribution and skull characters of *A. americana* subsp. are given, among them *A. americana gigas* (all sections of Alaska and Yukon Territory), and *A. a. americana* (James Bay region).

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53962. PETERSON, RANDOLPH LEE, 1920– . Notes on the eastern distribution of *Eutamias minimus.* Toronto, 1953. 4 p. text map. (Toronto. Royal Ontario Museum of Zoology and Palaeontology. Contributions, no. 37.) 6 refs.

Contains distributional data on this rodent in Ontario, Manitoba, and Quebec. A series of five specimens collected two miles west of Fort Albany on James Bay indicates the extension of the range to the north but more data are needed to draw the northern limit.

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53963. PETRAK, FRANZ, *and* **J. BAUMGARTNER.** Schedae ad Cryptogamas exsiccatas, editae a Museo Historiae Naturalis Vindobonensi. Cent. 92. (Vienna. Naturhistorisches Museum. Annalen, 1958. v. 62, p. 87–94.) Text in German. ***Title tr.:*** Notes on cryptogamic specimens edited by the Museum of Natural History at Vienna.

Contains a decade, no. 163, of fungi, decades no. 93–96 of lichens and decades no. 109–113 of mosses and liverworts. Three mosses, *Ptilium crista-castrensis, Sphagnum compactum* and *S. rubellum,* were collected in Alaska. These decades were edited with the collaboration of 29 specialists. ***Copy seen:*** DSI.

53964. PETRAK, FRANZ. Zwei neue Gattungen der Parasphaeropsideen. (Sydowia, 1952. v. 6, no. 5–6, p. 372–77, illus.) Text in German. ***Title tr.:*** Two new genera of Parasphaeropsideae.

Includes descriptions in Latin and German of *Robakia* n. gen. and *R. arctica* n. sp., fungus found on dead branches of top-withered pines in Norway by H. Robak. ***Copy seen:*** DLC.

PETRÎAEV, EVGENIÏ DMITRIEVICH, *see* Nikolaev, V. A., *and* E. D. Petrîaev. O . . . bibliografii Sibiri. *1958.* No. 53600.

PETROPAVLOVSKIÏ, V. V., *see* Suvorova, N. P., *and* V. V. Petropavlovskiï. O lenskom îaruse . . . *1957.* No. 55245.

53965. PETROV, ALEKSANDR MIKHAÎLOVICH. O proizvoditel'nosti prirodnykh pastbishch v kolkhozakh ÎAkutii. (Akademiîa nauk SSSR. ÎAkutskiï filial, *Yakutsk.* Institut biologii. Trudy, 1957. vyp. 3, p. 157–66, tables.) 6 refs. Text in Russian. ***Title tr.:*** Productivity of natural pastures in kolkhozes of Yakutia.

Contains information on the average duration of pasture (122 days) and seasonal course of feeding conditions for cattle and sheep; types of pastures, their topography, water conditions, plant components and productivity, production of the various types according to months, hay production, grazing effects.

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53966. PETROV, B. D. T͡Synga i bor'ba s neĭ v Rossii. (Voprosy pitaniîa, July–Aug. 1958. t. 17, p. 78–83.) Refs in text. Text in Russian. ***Title tr.:*** Scurvy and its combat in Russia.

An historical outline as from 1552 when it is mentioned for the first time in Russian sources: consecutive Russian references, outbreaks, conditions in the arctic regions, popular and medical remedies,

conditions and remedies in the army, speculations on causes, etc.

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53967. PETROV, I. G. Okonchanie dreĭfa stant͡sii "Severnyĭ Polûs-4." (Problemy Arktiki, 1958. vyp. 4, p. 108.) Text in Russian. Translated into English for the U.S. Air Force, Cambridge Research Center, Geophysics Research Directorate, by the American Meteorological Society. ***Title tr.:*** End of the drift of the station North Pole-4.

The third team headed by A. A. Dralkin, occupied this station on Apr. 19, 1956, at 87°24′ N. 182°15′ E.; in 367 days of drift, it traveled over 2,000 km. (700 km. net distance), and on Apr. 20, 1957, at 85°52′.6 N. 180° E., it was evacuated by air. Scientific work of the station in 1956–57 is briefly outlined.

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53968. PETROV, IOAKIM ROMANOVICH, *and others.* Gipotermiĭa i ganglioblokiruûshchie sredstva v sisteme profilaktiki posledstviĭ vremennogo prekrashcheniĭa krovoobrashcheniĭa v ėksperimente. (Vestnik khirurgii, Oct. 1956. t. 77, no. 10, p. 16–26, illus. tables.) 18 refs. Text in Russian. *Other authors:* T. N. Astakhova *and* N. V. Korostovt͡seva. ***Title tr.:*** Hypothermia and ganglion-blocking agents as prophylaxis against effects of experimental temporary circulatory arrest.

A study of procedures and drugs having beneficial effect during exclusion of the heart from circulation in dogs. Hypothermia was one of the means applied. Means of prevention of fibrillation and cardiac arrest were also studied. Young animals withstood better circulatory cardiac exclusion than mature ones.

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PETROV, IOAKIM ROMANOVICH, *see also* Raĭko, Z. A., *and others.* O vliiănii gipotermii . . . *1957.* No. 54205.

53969. PETROV, MIKHAIL KLIMENT'EVICH. Plavanie vo l'dakh. Moskva, Izd-vo "Morskoĭ transport," 1955. 255 p., illus., table, graphs, diagrs., 2 fold. plates. 116 refs. Text in Russian. ***Title tr.:*** Ice navigation.

Organizational and navigational aspects of ice-breaking and shipping in arctic seas are treated in detail. Information is presented on ice cover, preparation of vessels to withstand severe conditions, measures for prevention and repair of ice damage, etc. Symbols used to characterize ice in sailing charts are defined and illustrated (fold. plates, p. 24–25). Daily increase in ice thicknesses as a function of atmospheric temperatures is tabulated (p. 22–24). The development of ice-breakers and ice-strengthened ships from 1710 to the present is reviewed and details of cargo ships, tugboats and ice-breakers for arctic service are analyzed (p. 47–69), including a 7,500 t., 8,000 hp. diesel-electric ice-breaker. Signals and signalling procedures are outlined (p. 113–120). Convoying with ice-breaker escort is described, with consideration of such contingencies as relief from ice pressure, anchoring, docking, maneuvering, etc. Use of explosives in ice-breaking is discussed at length (p. 181–97). Rescue operations are dealt with (p. 221–37); responsibilities of the rescue vessel and the ship in distress are stated. Levy of rescue fees on Soviet and foreign vessels is explained and court rulings cited. Appendices present classification and terminology of sea ice, navigational regulations for ships being convoyed by an ice-breaker, and form of contract for rescue and collection of fees. ***Copy seen:*** DLC.

53970. PETROV, PROKOPIĬ USTINOVICH. Iz istorii revolût͡sionnoĭ deîatel'nosti ssyl'nykh bol'shevikov v ĬAkutii. ĬAkutsk, ĬAkutskoe gos. izdvo, 1952. 298 p. ports. (Akademiia nauk SSSR. ĬAkutskiĭ filial. Institut îazyka, literatury i istorii.) Over 700 refs. Text in Russian. ***Title tr.:*** History of the revolutionary activity of bolshevist exiles in Yakutia.

Outlines political and administrative conditions in Yakutia in 1900–1917, and the life, work and political activities of S. I. Mit͡skevich, M. S. Ol'minskiĭ, K. I. Kirsanova, G. K. Ordzhonikidze, M. S. Uritskiĭ, E. M. ĬAroslavskiĭ and other political exiles in Yakutsk, Sredne-Kolymsk, Nizhne-Kolymsk, Olekminsk and several other places in Yakutia till their departure in 1917 after the February Revolution in Russia. The study is based in part on unpublished materials. A summary of post-Revolutionary development in Yakutia is given in the conclusion (p. 232–55). Index of names and selected bibliography (over 250 items) are appended. ***Copy seen:*** DLC.

53971. PETROV, PROKOPIĬ USTINOVICH. Ustanovlenie sovetskoĭ vlasti v ĬAkutii. Yakutsk, ĬAkutskoe knizhnoe izd-vo, 1957. 298 p. 174 refs. Text in

Russian. ***Title tr.:*** Establishment of the Soviet rule in Yakutia. M. A. Krotov, editor.

Detailed account of the political and social repercussions in Yakutia of the Democratic Revolution of Feb. 1917, Communist Revolution in Oct. 1917 and the Russian civil war to the final establishment of the Soviet Government in 1920. The book is based in part on unpublished material. Events in Verkhoyansk and other towns of the northern part of Yakutia are noted. Appended (p. 239–97) is a chronology of events, list of references, and index of names.

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PETROV, PROKOPIĬ USTINOVICH, *see also* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Istoriîa ÎAkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957*. No. 49168.

PETROV, PROKOPIĬ USTINOVICH, *see also* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Revolût͡sionnye sobytiîa 1905–1907 . . . *1956*. No. 49167.

53972. PETROVSKIĬ, D. Nekotorye osobennosti ėkspluata t͡sii avtomobileĭ na Kraĭnem Severe. (Avtomobil'nyĭ transport, Jan. 1958. god 36, no. 1, p. 9–10, illus., table.) Text in Russian. ***Title tr.:*** Some features in the use of motor vehicles in the far North.

The problem of low temperature and wind effects on motor vehicle parts and on workmen is stated. The State Institute for the Development and Exploration of the Far North has tabulated meteorological conditions (temperature and wind) in relation to physical abilities for outside work. A temperature of −5° C. with wind of 20 m./sec. or a temperature of −40° C. and wind of 1 m./sec. are equally unsuitable for outside work. Various measures and materials required for engine starting, operation and storage are described. Arctic fuels Az-66 and A–74 are used for gasoline engines, and fuels AK_p–6, DA and D_p–8 for diesel engines. Special oil used for transmissions is diluted with 7–10% of fuel DA at temperatures below −30° C. Precautions are necessary to prevent snow from entering into fuel or oil tanks. Special frost-resistant tires are required to prevent cracking. Motor vehicles must be parked at least 6 m. apart and more than 40 m. must be allowed between rows of them. Drivers and maintenance crews must be well trained for arctic conditions. ***Copy seen:*** DLC.

53973. PETT, LIONEL BRADLEY, 1909– , *and* P. J. LUPIEN. Cholesterol levels of Canadian Eskimos. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 488.)

Summary of investigation on blood sera of Eskimos from the Hudson Strait and the far North. The study does not support the claim that Eskimos have low cholesteral levels. ***Copy seen:*** DNLM.

53974. PETTIBONE, MARIAN HOPE, 1908– . North American genera of the family Orbiniidae (Annelida: Polychaeta), with descriptions of new species. (Washington Academy of Science. Journal, May 1957. v. 47, no. 5, p. 159–67, 3 illus.) 16 refs.

A critical revision of the genera based on study of the types deposited in the U.S. National Museum. Four new species of orbiniids and a new subgenus are described; new names are given for two species. Among them is *Scoloplos* (*Scoloplos*) *pugettensis* n. name, ranging from arctic Alaska to California.

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53975. PETUKHOV, N. Opyt nauchnoĭ raboty kafedr pedagogiki Sibiri i Dal'nego Vostoka. (Narodnoe obrazovanie, June 1958. no. 6, p. 74–77.) Text in Russian. ***Title tr.:*** Experiment in scientific work of the chairs of pedagogy of Siberia and the Far East.

Reports conference (the second) held in Krasnoyarsk with 18 pedagogical institutes of Siberia and the far East participating. Methods of moral education in elementary, middle and high schools were mainly discussed. A Siberian branch (filial) of the Academy of Pedagogic Sciences or transfer of one of its research institutes to Siberia was suggested.

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53976. PÉWÉ, TROY LEWIS, 1918– , *and others*. Geology of the Fairbanks (D–2) quadrangle, Alaska. Washington, 1958. Map, text, tables. (U.S. Geological Survey. Geologic quadrangle maps of the United States, no. GQ 110.) 15 refs.

Map of area 64°45′–65° N. 147°30′–148° W. in scale 1:63,360, contour interval 50 ft., based on work of 1947–1955. Formations are shown and other geologic features noted; cross-section shows map data and permafrost areas. General information is provided on location, human and geologic history, topography, climate, and foundation conditions result-

ing from permafrost. Geologic units, ranging from Precambrian Birch Creek schist to various unconsolidated Quaternary deposits like Fairbanks loess are described in tables, analyses of soil and aggregate samples are given, also selected subsurface data with reference to location on map. ***Copy seen:*** DGS.

53977. PÉWÉ, TROY LEWIS, 1918– . Permafrost and its effect on life in the North. (Biology Colloquium, 18th, 1957. p. 12–23, illus., diagr.) 115 refs.

Discusses perennially frozen ground and its effects on natural processes and man's activities based on observations at Fairbanks, Alaska. Distribution and types of permafrost are analyzed and their effects shown on the life of the area. A summary of Quaternary geology of the region is included as background for understanding present conditions; fossil flora and fauna of the frozen ground are described. The most important feature of permafrost is its ice content which hinders agriculture and construction because of subsidence caused when it melts. Its influence on vegetation, agriculture, ground water and engineering is examined, and the most important effects are summarized. ***Copy seen:*** DGS.

53978. PÉWÉ, TROY LEWIS, 1918– . Preliminary report of the 1957 advance of Muldrow Glacier, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1908–1909.) Abstract of paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957.

Describes advance of this 35-mile long glacier on the north flank of Mt. McKinley, Alaska Range. After 100 years of wasting downward, the lower part advanced at least 3.8 mi. between fall 1956 and the end of July 1957, becoming greatly thickened and more crevassed. The part of the glacier below Gunsight Pass subsided about 100 ft., and its surface has broad wavelike configurations. Other major glaciers in the area show no new activity, and climatic data indicate no long-term increase in precipitation. Much of the Muldrow glacial trough lies along a major fault.

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53979. PÉWÉ, TROY LEWIS, 1918– . Recent history of Canwell and Castner Glaciers, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1779.) Abstract of paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957.

Describes evidences from moraine vegetation of two advances within the last 300–400 years of these glaciers located in the Delta River valley, central Alaska Range, and suggests the advances can be correlated with those of other glaciers in the area. ***Copy seen:*** DGS.

PÉWÉ, TROY LEWIS, 1918– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

PÉWÉ, TROY LEWIS, 1918– , *see also* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958.* No. 50694.

53980. PHILLIPS, E. D. New light on the ancient history of the Eurasian steppe. (American journal of archeology, July 1957. v. 61, no. 3, p. 269–80.) 28 refs.

Touches on the problem of nomadism and the current theories of the steppe culture chronology, including the neolithic and bronze age stages of the Yenisey River area: Afanas'evo (third millennium–1700 B.C.), Andronovo (1700–1200 B.C.), Karasuk (1200–1000 B.C.).

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PHILLIPS, FRANCIS JAMES, 1904– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

53981. PHILLIPS, LAURENCE S. Preliminary report on Tuttle Lake area, Saguenay electoral district. Quebec, 1958. 8 p., fold map, table. (Quebec. Dept. of Mines. Geological Surveys Branch. Preliminary report, no. 377.)

Maps at scale 1 in. : 1 mi. and outlines the geology of this 183 sq. mi. area (52°30′–45′ N. 67°30′–45′ W.) in the vicinity of Mt. Wright, approx. 40 mi. southwest of Wabush Lake. The consolidated rocks, Precambrian, represent, in part, the metamorphosed southwesterly extension of the iron-bearing sequence of the Labrador Trough. Rock types, north to south, comprise biotite gneisses and migmatites, with amphibolites and granite gneiss; amphibolite-free biotite schists, gneisses and migmatites; iron formations, including quartzites and crystalline marbles; and hornblende-biotite gneiss. The structure of the area is complex and the rocks are folded into tight isoclinal and overturned folds, mostly trending north-northwest. Deposits of Pleistocene glaciers and direction of ice movement are

noted. Several grab samples containing 50% or more iron oxide were obtained from formations in the southern half of the area, possibly of economic value.

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53982. PHILLIPS, LYLE LLEWELLYN, 1923– . A revision of the perennial species of *Lupinus* of North America exclusive of southwestern United States and Mexico. (Washington, *State*. State College, Pullman; Research studies, Sept. 1955. v. 23, no. 3, p. 161–201, 10 text maps.)

Contains historical notes, a generic description, keys, and a systematic annotated list of 16 species and about 30 subspecies and varieties; descriptions, critical notes and distributional data (text maps) are included. Several of these plants occur in the far North: *L. perennis* with subspecies *nootkatensis* and *latifolius* in Alaska, and *L. polyphyllus* with subspecies *polyphyllus* (var. *polyphyllus*) and *arcticus* in Alaska, Yukon Territory and Northwest Territories.

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53983. PHILLIPS, ROBERT ARTHUR JOHN. The Eastern Arctic Patrol. (Canadian geographical journal, May 1957. v. 54, no. 5, p. 190–201, 13 illus., text map.)

Reviews early, primarily scientific, patrols (1884, 1885, 1887, 1897) and the regular patrols started in 1903 with the *Neptune*, carried on annually from 1922 with the *Arctic* 1922–1924, *Beothic* 1925–1931, *Ungava* 1932, *Nascopie* 1933–1947, and from 1950 with the *C. D. Howe*. The changing character of the North, and of the services provided by the Patrol is described. At present a three-month trip, beginning late June, is made with 25 officials representing Government departments. A typical administrative-scientific program carried out during a day at one of the settlements is described.

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53984. PHIPPS, WELLAND W. By piper cub to the extreme north of Canada. (Arctic circular, Aug. 1958. v. 11, no. 1, p. 7–9.)

Discusses the performance (satisfactory) of light, wheel-equipped aircraft during a film-making trip to the northern Queen Elizabeth Islands in 1956. These aircraft are recommended for fast, economical transportation in northern areas of rugged terrain.

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53985. PÎATERIKIN, N. K. Uproshchennyĭ metod opredeleniîa razmera îacheĭ drifternykh setei pri love sel'di v Severnoĭ Atlantike. (Rybnoe khoziîaĭstvo, Apr. 1958. god 34, no. 4, p. 45–49, illus., table.) Text in Russian. ***Title tr.:*** Simplified method of determining eye-size of herring drift-nets in the North Atlantic.

The relation between eye-size, fish dimensions and efficiency of herring drift-nets is explained and these parameters submitted to a mathematical analysis. The results are presented on a simple graph enabling the determination of optimal eye-size from the dimensions of about a hundred herring caught.

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PICCALUGA, A., *see* Frongia, N., *and others.* Quadri istologici ed istochimici . . . nell' encefalo . . . ipotermia . . . *1957.* No. 51015.

PICHKOV, ALEKSEĬ, *see Sibirskie ogni.* Poĕty . . . *1957.* No. 54861.

53986. PIERCE, JOE E. A statistical study of consonants in New World languages: I, introduction; II, data. (International journal of American linguistics, Jan. and Apr. 1957. v. 23, no. 1, p. 36–45; no. 2, p. 94–108, tables, graphs.) 16 refs.

Tests C. F. Voegelin's attempt to classify phonological systems on the basis of the number of stop consonants. The different kinds of consonants used in aboriginal American languages, including Eskimo, Tlingit, Haida, Athapaskan and Tsimshian are discussed, compared, tabulated and the percentile occurrence of consonants in each language graphed. This consonant grouping, corroborated by known phonological features, seems to indicate a new way to classify languages. ***Copy seen:*** DLC.

53987. PIERCE, JOHN H. Range extensions of certain plants on the Gaspé Peninsula. (Rhodora, Aug. 1936. v. 38, no. 452, p. 273–75.)

Contains an annotated list of 12 plants with distributional data. At least seven of them are extending into northern regions of North America and Greenland, and some, like *Draba nivalis*, are of circumpolar distribution.

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PIERSON, R. M., *see* Meyer, G. E., *and others.* A versatile new family of elastomers. *1957.* No. 53255.

PIHLAINEN, JOHN A., *see* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958*. No. 50694.

53988. PIĬP, BORIS IVANOVICH. Kurilo-Kamchatskaîa ėkspeditsiîa prezidiuma Akademii nauk SSSR. (Akademiîa nauk SSSR. Vulkanologicheskaîa stantsiîa. Biûlleten', 1958. no. 27, p. 82–84, illus.) Text in Russian. ***Title tr.:*** The Kuril-Kamchatka Expedition of Presidium of the Academy of Sciences of U.S.S.R.

M. A. Lavrent'ev headed this expedition, explored the main thermal springs of Kamchatka and the Kuril Islands for potential power resources, July 6–Aug. 6, 1956. The party visited the Academy's Volcanological Station at Klyuchi and made trips to hot springs in the Klyuchevskiy Volcano area, to the Nachiki (approx. 53° N. 157°45′ E.) and Paratunka (52°29′ N. 158° E.) hot springs near Petropavlovsk, to the Pauzheta (51°28′ N. 156° 48′ E.) and Ozernoye (approx. 51°29′ N. 156°35′ E.) hot springs in southern Kamchatka, and to several thermal sources on the Kuril Islands. The area selected for experimental drilling in the Pauzheta River Basin was studied and the site was determined for the first hole. The importance of volcanological studies in Kamchatka, where one-eighth of the world's active volcanoes are located, is noted; need is stressed for modernizing the observations and for a second volcanological station at Petropavlovsk. ***Copy seen:*** DLC.

PIĬP, BORIS IVANOVICH, *see also* Akademiîa nauk SSSR. Vulkanologicheskaîa stantsiîa. Katalog . . . *1957*. No. 49187.

PIĬP, BORIS IVANOVICH, *see also* Îâkovlev, I., *and* B. I. Piĭp. Probuzhdenie Korîakskoĭ sopki. *1957*. No. 51885.

53989. PIKARTOVÁ, HANA. Kožní teplota u zralých i nezralých novorozenců. (Československá pediatrie, May 1958. ročník 13, číslo 4, p. 333–38, illus., table.) 12 refs. Text in Czech. Summary in English. ***Title tr.:*** Skin temperature in mature and premature newborn.

Report based on skin and rectal temperature records of 100 infants. Skin temperature varied from 36.8° to 29.6° C. with that of the abdomen being highest and that of the back lowest. No significant differences between sexes were noted nor between the ages of one and seven days. After feeding, abdominal temperature fell by 0.4° C., that in the rectum by 0.36° C. on the average.

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53990. PIKARTOVÁ, HANA. Teplota novorozence při ochlazení. (Československá pediatrie, Apr. 1958. ročník 13, číslo 3, p. 213–18, illus.) 10 refs. Text in Czech. Summary in English. ***Title tr.:*** Temperature of newborn during cooling.

Account of rectal and skin temperatures of one- and seven-day-old babies when swaddled or exposed to 20°, 22° and 24° C. Temperatures were somewhat lower in newborn than in week-old babies. Rectal temperatures did not change during and after cooling; skin temperature after an initial fall, rose above initial values. ***Copy seen:*** DNLM.

53991. PIKE, A. E. Yukon. (Western miner and oil review, Nov. 1957. v. 30, no. 11, p. 39–48, illus., map.)

Reviews development of mining and transportation in the Territory from the early gold rushes to the present. Exploration, mining, milling, production (silver, lead, zinc) are outlined. Activities of several companies are described; stakes, size of ores, earnings, etc., with emphasis on United Keno Hill Mines. Outlook for future development is considered.

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53992. PILÁT, ALBERT, *and* **J. A. NANNFELDT.** Notulae ad cognitionem Hymenomycetum Lapponiae Tornensis, Sueciae. (Friesia, 1954. bd. 5, hefte 1, p. 6–38, 14 illus.) 45 refs. Text in English. ***Title tr.:*** Hymenomycetes in Torne Lappmark, Sweden.

Contains a systematic annotated list of 22 species and some varieties and forms of fungi, collected by the authors in the spring of 1948; four species are described (in Latin) as new; brief Latin diagnoses are supplied to all species.

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53993. PILLEWIZER, WOLFGANG. Neue Erkenntnisse über die Blockbewegung der Gletscher. (Zeitschrift für Gletscherkunde und Glazialgeologie, 1958. Bd. 4, Heft 1–2, p. 23–33, illus., graphs.) 11 refs. Text in German. Summary in English. ***Title tr.:*** New evidence on the block-movement of glaciers.

Describes a type of movement in rigid masses as studied by A. Bauer in Eqip Sermia glacier, West Greenland during Expéditions Polaires Françaises 1948–1953 (No. 38722, 33483), also in other glaciers outside the arctic area, and dis-

cusses its causes. This motion, observed between lateral mobile zones, is characterized by a very crevassed ice surface. The movement occurs when ice masses from large firn areas are pushed through narrow outlets (Greenland glaciers); when large accumulations of snow in the firn region of high-mountain glaciers produce large ice masses and force them through narrow valleys; and when firn masses and avalanches descend at high speed, the steep slopes of the firn region imparting a block movement to flat glacier tongues (Karakoram glaciers and Jostedalsbre in Norway).—From SIPRE.

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53994. PILSBRY, HENRY AUGUSTUS, 1862– . Notes on *Acmaea patina* Esch. (Nautilus, Oct. 1922. v. 35, no. 2, p. 71.)

Notes on this and a related limpet, *A. scutum*, considered a synonym; both described from Sitka by Eschscholtz (q.v.) in his zoological atlas. ***Copy seen:*** DSI.

53995. PIMLOTT, D. H., *and* W. J. CARBERRY. North American moose transplantations and handling techniques. (Journal of wildlife management, Jan. 1958. v. 22, no. 1, p. 51–62, illus., table, map.) 11 refs.

Account of moose trapping operations in Newfoundland and transplantation of the animals into the St. Lewis River area, Labrador, in 1953. Trap construction, baiting techniques, feeding, crating and transport are described and illustrated. Of 32 animals captured, ten died, ten were set free or escaped and 12 were successfully introduced into Labrador. Several other moose transplantations, some into distant areas (Germany, New Zealand) and one case of air transport, are discussed. The high mortality entailed in these operations in general, is analyzed. ***Copy seen:*** DLC.

53996. PINCHUKOV, KONST. Na velikoĭ sibirskoĭ stroĭke. (Sibirskie ogni, Sept. 1958. god 37, no. 9, p. 113–18, illus.) Text in Russian. ***Title tr.:*** At the great Siberian construction site.

Describes the Padun rapids and building of the Bratsk hydroelectric station with data on work accomplished, highway and railroad construction, potential power output, etc. The Bratsk reservoir, some 60,000 km.^{2}, will inundate several towns, 275 smaller settlements, 16,000 kolkhoz homesteads, and 57 large enterprises, part of the Tayshet-Lena railroad, etc. ***Copy seen:*** DLC.

53997. PINEGIN, NIKOLAĬ VASIL'EVICH, 1883–1940. Aufzeichnungen eines Polarforschers. Leipzig, Verlag P. Reclam, 1955? 574 p., port., plates. Text in German. ***Title tr.:*** Notes of a polar explorer. Translated from the Russian by Elisabeth and Wladimir Wonsiatsky.

German translation of the two main parts (p. 81–464) of Pinegin's *Zapiski polŭarnika*, posthumous edition of 1952 (No. 31316). It covers Sedov's expedition to Novaya Zemlya and Franz Joseph Land on the *Sv. Foka* in 1912–14 and the author's expedition to Yakutia and New Siberian Islands in 1927–29; map and some illus. are omitted.

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PINGS, C. J., *Jr., see* Meier, M. F., *and others.* Preliminary . . . crevasse formation . . . *1957.* No. 53215.

PINKERTON, HENRY, *see* Privitera, C. A., *and others.* Effects of freezing . . . oxydative phosphorylation of mitochondria. *1957.* No. 54145.

PINKERTON, HENRY, *see* Privitera, C. A., *and others.* Oxydative phosphorylation . . . freezing . . . *1958.* No. 54146.

53998. PINKHENSON, DMITRIĬ MOISEEVICH. D. I. Mendeleev i osvoenie kraĭnego Severa Rossii. (Vsesoŭznoe geograficheskoe obshchestvo. Izvestiĭa, Jan.–Feb. 1958. t. 90, vyp. 1, p. 69–75.) 11 refs. Text in Russian. ***Title tr.:*** D. I. Mendeleev and the conquest of the Russian far North.

Cites from Mendeleev's writings, his ideas on northern exploration and resource development, river and sea transport, shipping, etc. ***Copy seen:*** DLC.

53999. PINKOW, HANS HEINZ. Erdölvorkommen in den arktischen Regionen der Sowjetunion? (Zeitschrift für praktische Geologie, Dec. 1943. Jahrg. 51, Heft 12, p. 132–36.) 17 refs. Text in German. ***Title tr.:*** Petroleum occurrence in the arctic regions of the Soviet Union?

The search for oil reserves in the Soviet Union since 1938 is reviewed. In the arctic area, structural and geophysical studies which have been made are briefly summarized; discovery of new oilfields is confined to the Ural and Taymyr geosyncline and the border area of the folded mountains near the Pacific Ocean. In borings near Koshevnikov Bay, permafrost

reached a depth of 620 m. and temperatures of −12° to −14° C. were measured at 300–330 m. depths.

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54000. PIOLLET, LUDY. Bienque ce pays soit desormais le 49e état d'une union démocratique, il y a un roi en Alaska: l'avion. (L'air, Dec. 1958. année 39, no. 742, p. 15–19, illus.) Text in French. ***Title tr.:*** Although this land is henceforth the 49th state of a democratic union, there is a king in Alaska: the airplane.

Popular account of development of Alaska: importance of gold mining, air services; aids to air navigation, such as TACAN, and White Alice; significance of the DEW Line. ***Copy seen:*** DLC.

54001. *PIONER.* Ostrov-tûrma. (Pioner, Sept. 1957. god 34, no. 9, p. 19, illus.) Text in Russian. ***Title tr.:*** Prison-island.

A note on Mud'yugskiy island (64°54′ N. 40°15′ E.) and its use as political prison for communists during the Allied intervention of 1918–1920.

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54002. *PIONER.* Skorokhod i vezdekhod. (Pioner, May 1958. god 35, no. 5, p. 62–63, illus.) Text in Russian. ***Title tr.:*** High-speed and cross-country vehicles.

Light, eight-cylinder automobile "ZIL–111" and a six wheeled truck "ZIL–157" are sketched. "ZIL–111" develops 220 hp. with maximum speed of 170 km./hr. (106.6 mph.) its fuel consumption 19 liters/100 km. (12.4 mi./gal.). The truck "ZIL–157" has three pairs of wheels driven by an engine, from which the two front wheels may be disengaged; all have specially wide tires with individual air pumping controlled by the driver according to the character of the road. With four or six wheels and controllable low-pressure tires, the truck can be driven through heavy snow, sand and marshland.

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54003. PIOTROVICH, VIL'GEL'M VLADISLAVOVICH. Obrazovanie i staivanie l'da na ozerakh-vodokhranilishchakh i raschet srokov ledostava i ochishcheniîa. Moskva, Gidrometeoizdat, 1958. 192 p. tables, graphs, maps. 33 refs. Text in Russian. ***Title tr.:*** Formation and melting of ice in lakes and water reservoirs and calculation of freeze-up and ice-clearing dates.

A method of long-range forecasting is described, and the calculated dates are compared with long-period observations for various reservoirs in European U.S.S.R., including Kola Peninsula. The heat balance equation was solved on a day-by-day basis so as to account for variable meteorological factors. The water temperature reaches 0° C. within one-two days of freeze-up of the open area of a large reservoir 5–6 m. deep; narrow and comparatively deep reservoirs (9–16 m.) freeze up a few days before the water reaches 0° C. Dates of disappearance of ice, computed from the cold reserve in the air before melting, heat exchange of the ice-snow surface of the reservoir in spring, and standard meteorological observations appeared to be two-three days earlier than the observed dates.—From SIPRE.

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54004. PIOVELLA, C., *and* M. CORNAGLIA. Le modificazioni circolatorie dei piccoli vasi della congiuntiva bulbare indotte dal raffreddamento locale e a distanza. (Società italiana di Biologia sperimentale. Bolletino, Apr. 1957. v. 33, no. 4, p. 405–407.) 6 refs. Text in Italian. ***Title tr.:*** Circulatory changes in the small vessels of the bulbar conjunctiva induced by local or distant cooling.

Contains an outline of the various manifestations of the action of cold-agglutinin followed by description of circulatory responses, in the conjunctiva, to local cooling with ice or to cooling of an extremity. Differences in responses are described between normal subjects and those with circulatory diseases.

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54005. PIPER, CHARLES VANCOUVER, 1867–1926. On the identity of *Poa crocata* Michx. (Torreya, Feb. 1913. v. 13, no. 2, p. 35.)

A discussion based on three specimens of this grass in the herbarium of Drake de Castillo in Paris, examined in Dec. 1911. The type specimen is labelled "Juxta amnes ad Lacus Mistassini defluents. No. 160." The labels are all in Michaux's handwriting. All the specimens represent *P. triflora* Gilib. (=*Poa serotina* Ehrh.) to which *P. crocata* was assigned as a synonym by Steudel.

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54006. PIRÎATINSKIÏ, L. B. K voprosu ob izmenenii obshcheĭ immunologicheskoĭ reaktivnosti v usloviîakh Zapolîar'îa v

razlichnye periody goda. (Zhurnal mikrobiologii, ėpidemiologii i immunobiologii, Mar. 1957. god 28, no. 3, p. 65–66, tables.) Text in Russian. ***Title tr.:*** Changes in general immunological reactivity in polar conditions during the different seasons.

Report of investigation of 321 young, healthy, subjects who spent not less than one year in the Arctic. The "general immunological reactivity" of these persons was found to be lowered, especially during the polar night.

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54007. PIROZHNIKOV, L. P. Verkhniĭ ĭura arkhipelaga Zemli͡a Frant͡sa-Iosifa. (Akademiĭa nauk SSSR. Doklady Sept. 21, 1958. god 26, t. 122, no. 3, p. 462–64, map.) 8 refs. Text in Russian. ***Title tr.:*** The Upper Jurassic of the Franz Josef Land archipelago.

Reports on discovery of Oxfordian, Kimmeridgian, and lower Volga series of Upper Jurassic deposits identified by the author in 1956–57 on Capes Höfer (Gëfera) and Hansa (Ganza) of Wilczek (Vil'cheka) Island. The three Jurassic series are briefly described, lithologic and faunal characteristics outlined. Supposed Jurassic deposits of Northbrook, Hooker, Hall and Wilczek Islands are noted.

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54008. PIROZHNIKOV, L. P. Verkhniĭ trias o. Zemli͡a Vil'cheka, Arkhipelag Zemli͡a Frant͡sa-Iosifa. (Akademiĭa nauk SSSR. Doklady, June 1, 1958. god 26, t. 120, no. 4, p. 873–74, cross-section.) 9 refs. Text in Russian. ***Title tr.:*** The Upper Triassic of Wilzcek Island, Franz Joseph Land.

Presents results of author's 1957 investigation: a cross-section of the deposits found southwest of Cape Hansa (Ganza); the thickness,. composition, and faunal characteristics are indicated. These marine deposits seem to represent the Upper Triassic Karnian formation. Triassic has been described previously from Vrangel and the New Siberian Islands and from Greenland and Spitsbergen. This discovery is the first in the western Soviet Arctic. ***Copy seen:*** DLC.

PIROZHNIKOV, L. P., *see also* Miroshnikov, L. D., *and* L. P. Pirozhnikov. O mestonakhozhdeniĭakh iskopaemykh nasekomykh . . . *1956*. No. 53332.

54009. PIROZHNIKOV, P. L. Materialy po biologii promyslovykh ryb reki Leny. (Leningrad. Vsesoi͡uznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozi͡aĭstva. Izvestiĭa, 1955. t. 35, p. 61–128, illus. tables, map.) 38 refs. Text in Russian. ***Title tr.:*** Materials to the biology of the commercial fish of the Lena River.

A study of the ichthyological, hydrobiological and economic aspects of the lower Lena, made during 1943–1947. The fishes are dealt with in taxonomic order, with main emphasis on biology and fisheries. Distribution, size, classes of catches, growth and size, food, maturation, migration, catches in various areas and seasons are discussed for each species. Over half of the catches are made up by a whitefish, muksun (*Coregonus muksun*), another ±40% by two other species of whitefish. Conservation measures for muksun are discussed.

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54010. PIROZHNIKOV, P. L., *and* **E. L. SHUL'GINA.** Osnovnye cherty zooplanktona nizov'ĭa reki Leny. (Vsesoi͡uznoe gidrobiologicheskoe obshchestvo. Trudy, 1957. t. 8, p. 219–30, illus., tables.) 15 refs. Text in Russian. ***Title tr.:*** A basic outline of the zooplankton of the lower Lena.

Account of 75 species (88 forms) found between Yakutsk and the delta, 42 of which are crustaceans. Effects of sediments and of water chemistry on the composition of the zooplankton and its character as compared with that of the other big Siberian rivers, are discussed. The distribution and frequency of forms in the different regions of the lower course of the Lena are dealt with in detail. ***Copy seen:*** DLC.

54011. PIRSON, A., *and* **A. KUHL.** Dependence on light of the reversible uptake of inorganic phosphate by *Hydrodictyon*. (Nature, *London*, Mar. 29, 1958. v. 181, no. 4613, p. 921–22, illus.) 7 refs.

Report of investigation on uptake and metabolism of phosphate by this alga. Red and blue light were more effective in aiding phosphate accumulation than green light of equal energy. The accumulation of P is not considered as ingredient or consequence of photosynthesis and is believed to take place at the expense of surplus energy available in addition to requirements of photosynthesis. ***Copy seen:*** DLC.

PISARCHIK, N. K., *see* Demokidov, K. K., *and others.* Stratigrafiîa i faŝii kembriîa . . . *1958.* No. 50497.

54012. PISARZHEVSKIĬ, OLEG. Pogoda. (Sovetskiĭ soîuz, 1958, no. 9 (103), p. 8–11, illus., incl. color, maps.) Text in Russian. ***Title tr.:*** Weather.

Describes climatic research during IGY, including the Soviet hydrological plans involving a southern diversion of the north-flowing Ob' and Yenisey Rivers to irrigate southern deserts. The projected river systems and the artificial reservoirs in operation, under construction or planned are mapped: including Kola Peninsula, the Ob', Yenisey and Angara Rivers. Illus. include rocket launching and recovery at a polar station. ***Copy seen:*** DLC.

54013. PITELKA, FRANK ALOIS, 1916– . Some characteristics of microtine cycles in the Arctic. (Biology Colloquium, 18th, 1957. p. 73–88, illus., tables, map.) 47 refs.

A study of the 3–4-year cycle of abundance in the population of lemmings, along a coastal zone with Point Barrow as its approximate center. Geographic distribution, habitat of the two species common in the area, population biology, population fluctuation and cycles, areal extent of the cycles, are outlined. Factors producing population fluctuations are analyzed, and the fluctuation considered in relation to the number of related species studied. The cyclic high observed in 1956 was found to extend some 200 miles along the coast and a distance of 15–50 miles inland; there was no indication that a similar cycle occurred elsewhere on the Alaskan Arctic slope. Account of ensuing discussion is appended. ***Copy seen:*** DGS.

54014. PITTNER, JOHANN. Die Luftfahrt in polaren Zonen. (Nauticus, 1941. Jahrg. 24, p. 278–91, fold. map, 3 tables.) Text in German. ***Title tr.:*** Aerial navigation in polar zones.

Traces development of navigation and transportation in the Arctic. Importance of aerial navigation in ice reconnaissance and in ice-breaking with bombs, is stressed. Cities and areas in northern U.S.S.R. and Canada dependent on air transportation, are enumerated. Tabulated data are presented on the navigability of waterways in Siberia; and on average (monthly and yearly) temperatures for 15 arctic localities. ***Copy seen:*** DLC.

54015. PIVNIK, S. A. K voprosu o plodonoshenii kedrovogo stlanika, *Pinus pumila* [Pall.] Rgl. (Botanicheskiĭ zhurnal, May 1957. t. 42, no. 5, p. 745–51, 5 tables.) 16 refs. Text in Russian. ***Title tr.:*** The fruiting of the Siberian dwarf pine, *Pinus pumila* [Pall.] Rgl.

This economically important shrub was studied in the Lena and Vilyuy River basins. Data on the yield of the cones in the various plant associations, various plant zones and yearly fluctuations are tabulated, the dimensions of cones and seeds in various plant associations are likewise represented. The largest yield of seeds was found in deciduous forest with ground moss cover. Need for further study is stressed. ***Copy seen:*** DLC.

54016. PIVNIK, S. A. Osobennosti kornevoĭ sistemy kedrovogo stlanika v ĵAkutii. (Akademiîa nauk SSSR. Sibirskoe otdelenie. Izvestiîa, 1958, no. 8, p. 134–38, illus. on fold. inserts.) 12 refs. Text in Russian. ***Title tr.:*** Features of the root system of the Siberian dwarf pine in Yakutia.

Reports results of studies carried out in 1955–56 in areas of the Verkhoyansk Range adjacent to the Lena River basin. The root system of *Pinus pumila* Rgl. in these regions, is characterized by absence of a main root; its branch (and adventitious) roots penetrate the soil no deeper than 30–35 cm. and during the vegetation period, they never reach the permafrost layer; the radius of the root system is 3–4 times greater than the radius of the crown. The soil is described and problems of root growth are discussed. ***Copy seen:*** DLC.

54017. PLAFKER, GEORGE, 1929– , *and* **D. J. MILLER.** Glacial features and surficial deposits of the Malaspina district, Alaska. Washington, D.C., 1957. 15 p. 3 maps incl. 1 fold. (U.S. Geological Survey. Reports, open file series, no. 425.) 24 refs.

Preliminary map and report, outgrowth of field studies of bedrock geology made in the Survey's petroleum program. Map shows distribution and form of moraine, crevasses, vegetation cover, and other features on the surface of the glacier. Twelve types of surficial depos-

its are distinguished, according to inferred lithologic character, origin, relative age; areas of bedrock are shown. Text summarizes investigations, also recent history of glaciation and deposition in the district and adjoining Icy and Yakutat Bays. Position of ice fronts and coast line at two periods of glacial history are outlined on text maps. Malaspina Glacier, long regarded as the type example of the piedmont glacier, offers clues to the nature of glacier movement because of its strikingly developed morainic banding. ***Copy seen:*** DGS.

54018. PLAFKER, GEORGE, 1929– , *and* D. J. MILLER. Recent history of glaciation in the Malaspina district and adjoining bays, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1909.) Abstract of paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957.

Traces advance and retreat of Malaspina and other glaciers discharging into Icy and Yakutat Bays, inferred from field investigations, aerial photographs, historical records and radiocarbon dates. Includes advance, 600–1290 A D., in a nearly continuous tidal ice front from west of Icy Bay to southeast of Yakutat; recession, 1400–1700, to positions at or north of present; advance, 1700–1791, less extensive than earlier; recession of Yakutat Bay lobe and stagnation of Malaspina, 1791 to present, and recession of Icy Bay lobe from about 1905. Wood embedded in moraines, recording maximum advance, was radiocarbon dated at $1,200 \pm 160$ and 830 ± 160 years B.P. ***Copy seen:*** DGS.

54019. PLAFKER, GEORGE, 1929– , *and* D. J. MILLER. Recent history of glaciation in the Malaspina district and adjoining bays, Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1700.)

Contains abstract of a paper presented at the Society meeting in Eugene, Oregon, Mar. 27–29, 1958. Traces advance and retreat of the Malaspina Glacier and glaciers discharging into Icy and Yakutat Bays, inferred from recent field investigations and study of aerial photographs, historical records, and radiocarbon dates. ***Copy seen:*** DGS.

54020. PLAKHOTNIK, A. Znachenie MGG dlîa moreplavaniîa. (Morskoĭ flot, Nov. 1958. god 18, no. 11, p. 20–22, map.) Text in Russian. ***Title tr.:*** The importance of the IGY to navigation.

Outlines oceanographic problems to be studied during the extended International Geophysical Year (1959). Soviet research vessels participating in the 1957/58 program are named; 1959 Northern Hemisphere activities are to be concentrated in the North Atlantic and North Pacific, where fisheries research is to be increased. In the Arctic shipborne research is supplemented by investigations at coastal stations. The status of programs initiated in 1955–56 is summarized. ***Copy seen:*** DLC.

PLANE, PIERRE, *see* Malmejac, J., *and others.* Action de l'adrénaline . . . *1957.* No. 53081.

PLANE, PIERRE, *see* Malmejac, J., *and others.* Possibilités expérimentales de ventriculotomies . . . *1957.* No. 53085.

PLANE, PIERRE, *see* Malmejac, J., *and others.* Sur l'activité du coeur . . . *1957.* No. 53086.

PLANE, PIERRE, *see* Malmejac, J., *and others.* Sur . . . transfusion sanguine . . . le chien refroidi. *1957.* No. 53087.

54021. PLANKTON SYMPOSIUM, *Bergen,* Sept. 27–29, 1957. Contributions: Measurements of primary production in the sea. Copenhagen, Høst, Apr. 1958. 158 p. illus., tables, maps. (International Council for the Exploration of the Sea. Rapports et procès-verbaux, v. 144.) Text in English or French.

Contains 31 contributions presented at sessions on methods of estimating standing-crop in phytoplankton; on methods of measurement of production and of primary production, and on environmental conditions for primary production. Reports of committees and recommendations are also included. Papers dealing with the Arctic as listed below, are abstracted in this Bibliography under the authors' names:

CORLETTE, J. Measurements of primary production in the western Barents Sea.

BERGE, G. The primary production in the Norwegian Sea in June 1954, measured by an adapted 14 C. technique.

NIELSEN, E. G. A survey of recent Danish measurements of the organic productivity of the sea.

HOLMES, R. W. Surface chlorophyll "A" surface primary production and

zooplankton volumes in the eastern Pacific Ocean.

BOGOROV, B. G. Estimates of primary production in biogeographical regionization of the ocean.

NIELSEN, E. S. Light and organic production in the sea.

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54022. PLATT, RUTHERFORD. A visit to the living ice age. (National geographic magazine, Apr. 1957. v. 111, no. 4, p. 525–45, 48 illus. incl. 42 col., text map.) 6 refs.

Describes trips to West and North Greenland with D. B. MacMillan in the schooner *Bowdoin*. Plant life at the face of glaciers, site of a fossil forest on the coast near Diskø, icebergs, Thule Eskimos, etc., are sketched, with excellent photographs of flowers.

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PLESKOVSKIĬ, FEDOR, *see* Belinovich, N. S., *and* F. Pleskovskiĭ. Periâ . . . *1957*. No. 49623.

54023. PLISCHKE, HANS. Knochenplastiken der Eskimos. (Kosmos, Aug. 1956. Jahrg. 52, Heft 8, p. 364–69, illus.) Text in German. ***Title tr.:*** Eskimo bone sculptures.

Describes with illus. the plastic art and bone carving techniques of Bering Strait Eskimos and Chukchis dating back to pre-contact times (1780) and of Labrador Eskimos in early contact time (1870–80). The realism and lack of sophistication of these early sculptures are contrasted with the modern "souvenir" industry. All items discussed come from the ethnographic museum (Museum für Völkerkunde) in Göttingen.

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54024. PLOTNIKOVA, M. I. O svi͡azi napravleniĭ izvilin doliny r. Nizhneĭ Tunguski s tektonicheskoĭ treshchinovatost'iu. (Leningrad. Vsesoi͡uznyĭ geologicheskiĭ institut. Materialy, nov. seriiâ, 1957. vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 237–42, diagrs. (1 fold.), map.) 5 refs. Text in Russian. ***Title tr.:*** On the connection between direction of Nizhnyaya Tunguska River valley curves and tectonic fracturing.

Presents results of author's 1951 investigation in the Nizhnyaya Tunguska valley between its tributaries Nepa and Teteya. Directions of valley bends and directions of tectonic cracks in various sections of the valley are studied and diagrammed. Comparison is discussed and coincidence is established especially for Lower Paleozoic period.

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PLOTNIKOVA, M. I., *see also* Ruzhit͡skiĭ, V. O. Almazy drevnego Timana. *1958*. No. 54462.

54025. PLUM, NIELS MUNK, 1882– . Vinterbyggeri; forsøg afholdt af Statens byggeforskningsinstitut i årene 1947–50. København, Teknisk forlag, 1951. 1 v. approx. 76 p. illus., tables, diagrs. (København. Statens byggeforskningsinstitut. Rapport nr. 6.) Text in Danish. ***Title tr.:*** Winter construction, investigations made by the Statens byggeforskningsinstitut [Danish National Building Research Institute] 1947–50.

Presents results of experiments at 75 construction sites and of some laboratory tests. Bricklaying, concreting, excavating, protection of workers, heating sources, temporary water piping, and artificial illumination are dealt with in turn. All phases of construction can be carried out in winter (average February temperature −1° C.), provided adequate protection procedures are observed. Economic aspects are discussed. Diagrams are presented for predetermining required temperature of concrete laid at air temperature of 0° to −15° C., and with varied insulation covering, also for the additional heat required to compensate for delay in covering.

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54026. PO SLEDAM DREVNIKH KUL'TUR. Moskva, Gos. izd-vo kul'turno-prosvi͡atitel'noĭ lit-ry, 1951–1954. 3 v. 271; 360; 335 p. illus. Refs. Text in Russian. ***Title tr.:*** In the foot-steps of ancient cultures.

Collection of popular papers on historical subjects, stressing the importance of autochthone (Russian and Siberian) cultures and the predominantly westward migration of prehistoric tribes. Three of the articles pertinent to the North, are abstracted in this Bibliography under their authors' names, viz (titles translated):

OKLADNIKOV, A. P. Excavations in the North.

CHERNET͡SOV, V. N., *and* V. I. MOSHINSKAIA. In search of the ancient homeland of Ugric peoples.

OKLADNIKOV, A. P. At the culture sources of the peoples of the Far East.

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54027. PODOPLEKIN, D. Novatory rybopromyslovogo dela. (*In:* Na pro-

myslakh v Barent͡sovom more, 1956. p. 3–27.) Text in Russian. ***Title tr.:*** Innovators of the fishing industry.

Contains information on recent Soviet catches in the Barents Sea and North Atlantic; developments in fishing vessels and gear; refrigeration on vessels; fish by-products; achievements and improvements of individuals; adapting and improving gear, handling, navigation, etc. ***Copy seen:*** DLC.

54028. POE, IONE. A revision of the *Plantago patagonica* group of the United States and Canada. (Torrey Botanical Club. Bulletin, Oct. 1928. v. 55, no. 7, p. 406–420.)

Contains a key and descriptions of six species (15 varieties and forms) with synonyms, critical notes, type localities and records of specimens. *P. spinulosa* var. *typica* n. nom. from Cypress Hills, Northwest Territories (p. 411) is included. ***Copy seen:*** DLC.

54029. POGODIN, M. Vospitanie uchashchikhsi͡a v profsesse prepodavani͡a. (Narodnoe obrazovanie, Aug. 1958, no. 8, p. 61–65.) Text in Russian. ***Title tr.:*** Upbringing of students during the process of instruction.

A former secondary-school teacher of Polyarnoye, now director of the Murmansk province institute of teacher-training, comments on the need of inculcating social and moral teachings along with subject instruction. The importance of extra-curricular activities is stressed. ***Copy seen:*** DLC.

54030. POGORELOV, V. I. Radiolokat͡sionnye otrazheni͡a ot polя̄rnykh si͡anii. (Akademii͡a nauk SSSR. Izvestii͡a, seri͡a geofizicheskai͡a, Aug. 1958, no. 8, p. 1048–51, diagrs.) 6 refs. Text in Russian. ***Title tr.:*** Radar reflections from auroras.

Auroral radar reflections were studied daily at 15 min. intervals June–Oct. 1957 at the Roshchino station (near Leningrad) as part of the IGY. program. The equipment used is described in detail. Two types of signals were observed: a stationary or slowly moving reflection, and a fast-moving one with velocities up to 5,000 km./sec. The distribution of these reflections over a 24-hr. period is plotted. Reflection regions are distributed along magnetic parallels, with the maximum number of reflections occurring at an altitude of 120 km., the zone of maximum auroral intensity. ***Copy seen:*** DLC.

54031. POGREBITSKIĬ, I͡U. E., *and others.* Rezul'taty uvi͡azochno-revizionnykh rabot na t͡sentral'nom Taĭmyre. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1957. vyp. 5, p. 58–62.) Text in Russian. *Other authors:* L. V. Makhlaev, R. V. Sobolevskai͡a, *and* V. A. Cherepanov. ***Title tr.:*** The results of coordinating and revision work in the central Taymyr Peninsula.

Reports final checking done in 1957 in preparation of the Taymyr geological map at scale 1 : 1,000,000 for publication. Some aspects of the geologic structure of the Taymyr folded zone are outlined. Distribution, thickness, lithology and faunal characteristics of Precambrian and Lower Paleozoic deposits are reviewed. ***Copy seen:*** DGS.

54032. POHJAKALLIO, ONNI. Samarbetsproblem för forsknings- och försöks-verksamhet rörande växtodling i norra Finland, Norge och Sverige. (Nordisk jordbrugsforskning, 1956. årg. 38, häfte 1, p. 20–29.) Text in Swedish. ***Title tr.:*** Co-operative research and experimentation on plant improvement in northern Finland, Norway and Sweden.

Agricultural area, soil, weather, and crops in arctic Finland are discussed. Recent researches at Inari, Sodankylä and elsewhere include studies of drainage, nutrient elements, diseases, insects, soil biology, and overwintering conditions for cultivated crops. Potatoes, wheat, rye, clover, and meadow grasses are grown successfully during long daylight with little temperature change, but summer frosts do periodic damage. The division of interests in research between the three countries and cooperation among their personnel are recommended. ***Copy seen:*** DA.

POHJANPALO, LIISA, *see* Kujala, V. V., *and others.* Agaricales. *1953.* No. 52545.

54033. POHLHAUSEN, HENN. Zum Problem der nordgermanisch-lappischen Beziehungen. Bonn, 1957. 23 p. illus., diagr. (Commentationes Balticae, 1955, *pub.* 1957. v. 3, no. 3, p. 97–117.) Approx. 30 refs. Text in German. ***Title tr.:*** The problem of north German-Lapp relations.

Postulates that since a large number of Lapp words relating to reindeer hus-

bandry are of old Germanic origin, reindeer breeding has been introduced by contact with ancient Germanic tribes. The prehistoric (bronze and iron age) distribution of reindeer in Eurasia is traced, the origin and migration of proto-Lapps discussed; the lexical composition of Lappish is indicated and five different theories stated upon the provenience of Germanic reindeer terminology in Lapp development. ***Copy seen:*** DLC.

54034. POIRIER, LOUIS J. Hypothalamus et thermorégulation chez le singe. (Union médicale du Canada, Jan. 1958. t. 87, no. 1, p. 4–9, illus., tables.) 19 refs. Text in French. ***Title tr.:*** Hypothalamus and thermoregulation in the monkey.

Destruction of the "autonomic" centers or of their efferent paths abolished the peripheral mechanism of cold-resistance through reduction of heat loss. Destruction of the "extra-sympathetic" centers, disturbed the peripheral mechanism of heat production. ***Copy seen:*** DNLM.

54035. POKROVSKAĬA, I. M., *Editor.* Atlas miot͡senovykh sporogopyl't͡sevykh kompleksov razlichnykh raĭonov SSSR. Moskva, Gos. nauchno-tekhnicheskoe izd-vo'lit-ry po geologii i okhrane nedr, 1956. 461 p. illus., diagrs. (10 fold.), tables incl. fold., 2 maps. (Vsesoi͡uznyĭ geologicheskiĭ institut. Materialy, nov. ser., vyp. 13.) 127 refs. Text in Russian. ***Title tr.:*** The atlas of Miocene spore-pollen complexes of different regions of the U.S.S.R.

Comprehensive work, prepared by ten scientists in 1951–52 from material brought to the Geological Institute Laboratory for pollen analyses. Miocene fossil flora are identified and treated fully. Pollen analyses serve mainly for stratigraphic characteristics of certain areas. The lower Ob' River (p. 50–52) and Podkamennaya Tunguska (p. 84–85) are described among other regions. The numerous maps cover broad arctic areas. Similar atlases for other geologic periods are planned. ***Copy seen:*** DGS.

54036. POKROVSKAĬA, NINA VASIL'EVNA. Agnostidy srednego kembriĭa ĬAkutii, chast' I. Moskva, izd-vo Akademii nauk SSSR, 1958. 96 p. illus., plates, table. (Akademiĭa nauk SSSR. Geologicheskiĭ institut. Trudy, vyp. 16.) 99 refs. Text in Russian. ***Title tr.:*** Agnostides of the Yakutia Middle Cambrian, part I.

Monographic study of Agnostidae trilobites collected in 1950–1951 by the author and others, in cross-sections of the Maya, Amga, Botoma and Lena valleys. Twenty species and one variety, representing eight genera, are described, two genera and ten species as new. The anatomy is treated comprehensively, comparison made with forms in Scandinavian countries and England. The importance of Agnostidae in the stratigraphy of the Middle Cambrian is stressed not only for the U.S.S.R., but the entire world. Foreign sources were consulted extensively. ***Copy seen:*** DLC.

54037. POKROVSKAĬA, T. N. O prichinakh obuslovlivaĭushchikh sovremennoe rasprostranenie navagi, rod *Eleginus.* (Zoologicheskiĭ zhurnal, Aug. 1958. t. 37, vyp. 8, p. 1181–94, illus. tables, map.) 41 refs. Text in Russian. Summary in English. ***Title tr.:*** Causes determining present distribution of the navaga, genus *Eleginus.*

Following an outline of the geographical distribution of this species of cod, the author analyzes the factors affecting it. One of them is low temperature of littoral waters during the winter necessary for reproduction. This is considered to be the cause of the species' not spreading into the Pacific south from Southeast Alaska and northern Korea. Scarcity of food is assumed to exclude the navaga from arctic Siberia and arctic Canada. ***Copy seen:*** DLC.

54038. POKROVSKAĬA, T. N. Vozrast i rost navagi Karskogo moriĭa. (Akademiĭa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 20, p. 302–311, illus., tables.) 13 refs. Text in Russian. ***Title tr.:*** Age and growth of the navaga of the Kara Sea.

Reports investigation of the size of 24,000 and the age of over 6,000 specimens of *Eleginus navaga.* This cod-like fish was found to attain a length of 45 cm. and an age of 12 years. Fastest growth was calculated for the first three years of life, i.e., up to the attainment of sexual maturity. Seasonal growth was strongest during a six-week period (mid-September through October), being slow or non-existent during the rest of the year. ***Copy seen:*** DLC.

54039. POKSHISHEVSKIĬ, VADIM VĬACHESLAVOVICH. ĬAkutiĭa: priroda, lĭudi, khozĭaĭstvo. Moskva, Izd-vo Akademii nauk SSSR, 1957. 197 p. illus.,

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tables, maps incl. 2 fold. Errata slip. (Akademiîâ nauk SSSR. Nauchno-populîârnaîâ seriîâ.) Over 100 refs. Text in Russian. ***Title tr.:*** Yakutia: nature, people, economy.

Describes this republic of over three million sq. km., one-seventh of the area of the U.S.S.R., its population only 413,000 in 1939 (277,000 in 1911), i.e., 0.14/sq. km. Over 5 billion rubles has been sunk in its development since 1927. Information on the area as a whole is augmented by separate treatment of the sections (p. 119–91) viz.: central Yakutia, west of the Lena, the Aldan mineral development district, the northeast, the lower Lena and arctic coast. The physical character of the country is delineated in its geomorphology, rivers, lakes, mountains and climate; permafrost underlies most of the area; taiga forest is the dominant vegetation, with scattered small patches of meadow ("alass") and arable soil. The population is chiefly Yakuts; their history, material culture, and present acculturation are sketched: dwellings (modernized yurtas, p. 85–88), food, clothing, etc.; traditionally dispersed in small one–two family groups on the scattered meadows and arable ground, they have resisted recent concentration by collectivization and industrialization. The towns and "city-like" settlements of Yakutia are sketched: Yakutsk (with its remarkable growth, two higher schools, Branch of Academy of Sciences, etc.), Vilyuysk, Nyurba, Aldan, Ust'-Nera, Zyryanka, Khandyga (approx. 62°25′N. 135°30′E.), Sangar, Tiksi, Ambarchik, Russkoye Ust'ye, Olenek (approx. 68°40′N. 112°20′ E.), Saskylakh (71°58′N. 114°04′E.), etc. The main traditional occupation, animal husbandry, especially cattle and horse breeding, reindeer breeding in the North (p. 185–90) has been hampered by shortage of water and forage; fur farming, hunting and trapping, fisheries (development limited by scarcity of fish in northern waters) have also been carried on, and some attempts made to extend agriculture: 36,000 hectares of arable land in 1917, 108,000 in 1940 and only 80,000 in 1955. Timber and mineral resources are great; and development is noted of the wood industry, gold in the Aldan basin, coal mining at Sangar, Kangals and the Zyryanka River (left tributary of Kolyma at 65°34′N. 148°12′ E.) supplying the Northern Sea Route; also mica deposits in the Aldan area, salt springs and deposits and the diamantiferous fields in Vilyuy River basin; petroleum prospects and discovery of natural gas near the mouth of the Vilyuy River are mentioned. Advances in transportation are indicated by the transfer of river steamships in 1952 from the Sormovo shipyards via Northern Sea Route to the Lena River; the Tayshet-Ust'-Kut railroad, and new automobile roads; the Amur-Yakutia trunk line (AÎÂM) from Bol'shoy Never station on Siberian railroad to Aldan, and the Magadan-Khandyga road. Prospects of further development as conditioned by increase of population and improvement of transportation are discussed in conclusion (p. 192–95). To references in footnotes throughout, a selected list of 16 books is added. Folded map shows boundaries of Yakutia and its 36 districts, with location of the administrative centers.

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54040. POLACHEK, P., *and* **N. LEDINSKAÎÂ.** Izmeneniîâ perifericheskoĭ nervnoĭ sistemy, voznikaîûshchie pri okhlazhdenii i iskusstvennoĭ gipotermii u laboratornykh zhivotnykh. (Bîûlleten' éksperimental'noĭ biologii i mediîsiny, May 1958. t. 45, no. 5, p. 118–21.) 16 refs. Text in Russian. Summary in English. ***Title tr.:*** Changes in the peripheral nervous system effected by cooling and artificial hypothermia in laboratory animals.

Report on experiments with rats and rabbits. Changes were observed in peripheral nerves of the heart, intestine and articular capsule. They consisted in increased staining and roughness affecting mainly the thick terminal fibers and nerve endings. ***Copy seen:*** DNLM.

54041. POLAIRE, HENRI. La traversée du passage du nord-ouest par la police montée canadienne. (Géographia, Feb. 1958. no. 77, p. 8–12, illus., text map.) Text in French. ***Title tr.:*** The traverse of the Northwest Passage by the Canadian Mounted Police.

Popular account of experiences of crew of seven constables under Sergeant Larsen, on their trip from Vancouver to Halifax via the Northwest Passage, 1940–42, in the 31-m., 80-ton vessel *Saint Roch*. Two years later, Sgt. Larsen made the return trip.

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54042. POLAR ATMOSPHERE SYMPOSIUM, *Oslo*, July 2–8, 1956. Part 1, Meteorology section, edited by R. C.

Sutcliffe; part 2, Ionospheric section, edited by K. Weekes. London, Pergamon Press, for Advisory Group for Aeronautical Research and Development, North Atlantic Treaty Organization, 1957–58. 2 v.: xi, 341 p., xiii, 212 p., illus., plates, maps, diagrs., etc. (Agardograph no. 29, pt. 1–2.)

Contains (in pt. 1) 23 papers as listed below, all abstracted in this Bibliography under the authors' names. Discussion of each day's papers is included, also Dr. F. L. Wattendorf's opening address on AGARD, and Dr. H. U. Sverdrup's introductory speech. The latter notes: achievements of the pioneering expeditions of which the *Maud*'s, his first, was the last; changes in meteorological work, its common ground with ionospheric studies; radiation processes as characteristic of polar meteorology. Pt. 2 comprises 21 papers (and ensuing discussion) as listed below, of which eleven are abstracted under the authors' names (those in caps.) as arctic studies.

Pt. 1, Meteorology section, pub. 1958:

HARE, F. K. Arctic geography and climate.

HOLCOMBE, R. M. Similarities and contrasts . . . arctic and antarctic marine climates.

HESSELBERG, T., *and* T. W. JOHANNESSEN. The recent variations of the climate at the Norwegian arctic stations.

BELMONT, A. D. A brief review of research in arctic meteorology.

NAMIAS, J. The general circulation of the lower troposphere over arctic regions . . .

FLOHN, H., *and* G. SEIDEL. Recent studies on the arctic troposphere . .

WEXLER, H., *and* W. B. MORELAND. Winds and temperatures in the arctic stratosphere.

GODSON, W. L. The arctic winter stratospheric jet stream (abstract).

FJØRTOFT, R. The problem of the maintenance of the low-level anticyclonic circulation in the Arctic.

SCHERHAG, R. The role of tropospheric cold-air poles . . . in the arctic weather.

FLETCHER, R. D. Arctic weather-forecasting problems of the Air Weather Service.

REED, R. J. Arctic weather analysis.

HARE, F. K. The quantitative representation of the north polar pressure field.

GEORGE, J. J., *and others.* An empirical method of forecasting 24-hour movement . . . subarctic North Atlantic cyclones (abstract).

FRITZ, S. Solar radiation measurements in the Arctic Ocean.

LILJEQUIST, G. H. Long-wave radiation and turbulent heat transfer in the antarctic winter and the development of surface inversions.

FRITZ, S. On the "arctic whiteout."

JOHANSEN, H. On the relation between meteorological conditions and total amount of ozone over Tromsö.

MITCHELL, J. M. Visual range in the polar regions with particular reference to the Alaskan Arctic.

SCHUMACHER, N. J. Some problems of meteorological observing in polar regions.

BELMONT, A. D. Lower tropospheric inversions at ice island T–3.

BATES, C. C. Current status of sea ice reconnaissance and forecasting for the American Arctic.

WINCHESTER, J. W., *and* C. C. BATES. Meteorological conditions and the associated sea ice distribution in the Chukchi Sea . . . 1955.

Pt. 2, Ionospheric section, pub. 1957:

Jones, I. L. Theoretical views on drift measurements.

Weekes, K. The drift of an ionized layer in the presence of the geomagnetic field.

Jones, I. L. The height-variation of horizontal drift velocities in the *E*-region.

Agy, V. Results of ionospheric drift measurements in the United States.

HARANG, L. Results of ionospheric drift measurements in Norway.

Wells, H. W. Large-scale movements of the layers.

Jones, I. L., *and others.* Movements of ionospheric irregularities observed simultaneously by different methods.

GASSMANN, G. J. Measurements of irregularities and drifts in the arctic ionosphere . . .

Booker, H. G. Turbulence in the ionosphere with applications to meteor trails, radio star scintillation, auroral radar echoes . . .

Kallmann, H. K. Electron distribution in a new model of the ionosphere.

MEEK, J. H. Prediction techniques at high latitudes.

SHAPLEY, A. H. Geographic distribution of geophysical stations on the polar cap.

KNECHT, R. W. Statistical results and their shortcomings concerning the ionosphere within the auroral zone.

MEEK, J. H. Polar disturbances.

AGY, V. Polar blackout occurrence patterns.

LIED, F. Quantitative measurements of absorption in the auroral zone.

MOORE, R. C. Forecasting of disturbed HF communication conditions.

Gallet, R. M. The spectrum of the electron density fluctuation in the ionosphere.

Booker, H. G., *and* R. Cohen. A theory of long-duration meteor-echoes based on atmospheric turbulence . . .

SMITH, E. K., *and* R. W. KNECHT. Some implications of slant-E_s.

HAGFORS, T. Results of scatter measurements at 36 mc./s. over a 1,200-km. path. ***Copy seen:*** DLC.

54043. ***POLAR RECORD.*** Films on polar exploration and research. (Polar record, Sept. 1957. v. 8, no. 57, p. 542–56.)

Revision of list by Frank Bamping in *Scientific film review*, 1957, v. 3, no. 2, p. 53–68. Lists approx. a hundred films by title (many on the Arctic), noting size (mm.) and other features, also subject if not disclosed by title.

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54044. ***POLAR RECORD.*** The new constitution of the Scott Polar Research Institute. (Polar record, May 1957. v. 8, no. 56, p. 412–418.) *Also pub. as:* Cambridge University reporter, Dec. 12, 1956. v. 87, no. 15, p. 430–36.

This constitution is in force as of Jan. 1, 1957. Origin and history of the Institute, its organization and relation to the University, expenditures, future expansion and staff are outlined. The Institute has been made a sub-department within the University Dept. of Geography and the directorship and three other posts established as University teaching offices. A committee will advise the Director as to education, research, and cooperation with other bodies interested in polar research.

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54045. ***POLAR RECORD.*** News notes. (Polar record, 1957–1958. v. 8–9, no. 55–60.)

Events and other news of arctic interest, except expeditions, obituaries, ships (*infra*), are summarized as follows:

Arctic Research Laboratory of the U.S. Office of Naval Research at Pt. Barrow, Northern Alaska (no. 57, p. 558–59).

Arktisk Institut, Copenhagen, Denmark, which started operation in Oct. 1954, its Board of Directors, maintenance, library (no. 56, p. 453).

V. A. Obruchev Institute of Permafrost Studies in Moscow, with 170 technical and scientific workers in three departments (no. 55, p. 362–63).

Research Institute of Agriculture of the Far North, Leningrad, which employs about 150 scientific and technical workers and maintains field stations in the North to help collective farms (no. 55, p. 363–65).

Yakutsk State University opened Sept. 29, 1956, accepting 1,200 students, the majority belonging to minority peoples (no. 56, p. 455).

Karel'skaya A.S.S.R. approved by the Supreme Soviet as an autonomous republic within the Russian Soviet Federated Soviet Republic (no. 55, p. 365).

Soviet river ice conference held at Novosibirsk, May 7, 1957, at which ways of lengthening navigation season were noted and subjects for future research approved (no. 57, p. 559–60).

International Whaling Commission's eighth meeting, held in London July 16–20, 1956, with 17 contracting governments represented, and recommendations made concerning Blue Whale Units, seasons and areas for various types of whales (no. 56, p. 455–56).

Anglo-Soviet fisheries agreement signed in Moscow May 25, 1956, permits British fishing boats to approach within three mi. of specified areas in Barents Sea; other non-Soviet fishing boats must remain outside 12-mi. limit (no. 55, p. 366).

Eskimo resettlement at Resolute Bay, Cornwallis Island, with ten families from Port Harrison, Northern Quebec, and Pond Inlet, Baffin Island, moved during the Eastern Arctic Patrols of 1953 and 1955 (no. 55, p. 370–71).

Eskimo resettlement at New Thule (formerly Kanaq), northwest Greenland, about 100 km. north of former Thule (now U.S. Air Force base); construction during 1953–1954 described (no. 55, p. 368–70).

Greenland Constitution: changes during 1947–1955 (no. 56, p. 449–50).

Finnish-Swedish boundary inspection team during Aug. 1956 (first since 1926) made minor changes due to shifts of river channels (no. 57, p. 559).

Snow shoe of new design developed by

Statens Skogsforskningsinstitut for use in Swedish lumber work (no. 55, p. 367).

Norwegian arctic weather stations in Svalbard, Jan Mayen, East Greenland and northern Norway, with list of periodical publications of Norske Meteorologiske Institutt, Oslo (no. 56, p. 451–52).

Shipping movements in 1956 along the Northern Sea Route and ways in which the new Five-Year Plan would affect the Route (no. 56, p. 453–55).

Snow retention methods for Soviet farmers to protect soil from low temperatures and provide source of moisture (no. 57, p. 556–57).

Soviet methods (with diagram) of constructing ice cellar capable of holding 100 metric tons of foodstuffs; maintenance of cool temperatures in summer (no. 57, p. 557–58).

Eskimo bulletin pub. by the Canadian Dept. of Northern Affairs (irregularly), since 1953 and distributed to Eskimos, teachers, missionaries, and RCMP. detachments in Eskimo areas (no. 56, p. 456–57.)

Glaciers in arctic regions (no. 58, p. 32–36).

Conference 1955, on tree line growth in the Soviet Arctic (no. 58, p. 41–42).

Murmansk Biological Station (no. 58, p. 42–43).

Interim Convention on Conservation of North Pacific Fur Seals, Washington, D.C., 1957 (no. 58, p. 43–49).

Trans-arctic commercial flights between Europe and western U.S. by Pan American World Airways, and between Paris and Tokyo by Air France (no. 58, p. 49; no. 60, p. 266).

Mesters Vig, East Greenland lead and zinc deposits under development by Nordisk Mineselskab A/S (no. 58, p. 50–51).

Map of arctic IGY stations 1957–58 (no. 59, p. 149–50).

Co-ordinating Commission for Permafrost Studies attached to the V. A. Obruchev Institute 1957 (no. 59, p. 150–51).

Population statistics of 1956, for 13 towns in arctic U.S.S.R. (no. 59, p. 151).

Diamond deposits and kimberlite pipes similar to those of South Africa are found in Yakut A.S.S.R. and large-scale exploitation is planned (no. 59, p. 151–53).

Melting of ice by sprinkling it with dark material caused breakup at Arkhangel'sk 15–20 days early (no. 59, p. 153–54).

Research stations established since 1903 in north Norrland, Sweden: Abisko naturvetenskapliga station, botanical and zoological studies; Sareks naturvetenskapliga anläggningar, in Sareks national park, meteorology; Tarfaladalens glaciologiska observatorium, Kebnekaise area, carrying out a long-term glaciological program; and Kiruna geofysiska observatorium, ionospherics, seismology, cosmic rays, meteorology and geomagnetism (no. 59, p. 154–56).

Sea ice observations in waters between Svalbard and Greenland reported by Scandinavian Airlines System crews on their regular trans-polar flights; photographs are taken in flight (no. 59, p. 156).

Canadian Joint Committee on Oceanography has a working group 1957, to coordinate government studies of ice in navigable waters, its objectives (no. 59, p. 156–57).

Dewey Soper Bird Sanctuary established 1957 on Baffin Island breeding grounds of geese includes the 500 sq. mi. Bowman Bay Game Preserve (no. 59, p. 157).

Arctic Sea Ice Conference at Easton, Maryland, 1958, its program (no. 60, p. 264–65).

Kara Sea Route voyages 1953–57, by non-Soviet ships, loading timber at Igarka (no. 60, p. 266).

Defence Research Northern Laboratory established 1947 at Churchill, Canada, concerned with effects of arctic environment on the performance of men and materials (no. 60, p. 266–67).

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54046. ***POLAR RECORD.*** Notes on expeditions, exercises, projects, patrols, etc. (Polar record, 1957. v. 8, no. 55–57).

Summary account is given of the following:

Soviet High Latitude Air Expeditions, 1948–56, in the Arctic Basin (no. 55, p. 346).

Soviet oceanographic expeditions, Aug.–Oct. 1955 in the *Fedor Litke* in the area 82°–83° N. 53°–65° E. and in Svalbard waters, and the *Ob'* Aug.–Sept. 1956 in Greenland Sea, both led by L. L. Balakshin of the Arctic Institute, Leningrad (no. 55, p. 347; no. 57, p. 519); voyages of the R/V *Vitiaz'* in the Bering, Okhotsk, and Japanese Seas, 1949–55 (no. 55, p. 346).

Soviet drifting stations North Pole-4, -5, -6, and -7 in the Arctic Basin, with note on 15 automatic weather stations to

be put on the ice in summer 1957 (no. 55, p. 350–51; no. 57, p. 519–20, 521).

Danish geological, glaciological, and botanical work in West Greenland, June–Oct. 1955, and geological, paleontological, archeological and zoological work by Danes, Swiss, and British in East Greenland, July–Sept. 1955 (no. 55, p. 347–48).

Preliminary Danish glaciological studies, in connection with the IGY in Upernavik and Inglefield Bredning areas of West Greenland, June–Aug. 1956 (no. 56, p. 447).

Helicopter operations in the Mesters Vig area, northeast Greenland, including transport of prospectors, equipment and supplies, reconnaissance flights, contracted for by Nordisk Mineselskab A/S of København, July–Sept. 1956 (no. 57, p. 520).

Six-man Scandinavian archeological expedition to Vestspitsbergen, July–Aug. 1955, working at Russekeila, Randvika, and Festningen where 17th and 18th century objects were found (no. 55, p. 348–49).

Scandinavian Airlines System transarctic commercial flights during 1954–57 (no. 57, p. 520, 522).

Five-man Oxford University Expedition to West Greenland, July–Sept. 1956, led by M. F. W. Holland, which carried out geomorphological and glaciological work on Sukkertoppen icecap (no. 56, p. 448).

Cambridge survey in central Vestspitsbergen, June–Aug. 1955, consisting of topographic, geologic, and survey work by four members of the Cambridge Spitsbergen Physiological Expedition, Cambridge North Ny Friesland Expedition and Oxford University Expedition to Nordaustlandet (no. 55, p. 349).

Cambridge University and Marlborough College Expedition to North-East Greenland (six-man party) which ringed and observed barnacle and pink-footed geese in the Hold with Hope area, Aug. 1956 (no. 55, p. 349–50).

Cambridge Spitsbergen Expedition (two-man party) which carried out geological and survey work in Ny Friesland, May–Sept. 1956 (no. 55, p. 350).

Plankton studies by P. S. B. Digby and Mrs. Digby, July–Aug. 1956, in Sørgattet, Vestspitsbergen, continuing work done at Isfjorden in 1948 and at Scoresby Sund, East Greenland in 1950–1951 (no. 55, p. 351).

Four-man French Expedition to Central Greenland, 1956–1957, led by J. Dumont and sponsored by Expéditions polaires françaises, which will winter on the ice at approx. 71°20′ N. 33°55′ W. and return to coast on foot June 1957. Party was dropped by parachute and supplied by air (some details given) (no. 56, p. 447–48).

Caribou investigations in northern Yukon in 1953, Baffin Island 1954, and detailed re-survey of Mackenzie, Keewatin and Saskatchewan in 1955 gave new estimated total of 277,000 head, a decline of 60% since 1950. In spring 1956, survey of Mackenzie District showed 80,900 wintering caribou compared to 96,900 estimated for previous winter (no. 55, p. 371–72).

Bering Sea Patrol by the U.S. Coast Guard, 1895–1955 (no. 55, p. 372–73).

IGY stations north of the Arctic Circle in Canada, Alaska, Greenland, Finland, Norway, Svalbard, Jan Mayen, Sweden, and drifting stations in the Arctic Basin. Soviet stations are not given; also expeditions in connection with the IGY Swedish-Finnish-Swiss expedition to Nordaustlandet, which will study meteorology and cosmic rays; Polish glaciological expedition to Hornsund region of Vestspitsbergen; Canadian glaciological expedition to Lake Hazen area of northern Ellesmere (no. 56, p. 445–47).

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54047. ***POLAR RECORD.*** Notes on expeditions, exercises, projects, patrols, etc. (Polar record, 1958. v. 9, no. 58–60.)

Summary account is given of the following:

Canadian Geological Survey investigations in the northern Foxe Basin area in 1956 by R. G. Blackadar and J. Pirrit, in 1957 by R. G. Blackadar (no. 58, p. 23; no. 60, p. 241); on Ellesmere and Axel Heiberg Islands by R. Thorsteinsson with E. T. Tozer in 1956, and with R. H. Janes in 1957 (no. 58, p. 23; no. 60, p. 240).

Operation Hazen 1957, part of the Canadian IGY program, to carry out over two summers and one winter meteorological, glaciological, and geological studies on northern Ellesmere (no. 58, p. 26–27).

Swedish-Finnish-Swiss Expedition to Nordaustlandet, 1957–1958, its 1957 activities (no. 58, p. 24–25).

International Glaciological Expedition to Greenland, 1957–1960, sponsored by the International Commission on Snow and Ice in connection with the IGY, Denmark, France, Germany and Switzer-

land participating, its reconnaissance activities in 1957 (no. 58, p. 25–26).

Brooks Range Project 1955–1956, of the U.S. Geological Survey: topographic mapping in Alaska north of 66° N. (no. 59, p. 138).

USS. *Nautilus*, atomic submarine 1957 cruise with 5½ days under ice in the Arctic Basin and reaching 87° N. (no. 59, p. 143).

U.S. Navy hydrographic surveys in the Canadian Western Arctic 1957; completion of a Northwest Passage (no. 59, p. 146–47).

U.S. drifting stations Alpha and Bravo in the Arctic Basin 1957–1958, as part of the IGY program (no. 60, p. 241–42).

Danish scientific work 1956 in West Greenland: geological, geophysical, glaciological, botanical, paleontological and archeological studies, and in East Greenland: continuation of geological investigations by L. Koch's party, and studies in paleontology and botany (no. 59, p. 138–39).

Norsk Polarinstitutt expeditions to Svalbard 1956 and 1957 with work programs consisting of topographic surveys, glaciology, ornithology and geology studies, hydrographic surveys, aerial photography, and a magnetic survey (no. 59, p. 139–40); also the Institute's relief expeditions to Jan Mayen, Myggbukta and northeast Greenland on the Polarbjørn in 1956 and 1957 (no. 59, p. 140).

Oceanographic work in Barents Sea and north of Spitsbergen (70°26′–80°24′ N. 12°10′–41°50′ E.) by a party from the Finnish Institute of Marine Research traveling on the *Aranda*, during which 55 hydrographic and 270 bathythermograph stations were worked, salinity and other chemical determinations made (no. 59, p. 142).

Swedish glaciological expedition in the Murchisonfjorden area of Nordaustlandet in 1957, to be extended in 1958 (no. 59, p. 142–43).

Botanical and zoological work on Bjørnøya 1957, by a Tromsø Museum party (no. 59, p. 143).

North Sweden Research Group of London University, its activities 1956 and 1957, establishing ground control points for a map to be plotted from air photos of mountainous area between Katterjaure and Sjangeli, 68°20′ N. 18°20′ E. (no. 59, p. 140).

University of Durham Exploration Society's Expedition to study the geography, geology, glaciology and zoology of the Lyngen area in Norway (no. 59, p. 140–41).

Cambridge Spitsbergen Expedition 1957, to extend geological and topographic survey of north Dickson Land begun by the 1953 Cambridge University Geological Expedition (no. 59, p. 141); continued in north Vestspitsbergen by C. B. Wilson, also of Cambridge University (no. 59, p. 142).

Nottingham University Exploration Society's Expedition to carry out physiological, geological, botanical and ornithological studies north of Kongsfjorden, Vestspitsbergen in 1957 (no. 59, p. 141).

Queen's University (Belfast) Expedition 1957 for geological and topographic work in Vestspitsbergen (no. 59, p. 141).

Reading University Zoological expedition to West Greenland 1957 (no. 59, p. 141–42).

H. I. Drever's geological study on Ubekendt Ejland, West Greenland continued 1957 (no. 59, p. 143).

Soviet drifting stations North Pole 6 and 7 (no. 60, p. 242).

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54048. ***POLAR RECORD.*** Notes on ships. (Polar record, 1957–1958. v. 8–9, no. 55–60.)

Construction, current activities, and other news is reported of the following vessels:

Canadian Hydrographic Survey vessel *Baffin*, launched June 18, 1956, especially designed for work in the Arctic; accommodates 102 persons (no. 57, p. 560–61).

British royal research ship *John Biscoe*, launched June 11, 1956, with range of 20,000 mi., accommodation for 34 passengers, 33 crew. The former *John Biscoe* is now HMNZS. *Endeavour* (no. 55, p. 374).

Construction of icebreakers by Wärtsilä-Koncernen A/B Sandvikens Skeppsdocka, Helsinki, for Finland, U.S.S.R., Sweden (no. 55, p. 366).

Danish transport vessel *Magga Dan*, launched June 1, 1956, for cargo service in the Arctic and Antarctic, with range of 16,000 mi., cargo capacity 63,000 cu. ft., accommodation for 35 passengers, 26 crew (no. 55, p. 373–74).

Loss of Danish naval cutter *Ternen* with eight men, in Greenland waters about Jan. 25, 1957; 82-ton vessel, presumed to have capsized suddenly due to heavy icing, later found sunk in the harbor of Ravns Storø, southwest Greenland (no. 57, p. 560).

Norwegian vessel *Jopeter*, lost in Greenland Sea, Sept. 13, 1955, was sighted by the Lauge Koch expedition in 1956 in Mountnorris Fjord, Traill Ø, refloated in Aug. and returned to Norway (no. 56, p. 456).

Trawler *Cape Trafalgar* built by Cook, Walton and Gemmell Ltd., Hull, England; incorporates design modifications based on results from experiments (described) on icing conditions (no. 58, p. 36–39).

Loss of the Norwegian sealer *Polarbjørn* Aug. 1957, in ice off northeast Greenland (approx. 73° N. 20° W.) on annual relief of stations on East Greenland; the '23 men aboard were evacuated by a U.S. Air Force helicopter from Thule (no. 58, p. 51–52).

Launching at Leningrad, Dec. 5, 1957, of the atomic icebreaker *Lenin* (no. 59, p. 154). ***Copy seen:*** DLC.

54049. ***POLAR RECORD.*** Obituaries. (Polar record, 1957–1958. v. 8–9, no. 55–60.)

Brief obituaries are given for:

Ove Balthasar Bøggild, 1872–1956, Danish authority on Greenland mineralogy, during 1913–1953 a member of Kommissionen for Videnskabelig Undersøgelser i Grønland (no. 56, p. 466).

Hans Bogen, 1899–1957, historian of Norwegian whaling and biographer of Lars Christensen (no. 59, p. 161).

Robert Neal Rudmose Brown, 1879–1957, British botanist and geographer and authority on Svalbard (no. 56, p. 466–67).

Rear-Admiral Richard Evelyn Byrd, 1888–1957, American explorer and aviator in the Arctic and Antarctic who flew over the North Pole in 1926 (no. 57, p. 562; no. 58, p. 54–55, port. facing p. 54).

Hallvard Ophus Devold, 1898–1957, Norwegian who played a part in the dispute between Denmark and Norway over East Greenland (no. 59, p. 161).

Wilhelm Filchner, explorer who led an expedition to Spitsbergen in 1910, died at 79 in May 1957 (no. 58, p. 56).

Lorentz Peter Elfred Freuchen, 1886–1957, Danish explorer, adventurer and writer, helped Rasmussen found Thule in 1910, participated in Mylius-Erichsen's expedition 1906–1908, and the First and Fifth Thule Expeditions, 1912 and 1921–1924 (no. 58, p. 56).

Johannes Grøntved, 1882–1956, Danish botanist who made studies in Greenland (no. 58, p. 56).

Helmer Julius Hanssen, 1870–1956, Norwegian sailor and polar explorer with the *Laura* expedition to Novaya Zemlya in 1897, *Gjøa* 1903–1906, and *Maud* 1918–1920 (no. 55, p. 377).

Frederick Lynge, 1889–1957, Greenlander, elected representative 1953, in the Danish folketing (no. 59, p. 161).

Leo Manning, died at 55, Mar. 1958, Canadian authority on the Eskimo language (no. 60, p. 271).

Hugo Holten Møller, 1900–1956, responsible for radio organization in Greenland, in 1946 and later director of electrification program there (no. 55, p. 377).

Vladimir Afanas'evich Obruchev, 1863–1956, Russian geologist and pioneer in permafrost studies, Director of the Institute of Permafrost Studies of the Academy of Sciences U.S.S.R. from 1930 (no. 55, p. 377).

Morten Pedersen Porsild, 1872–1956, Danish botanist, archeologist and ethnologist, who established Den Danske Arktiske Station at Disko in 1906, and directed it until 1946 (no. 55, p. 377–78).

Just Knud Qvigstad, 1853–1957, Norwegian philologist, ethnographer who studied Lapp culture (no. 58, p. 57).

Otto Ûl'evich Shmidt, 1891–1956, Russian scientist and leader of, among others, the Sibirîakov expedition 1932 and *Chelûskin* 1933–1934, and the North Pole expedition 1937–1938; Director of the Arctic Institute Leningrad 1930, and head of the Northern Sea Route Administration 1932–1939 (no. 55, p. 378).

Fredrik Carl Mülertz Størmer, 1874–1957, Norwegian astro-physicist and mathematician of aurora, who devised method of determining heights and positions of aurora by photographic means (no. 58, p. 57).

Harald Ulrik Sverdrup, 1888–1957, Norwegian meteorologist and oceanographer, chief scientist on the *Maud* expedition 1918–1925, the *Nautilus* 1931, etc., Director of Norsk Polarinstitutt, 1948 (no. 58, p. 57–58).

Joseph Burr Tyrrell, 1858–1957, Canadian geologist who explored and mapped large and hard-of-access areas of the North (no. 60, p. 271).

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54050. POLGE, C. Low-temperature storage of mammalian spermatozoa. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 498–508, tables.) 46 refs.

Information is presented on species

variation in resistance of spermatozoa to deep-freezing (−79° C. and below); protective action of glycerol; the importance of equilibration; rate of freezing and thawing. A critical temperature range (−15° to −25° C.) was found in which the greatest damage to spermatozoa occurs; means to reduce it are discussed. ***Copy seen:*** DNLM.

54051. POLHEMUS, WILLIAM L. A simplified method of pressure pattern navigation. (Navigation, Winter 1957–58. v. 5, no. 8, p. 401–407, graphs, table.)

Contains a table and corresponding descriptive graphs to facilitate the determination of Bellamy drift and pressure lines of position at latitudes from 30° to 85° with 5° intervals and speeds from 180 to 600 knots with 10 knots intervals. By use of the graphs, in-flight work is reduced to one simple multiplication or division. ***Copy seen:*** DLC.

54052. POLÎAKOV, A. Zashchitnye lesopolosy v raĭone Salekharda. (Sel'skoe khozîaĭstvo Sibiri, 1958, no. 11, p. 32–36.) Text in Russian. ***Title tr.:*** Forest shelter belts in the Salekhard area.

Reports experiments carried out by the Yamal (Salekhard?) Agricultural Experimental Station in 1954–56 to improve microclimatic conditions of cultivated fields by protecting them from wind. The best results were obtained with shelter belts of Siberian larch, mountain ash, birch (*Betula pubescens*), osier, raspberry-cane, black currant; four-row belts slowed considerably the wind velocity to a distance of 7–12 times of their height, contributing to an even distribution of snow in winter and improved conditions of thaw and soil in spring and summer. Climatic conditions of the area are noted: a mean annual temperature −4.8° to −7.4° C. with 79° amplitude of fluctuation, −46.7° minimum and 31.4° C. maximum; 108 frost-free days, with 11.4° C. mean daily temperature during the vegetation period; 409 mm. of annual precipitation, etc. ***Copy seen:*** DLC.

54053. POLÎAKOV, IL'Î MIKHAĬLOVICH, *and* **E. I. POPOVA.** Vsesoîuznyĭ institut zashchity rasteniĭ. (Vestnik sel'skokhozîaĭstvennoĭ nauki, Feb. 1958. god 3, no. 2, p. 33–40.) Refs. Text in Russian. Summary in English and in German. ***Title tr.:*** All-Union Institute of Plant Protection.

Reviews the organization and activities of the All-Union Scientific Research Institute of Plant Protection (VIZR), founded in 1929: its leading scientists, laboratories, investigation of plant pests and diseases, development of insecticides, fungicides, herbicides and mechanical methods for their application. The Institute maintains 320 observation posts in all parts of the U.S.S.R., and has a unique mycological herbarium. Its work on protection of vegetables in the northwestern European part of the Soviet Union is mentioned. ***Copy seen:*** DLC.

54054. POLÎAKOV, S. S., *and* **E. M. SERGEEV.** Inzhenerno-geologicheskaîa kharakteristika doliny r. Ob' v ee nizhnem techenii. (Nauchnye doklady vysshel shkoly. Geologo-geograficheskie nauki, 1958, no. 1, p. 124–32, map.) Text in Russian. ***Title tr.:*** Engineering-geological characteristics of the lower Ob' River valley.

Presents results of investigation of the Ob' valley from Salekhard up to Khanty-Mansiysk in "last four years" by the Ministry of Electrical Stations and Moscow University in view of hydroelectric construction eventually. Geological structure of the upper strata of three main parts of the valley is outlined: a glacial "plateau", 60-100 m. above the water level, extending along the right bank from the Kazym to Nazym River mouths (63°50′–61°15′ N.) and in the region of Salekhard and Labytnangi (p. 124–28); an alluvial plain, 35–45 m. high, with many lakes on both sides of the Ob'; the river valley proper, including its flooded areas (p. 129–30). Special attention is paid to ground formations and to occurrence of permafrost. A schematic text map of the valley is included. ***Copy seen:*** DLC.

54055. POLÎANICHKO, ÎAKOV IVANOVICH, *and others.* ÎUbileĭnaîa nauchnaîa sessiîa Karel'skogo filiala AN SSSR. (Akademiîa nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiîa, 1958, no. 2, p. 117–81.) Text in Russian. *Other authors:* I. V. Il'ina, G. N. Makarov, *and* A. A. Romanov. ***Title tr.:*** Jubilee scientific session of the Karelian Branch of the Academy of Sciences of the U.S.S.R.

Reports the scientific session, Oct. 28–29, 1957 (in Petrozavodsk?), celebrating the 40th anniversary of the Soviet regime. Papers delivered by V. S. Slodkevich, chairman of the Branch Presidium and other scientists, stressed the scientific, cultural and industrial development of Karelia; and a special exhibition was

prepared by institutes and divisions of the Branch, to illustrate the progress of scientific exploration in Karelia.

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54056. POLÎANOVSKIĬ, MAKS. U lesnykh lûdeĭ. (Sovetskiĭ soûz, 1957, no. 11, p. 30–31, illus.) Text in Russian. ***Title tr.:*** Among forest people.

Compares life of the Udegeĭtsy (Tungus) 30 years ago and now, using material of a 1928 and a recent film-expedition to the Amur region. ***Copy seen:*** DLC.

54057. POLÎANSKIĬ, ÎŪRIĬ IVANOVICH. Nekotorye voprosy parazitologii ryb Barent͡sova morîa. (Akademiîa nauk SSSR. Murmanskaîa biologicheskaîa stant͡siîa. Trudy, 1957. t. 3, p. 175–83, table.) 11 refs. Text in Russian. ***Title tr.:*** Some problems of fish parasitology in the Barents Sea.

Report on some aspects of parasitological research conducted since 1949 at the Murmansk Biological Station: number of parasites detected and their taxonomic grouping; biology and development of parasites; main fishes affected including the young; factors favoring infection; ecological complexes of parasites. ***Copy seen:*** DLC.

54058. POLÎANSKIĬ ÎŪRIĬ IVANOVICH, *and* **M. N. GOLIKOVA.** Ob infuzoriîakh kishechnika morskikh ezheĭ; soobshchenie II, novyĭ rod infuzoriĭ iz *Strongylocentrotus droebachiensis* Murmanskogo poberezh'îa. (Leningradskoe obshchestvo estestvoispytateleĭ. Otdel. zool. Trudy, 1957. t. 73, vyp. 4, p. 138–42, 4 illus.) 2 refs. Text in Russian. Summary in German. ***Title tr.:*** On Infusoria in the digestive tract of sea-urchins; communication II, new genus of Infusoria from *Strongylocentrotus droebachiensis* of the Murman coast.

Describes: Schizocaryum dogieli n. gen. n. sp. ***Copy seen:*** DLC.

POLIN, A. N., *see* Egorov, N. S., and A. N. Polin. Aktinomit͡sety-antagonisty . . . Leny. *1955.* No. 50708.

54059. POLKANOV, ALEKSANDR ALEKSEEVICH, 1888– , *and* E. K. GERLING. K–A and Rb–Sr methods and age of Precambrian of USSR. (American Geophysical Union. Transaction, Aug. 1958. v. 39, no. 4, p. 713–15, table.) 9 refs.

Contains tabulated data on 35 age determinations by these methods, including such of minerals from locations in Siberia and Kola Peninsula. Ages range from 500–2880 million years; the oldest rocks were found on Kola. Great difference in the age of some rocks as determined by the K-A method, and the geological data, is not believed due to incorrectness of the K-A method.

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POLKANOV, ALEKSANDR ALEKSEEVICH, 1888– , *see also* Gerling, É. K., *and* A. A. Polkanov. Problema absolûtnogo . . . dokembriîa . . . *1958.* No. 51162.

54060. POL'KIN, ÎA. I. K voprosu o proiskhozhdenii izvestniîakov iz ėffuzivnogo kompleksa trappov severa Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958. vyp. 9, p. 18–23, table.) Text in Russian. ***Title tr.:*** On the question of the origin of the limestone of the effusive trap complex in the northern part of the Siberian platform.

Widespread effusive traps in the northern part of the Siberian platform are distinguished in several series, which are reviewed. In this complex a light-gray limestone occurs in various localities, including the Kureyka, Gorbiyachin, Kotuy Rivers and Lake Ayan (approx. 68° N. 90–95° E.). Its appearance in lenses and seams is described and chemical analyses are presented. Hitherto this limestone has been held of lacustrian origin. On the basis of 1955–57 field study, the author reconsiders and offers his opinion that its origin is connected with active hydrothermal waters.

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54061. POL'KIN, ÎA. I. Trubki vzryva shchelochnykh bazal'toidov i bazal'tov severo-zapadnoĭ chasti Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958. vyp. 10, p. 37–42.) 6 refs. Text in Russian. ***Title tr.:*** Explosion pipes of alkaline basaltoids and basalts in the northwestern part of the Siberian platform.

Explosion pipes filled with basalts and basaltoids were found by the author in 1952 in the lower Kotuy River basin. The occurrence, dimensions and materials of explosion pipes are outlined. Tectonic structure of this region and features of Upper Permian volcanic

activity are discussed. Diamond-bearing kimberlite pipes are a possibility.

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54062. POLLACK, HERBERT, 1905– . Lessons from Korea. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 168–76.)

Author discusses his observations on a visit in Feb.-Mar. 1952 with respect to supplementary ration packs for hospitals and aid stations; feeding of casualties; feeding in the field; caloric expenditure and intake in the cold; civilian nutritional status in Korea, work habits, clothing, vitamin intake, etc.

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54063. POLLARD, CHARLES LOUIS. The genus *Achillea* in North America. (Torrey Botanical Club. Bulletin, July, 1899. v. 26, no. 7, p. 365–72.)

Describes ten species of yarrow, three new, and two in the North: *A. borealis* from Labrador to Alaska, and *A. ptarmica*, northeast Canada. ***Copy seen:*** DLC.

POLTE, JOHANNES W., *see* Hall, J. F., *and others.* Body cooling in wet and dry clothing. *1958.* No. 51513.

54064. POLUNIN, NICHOLAS VLADIMIR, 1909– . The botany of ice-island T–3. (Journal of ecology, July 1958. v. 46, no. 2, p. 323–47, illus., table, map.) 50 refs.

A study of plant material collected in 1952, 1953 and 1955 on or near the surface of so-called Fletcher's Ice Island, approx. 11½ by 6 mi. in size, drifting clockwise in the Canadian-Alaskan sector of the Arctic Basin. The material was from the following plants: *Salix arctica* (531 items), *Saxifraga oppositifolia* (164 items), *Poa abbreviata* (20 partial specimens), *Saxifraga caespitosa* (7 rosettes), various leaves and roots, lichens, mosses and liverworts. Collecting sites, location, substrate, etc., are indicated on map. All specimens except a mat of moss, were dead. Most of these land-grown forms are of high arctic origin. Aero-palynological studies on T–3 gave meager and inconclusive results.

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54065. POLUNIN, NICHOLAS VLADIMIR, 1909– . Perlustrationes plantarum arcticarum I (bis). Arctic dicotyledonous species: four new names or combinations. (Rhodora, Sept. 1951. v. 53, no. 633, p. 226–28.) Text in English. ***Title tr.:*** Surveys of arctic plants. I (con.)

Contains a description of *Lagotis hultenii* n. sp. (Novaya Zemlya, northern European U.S.S.R., Ural, Lower Ob' and Yenisey River) and three new combinations of plants occurring in northern U.S.S.R., Alaska and the Aleutian Islands. For other parts of these surveys, see No. 13686 and 25195–25197.

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54066. POLUNIN, NICHOLAS VLADIMIR, 1909– . Supplementary notes on arctic and boreal species in Benson's "North American Ranunculi." (Torrey Botanical Club. Bulletin, May 1944, v. 71, no. 3, p. 246–53.)

Contains additional distributional data on some arctic species, based on the author's field work in arctic regions or contained in No. 13670 and in some other works. Concerns mostly Canadian and Greenland species. See No. 49652 and No. 49655 for Benson's work and statement. ***Copy seen:*** DLC.

POLUNIN, NICHOLAS VLADIMIR, 1909– , *see also* Savel'ev, B. A. Opredelenie vozrasta ledîanykh ostrovov . . . *1958.* No. 54572.

54067. POLUTOV, I. A. O zimnem tralovom promysle treski v vodakh Kamchatki. (Rybnoe khoziîaĭstvo, Jan. 1957. god 33, no. 1, p. 13–16, table, maps.) Text in Russian. ***Title tr.:*** Winter trawling for cod in the waters of Kamchatka.

Information is presented on the occurrence of cod along the eastern shores of Kamchatka; summer fisheries; its winter migration and winter fisheries; spring return to the shores; yields during the winter months and in the spring; fish reserves. ***Copy seen:*** DLC.

54068. POLYNTSEVA, OL'GA AFANAS'EVNA, *and others.* Obshchie usloviîa pochvoobrazovaniîa. (*In:* Akademiîa nauk SSSR. Komi filial. Pochvy Komi ASSR, 1958. p. 12–28, diagrs, tables.) Text in Russian. *Other authors:* I. V. Zaboeva, S. N. Belîakov, *and* T. A. Stenina. ***Title tr.:*** General conditions for soil formation.

Outline on geology of the country; kinds and composition of parent mineral material, mechanical and chemical properties of soils, soil development in relation to relief, climate and vegetation.

Two profiles are presented, of the upper Vychegda and middle Sysola, as characteristic of soil development in the valleys of Komi A.S.S.R. For mechanical and chemical characteristics of the soils, some 300 analyses are reviewed and summarized in tables; mechanical composition in the 0–20 cm. and 20–100 cm. horizons is tabulated. Mechanical composition of the soils is shown (p. 22) in relation to area and percentage of occupied territory of Komi A.S.S.R. Relief, temperature, precipitation, the vegetation period, permafrost, and snow cover are discussed as factors in soil building; conditions in the Vychegda-Mezen' and Pechora lowlands, Polar Ural and other northern parts of the district are cited among others. ***Copy seen:*** DGS.

54069. POLYNTSEVA, OL'GA AFANAS'EVNA, *and others.* Opisanie pochv. (*In:* Akademiia nauk SSSR. Komi filial. Pochvy Komi ASSR, 1958. p. 29–144, tables, diagrs.) Text in Russian. *Other authors:* I. V. Zaboeva, L. A. Makarova, L. A. Verkholantseva, N. V. Chebykina, D. M. Rubtsov, *and* T. A. Stenina. ***Title tr.:*** Description of soils.

Soils of Komi A.S.S.R. are divided into types, subtypes and forms and described in detail: stages of the horizons, kind of soil, organic matter (microorganism, humus formation, its quantity), mechanical and chemical composition, acidity, porosity, weight and other characteristics. The main soil types are: tundra, podsolic, peat-carbonate, peat-gley, podsolic-marshy, marshy, marshy tundra, fluviogenetic, arable. Komi A.S.S.R. extends about 1000 km. north–south, and the soils range from arctic tundra in the north to podsolic soils in the south; climate is the major factor in forming the soil belts. Considerable attention is given to tundra soils (p. 32–54); of which eight different forms are represented in Komi A.S.S.R., shrubby tundra soil (with *Betula nana,* etc.) the most prevalent; together they cover 5% of the territory. The main features of tundra soil formation generally are a moist horizon near the surface, which leads to the destruction of soil by the frost and heaving; mechanical shifting of soil material upward; poverty of biotic elements; relatively low mineralization. Topography is discussed as important in the tundra soil formation. Profiles of the different soil types, mechanical and chemical composition in various horizons, nature and extent of the microflora, and humus formation are included. Tundra soils are little explored as yet and some aspects are still unknown. ***Copy seen:*** DGS.

54070. POLYNTSEVA, OL'GA AFANAS'EVNA. Pochvy iugo-zapadnoĭ chasti Kol'skogo poluostrova. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1958. 151 p., tables, text map. (Akademiia nauk SSSR. Kol'skiĭ filial.) 91 refs. Text in Russian. ***Title tr.:*** Soils of the southwestern part of the Kola Peninsula.

Presents the results of comprehensive investigations in 1938–1940 of the soils in the Lake Imandra depression and in the vicinity of Kapustnyye and Voron'i lakes (approx. 67°20′–67°40′ N. 30°20′–34°20′ E.). Climate, geologic structure, and vegetation are reviewed, as factors in soil formation, and the types of soils for plains, and mountain regions are described. Mountain soils include tundra, podsols and peat soils. Podsolic, podsol-swamp, bogland, and flood-plain soils developed on plains are treated in detail, as characteristic of the area studied. Soil reaction, classification of minerals, causes of acidity or alkalinity, organic matter, moisture, physical and other properties of soil type are dealt with. Data are given in tables.

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54071. POLYNTSEVA, OL'GA AFANAS'EVNA. Sostoianie izuchennosti pochvennogo pokrova. (*In:* Akademiia nauk SSSR. Komi filial. Pochvy Komi ASSR, 1958, p. 5–11.) Text in Russian. ***Title tr.:*** The state of knowledge of the soil cover.

Soil investigations in Komi A.S.S.R. are reviewed and pertinent soil maps noted. Such studies to date cover about 50% of the territory and give only a schematic outline of the soil cover. The Vorkuta tundra region, gley-podsolic soils in the upper Vychegda valley and fluviogenetic soils of the Sysola and Vychegda River basins have had more study than others. ***Copy seen:*** DGS.

POLYNTSEVA, OL'GA AFANAS'EVNA, *see also* Makarova, L. A., *and others.* Pochvennoe raionirovanie. *1958.* No. 53063.

POMEROY, PAUL W., *see* Bentley, C. R., *and others.* Seismic measurements on the Greenland ice cap . . . *1957.* No. 49658.

POMUKHIN, VLADIMIR PETROVICH, *see* Kamenskiĭ E. V., *and* V. P. Pomukhin. K voprosu o tipe sudna . . . *1958*. No. 52141.

54072. PONOMAREV, L. E. Gigienicheskaîa oc̑enka i prakticheskoe ispol'zovanie ul'trafioletovoĭ radiac̑ii solnc̑a i nebosvoda v raîone Severnogo poliûsa. (Gigiena i sanitariîa, Aug. 1957. god 22, no. 8, p. 69–70, table.) Text in Russian. ***Title tr.:*** Hygienic evaluation and practical utilization of ultraviolet radiation from the sun and sky in the area of the North Pole.

Account of observations made during July–Sept. 1955 on the drifting station North Pole-4 at 82°–83°08′ N. lat. The role of different types of clouds in filtering out this radiation, its antirachitic value and utilization for sun bathing by members of the expedition, are also discussed

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54073. PONOMAREV, PAVEL AKIMOVICH. Pervyĭ v mire atomnyĭ ledokol. (Slaviîane, Feb. 1958, no. 2, p. 25–26, illus.) Text in Russian. ***Title tr.:*** The first atomic ice-breaker in the world.

Interview with the captain of the *Lenin*, P. A. Ponomarev: launching of the vessel (in Dec. 1957) 15 months after construction began; specifications; principles of utilizing atomic energy; advantages in comparison with conventional ice-breakers; expected capacity to break through ice 2 m. thick; comfort of the accommodations, etc. ***Copy seen:*** DLC.

54074. PONOMAREVA, L. A. Redkaîa nakhodka v glubinakh Tikhogo Okeana. (Priroda, May 1957. god 46, no. 5, p. 115, illus.) Text in Russian. ***Title tr.:*** A rare find in the depth of the Pacific Ocean.

Notes on three specimens of a deep-sea crustacean, *Thysanopoda cornuta*, obtained by the research ship *Vitiaz'* in 1953, in the Kuril-Aleutian Trench, at the depth of 4,000 m. All the specimens are females, 98, 92, and 68 mm. long.

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54075. PONOMAREVA, L. A. Zooplankton zapadnoĭ chasti Karskogo moriîa i Baĭdaratskoĭ guby. (Akademiîa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 20, p. 228–45, illus., tables, maps.) 25 refs. Text in Russian. ***Title tr.:*** The zooplankton of the western Kara Sea and the Baydaratskaya Bay.

Contains information on earlier work, the investigated area (69° N. 67°30′ E.), material and methods; common forms; quantitative, vertical and horizontal distribution; ecology of the main groups; origin and migration of forms. The material was collected during Sept.-Oct. of 1945 and 1946.

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54076. POOL, J. LAWRENCE, *and others*. Mechanism and control of centrally induced cardiac irregularities during hypothermia. (American Neurological Association. Transactions, 82nd meeting, 1957, *pub.* 1958, p. 108–111.) *Other authors:* D. P. Purpura, E. M. Housepian, L. A. Kessler, R. J. Seymour, *and* S. A. Jacobsen.

Report on combined clinical and experimental studies (on cats) applying moderate hypothermia and slight or no anesthesia. Cardiac irregularities were commonly observed upon manipulation of an aneurysmal sac or adjacent artery in the circle of Willis. They consisted in bradycardia, premature ventricular contractions, abnormal P waves or auricular fibrillation.

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POOL, J. LAWRENCE, *see also* Purpura, D. P., *and others*.

Hypothermic potentiation . . . cardiac irregularities. *1958*. No. 54170.

POPOV, A. F., *see* Akademiîa nauk SSSR. Îakutskiĭ filial. Za sovetskuû vlast' . . . *1957*. No. 49170.

54077. POPOV, ANASTASIĬ MIKHAĬLOVICH. Gidrobiologicheskiĭ ocherk moriîa Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1932. vyp. 15, p. 189–229, illus., tables, map.) 185 refs. Text in Russian. Summary in English. ***Title tr.:*** Hydrobiological survey of the Laptev Sea.

A review of work carried out in 1927 from the M/S *Poliarnaîa Zvezda* for the Yakut Commission of the Academy of Sciences. Consecutive sections deal with history of marine investigation of the Laptev Sea, climate (of the coast), bottom relief, ice cover, temperature and salinity, effect of the Lena discharge, currents, bottom deposits (including tubes of worms, iron concretions). Stations are listed with their position, temperature, salinity, etc. The biology of the area studied is characterized generally, and the animals reported, from

the unicellular forms to the fishes, altogether are presented in a table.

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54078. POPOV, ANASTASIĬ MIKHAĬLOVICH. K poznaniiû fauny ryb Okhotskogo moriâ. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniiâ morei SSSR, 1931. vyp. 14, p. 121–54, illus. tables.) Text in Russian. Summary in German. ***Title tr.:*** Contribution on the fish fauna of the Okhotsk Sea.

A study of fishes collected in 1930 by the State Hydrographic Institute's expedition in the Okhotsk Sea, including its deep waters. Thirty-nine species were identified, seven of them new, one *Derjuginia ochotensis* n. g. n. sp. also a new genus. Most of these new forms live in the deep sea. Descriptions include size and morphometry, anatomy, location, related forms, ecological background (nature of bottom, temperature, salinity), distribution, etc. The fauna appeared to be largely arctic-boreal, with a few purely arctic and some boreal forms. ***Copy seen:*** DLC.

54079. POPOV, ANDREĬ ALEKSANDROVICH. Perezhitki drevnikh dorelegioznykh vozzreniĭ dolganov na prirodu. (Sovetskaiâ ėtnografiiâ, 1958, no. 2, p. 77–99, illus.) 4 refs. Text in Russian. ***Title tr.:*** The survival of ancient prereligious concepts about nature among the Dolgans.

Suggests that two basic ideological concepts preceded religious beliefs among primitive men: animatism, the attribution of life to objects and natural phenomena; and animism, their endowment with a soul. The personification of animals, objects and abstract concepts and the resulting development of taboos, magic rites and fetishism are traced in Dolgan folklore and their survival noted in present-day customs. Popov's "psychoanalytical" treatment of his subject is sharply criticized by M. I. Shakhnovich (Sovetskaiâ ėtnografiiâ, 1958, no. 5, p. 71–76) and B. Sharevskaiâ (ibid., no. 6, p. 61–75). ***Copy seen:*** DLC.

POPOV, IONA, *see* Ruzhitskiĭ, V. O. Almazy drevnego Timana. *1958.* No. 54462.

54080. POPOV, IURIĬ N. Nakhodka *Otoceras* v nizhnem triase Vostochnogo Verkhoian'ia. (Akademiiâ nauk SSSR. Izvestiiâ, ser. geologicheskaiâ, Dec. 1958. god 23, no. 12, p. 105–109, illus.) 10 refs. Text in Russian. ***Title tr.:*** *Otoceras* find in the Lower Triassic in the eastern Verkhoyansk region.

Describes this ammonite fauna found in 1955 at the source of the Santar, tributary to the Indigirka (approx. 62°25′ N. 140°10′ E.). Several species of *Otoceras* are indicated, of which two are described in detail: *Otoceras indigirense* Popov sp. n. and *Otoceras boreale* Spath. Previous finds (Timor Island, Himalayas, Greenland) are mentioned, and suggestion advanced that *Otoceras* may have migrated across the Pacific to the Himalayas and from there over the Verkhoyansk syncline to Greenland. ***Copy seen:*** DLC.

54081. POPOV, IURIĬ N. Otlozheniiâ verkhnego triasa na Zemle Frantsa-Iosifa. (Priroda, Mar. 1958. god 47, no. 3, p. 72.) Text in Russian. ***Title tr.:*** Upper Triassic deposits on Franz Joseph Land.

Notes on location and number of these islands; earlier geological explorations; those of 1956–1957 under V. D. Dibner and L. I. Pirozhnikov; Upper Triassic fossil molluscs identified by the author. ***Copy seen:*** DLC.

54082. POPOV, IURIĬ N. Paleontologicheskaiâ kharakteristika otlozheniĭ morskogo triasa Lensko-Olenekskogo raiona. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 67, Sbornik statei po geologii Arktiki, vyp. 7, p. 48–72, 6 tables, incl. 1 fold., text map) 15 refs. Text in Russian. ***Title tr.:*** Paleontological characteristics of Triassic marine deposits in the Lena-Olenek River region.

Presents the results of investigation westward from the Lena and northward from the Ayakit and Pur Rivers. The Triassic deposits in different areas are described, fossil fauna indicated and stratigraphy outlined. A comparative stratigraphic diagram for all cross-sections is compiled (table no. 5) and correlation made with similar deposits in neighboring regions. The collected marine fauna does not confirm the existence of upper Triassic, but it is inferred by analogy with areas of the Kharaulakh mountains and the Anabar-Khatanga interfluve.

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54083. POPOV, IURIĬ N. Tektonicheskie osobennosti Severo-Vostoka Azii. (Sovetskaiâ geologiiâ, Aug. 1958. god 1, no. 8, p. 37–53, 3 text maps.) 23 refs. Text in Russian. Summary in English. ***Title tr.:*** Tectonic features of northeast Asia.

Outlines the orography, tectonic structure and stages of geologic processes of northeast Asia and Alaska. The entire area between the Siberian platform and Canadian shield is considered as a single geosynclinal area (map p. 40) with intensive differentiated movements, intrusive and effusive magmatism and seismic activity. Three stages of tectonic processes, which formed this broad area are distinguished: (*1*) Paleozoic folding including Precambrian massifs, characterized by Paleozoic geosyncline and the Lamiya geoanticline in the northwestern part of the Sea of Okhotsk; (*2*) Mesozoic folding, including and especially characterized by the Verkhoyansk-Kolyma geosyncline; and (*3*) Cenozoic folding, volcanism and sedimentation, specially characterized by the Kamchatka-Koryak arch. The individual regions of northeast Asia, each identified with one of these structural periods, are discussed and effects of stratigraphy outlined. The tectonics of Alaska and western Canada are also treated (p. 50–51). A paleotectonic map of the Pre-Permian Verkhoyansk-Alaska geosyncline is included, and geotectonic structures are summarized in another map. ***Copy seen:*** DLC.

54084. POPOV, L. A. Lezhbishche morzheĭ na ostrove Peschanom. (Priroda, Sept. 1958, god 47, no. 9, p. 102–103, illus.) Text in Russian. ***Title tr.:*** Walrus rookery on Peschanyy Island.

Contains description of this tiny island in the Laptev Sea (approx. 73°35′ N. 118°40′ E.); ways and times of arrival of animals, size and location of harem(s), behavior in the harem, care of the young, mutual aid, behavior in captivity, departure from the island. ***Copy seen:*** DLC.

POPOV, L. I., *see* Akademiîa nauk SSSR. Mezhduvedomstvennyĭ komitet. Mezhdunarodnyĭ geofizicheskiĭ god. Informat͡sionnyĭ bi͡ulleten' . . . *1957.* No. 49182.

54085. POPOV, LEONID. Tri stikhotvoreniîa. (Druzhba narodov, 1953, no. 3, p. 174–75) Text in Russian. ***Title tr.:*** Three poems.

Narrative poems describing the taiga, tundra and Lena River. Translated from Yakut by A. Akhmatova.

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POPOVA, A. I., *see* Zol'nikov, V. G., *and* A. I. Popova. Paleogeograficheskaîa skhema . . . *1957.* No. 56238.

POPOVA, E. I., *see* Poliîakov, I. M., *and* E. I. Popova. Vsesoi͡uznyĭ institut zashchity rasteniĭ. *1958.* No. 54053.

54086. POPOVA, K. I. Opyt slovarnoĭ raboty na urokakh russkogo îazyka v V klasse îakutskoĭ shkoly. (*In:* Akademiîa pedagogicheskikh nauk RSFSR. Institut nat͡sional'nykh shkol. Iz opyta prepodavaniîa, 1957. p. 132–36.) Text in Russian. ***Title tr.:*** An experiment in vocabulary work in Russian language classes in the fifth grade of the Yakut school.

Repetition, grammatical analysis, translation and pictorial illustration help students to grasp the meaning and to memorize vocabulary. In the Yakut fifth grade (=American ninth), a thousand new words must be mastered in the 200 school-hours devoted to Russian. ***Copy seen:*** DLC.

54087. POPOVA, OL'GA SERGEEVNA. Narodnoe dekorativno-prikladnoe iskusstvo. (Sovetskaîa ėtnografiîa, 1957, no. 5, p. 108–126, illus.) Text in Russian. ***Title tr.:*** Ornamental folk art and craftsmanship.

Includes (p. 120–22) a description with illus. of bone carvings and sculptures made at Kholmogory, Arkhangel'skaya Oblast', and at the new craft shop at Uėlen, Chukotka, by young Chukchi artesans. ***Copy seen:*** DLC.

54088. POPOVIĆ, PAVA. Effet de l'hyperthermie ou de l'hypothermie précédentes sur les températures létales limites. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 5, p. 1003–1005, illus.) 2 refs. Text in French. ***Title tr.:*** Effect of preceding hyperthermia or hypothermia on lethal limit temperatures.

A study on the effects, in rats, of hyperthermia on resistance to subsequent hypothermia, and of hypothermia on the outcome of subsequent hyperthermia. Under certain conditions of temperatures and duration, there was no difference in results between the two groups. But generally high environmental temperature was more fatal to animals previously cooled. ***Copy seen:*** DNLM.

54089. POPOVIĆ, PAVA. Effet de l'hypothermie profonde prolongée sur l'activité nerveuse supérieure. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 5, p. 1001–1003, table.) 9 refs. Text in French. ***Title tr.:*** Effect of

deep, prolonged hypothermia upon higher nervous activity.

Report on experiments with rats submitted to a hypothermia of 14–15° C. for eight hours. Tests with a maze did not show any irreversible, dysfunction in higher nervous function.

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54090. POPOVIĆ, VOJIN. Prolonged lethargic hypothermia in rat and ground squirrel. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 125.)

An outline of investigations on critical survival time and life span in hypothermia, continuous, repeated or interrupted by rewarming. Differences between young and adult rats are also discussed.

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54091. POPUGAEVA, LARISA ANATOL'EVNA, *and* **I. I. SHAFRANOVSKIĬ.** Kristall almaza v kimberlite iz trubki "Udachnaîa." (Vsesoûznoe mineralogicheskoe obshchestvo. Zapiski, 1958, ser. 2, chast' 87, vyp. 4, p. 494–96, plate.) 4 refs. Text in Russian. ***Title tr.:*** Diamond crystal in the kimberlite pipe "Udachnaya."

Describes a diamond crystal from the collection made by L. A. Popugaeva in the breccia of "Udachnaya" on the right bank of the Daaldyn River in the Olenek basin. Appearance, structure and component rocks of the kimberlite pipe are outlined. The diamond, measuring 0.5 x 0.3 x 0.2 cm., is treated in detail. Its form, facets, index of refraction, illumination and other properties are reported; its similarity to South African diamonds is stressed. ***Copy seen:*** DGS.

54092. POPUGAEVA, LARISA ANATOL'EVNA. Poiski dragotsennogo kamnîa. (Sovetskaîa zhenshchina, Apr. 1957, no. 4, p. 12, illus.) Text in Russian. ***Title tr.:*** Search for precious stones.

A popular account of the search and discovery of a diamond-bearing kimberlite pipe in the taiga region of Yakutia, by the author, a woman geologist. This find in Aug. 1954, led to other discoveries in the same area in 1955.

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54093. POPULATION REFERENCE BUREAU, *Washington, D.C.* Alaska, a population profile. Washington, D.C., June 26, 1958. 3 p. Mimeographed.

Analyzes Alaska population data in comparison with the rest of the country: density about one person/four sq. mi. (57/sq. mi. average for the U.S.); Alaska has three country dwellers to one city resident; U.S. ratio is two city dwellers to one rural. Alaska has the most youthful population (median age of 26), the largest proportion of males to females, highest proportion of married women; highest birth and lowest death rates. Percentage of population increase is higher than for any state except Nevada which is the same. ***Copy seen:*** CaMAI.

54094. PORENIUS, PER. Västernorrlands jordbruk minskas. (Skogen, *Stockholm*, May 1, 1957. årg. 44, nr. 9, p. 310.) Text in Swedish. ***Title tr.:*** Agriculture in Västernorrland is declining.

Reports investigation of the status and potentials of agriculture and forestry in this county in northern Sweden. Both industries, now in decline, need to be modernized and put on an economic basis, and regulation of timber lots through sale or exchange is a precondition for development of forestry.

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PORENIUS, PER, *see also* Kvarby, N., *and others.* Skogliga arronderingsfrågor. *1957.* No. 52599.

PORFIDO, FRANK ANTHONY, *see* Rose, J. C., *and others.* Cardiovascular function in hypothermic anesthetized man. *1957.* No. 54385.

54095. PORFIRIDOV, NIKOLAÏ GRIGOR'EVICH, 1893– . Nadpisi na nozhakh russkikh morekhodov xvii v. (Sovetskaîa arkheologiîa, 1958, no. 2, p. 267–69, illus.) 8 refs. Text in Russian. ***Title tr.:*** Inscriptions on knives of Russian 17th century seafarers.

Disputes V. V. Gelman's (No. 35857) reading of the inscriptions on two 17th century knife handles found in 1941 on the eastern shore of Taymyr Peninsula. The first word deciphered as "murmz" i. e. from Murman, should be read as "purt", i. e. Zyryan knife, a trading staple at Mezen' and Mangazea. This suggested reading would weaken the hypothesis of the expedition's Murman origin. ***Copy seen:*** DLC.

54096. PORKHAEV, G. V., *and* **S. G. TSVETKOVA.** K voprosu ob èksperimental'nykh metodakh opredeleniîa osadki mnogoletnemerzlykh dispersnykh gruntov pri ottaivanii. (Akademiîa nauk SSSR. Institut merzlotovedeniîa. Trudy, 1958. t. 14, p. 64–69, tables, graphs,

diagr.) 3 refs. Text in Russian. ***Title tr.:*** Experimental methods of determining the settling of permanently frozen dispersed soils by thawing.

Laboratory tests on undisturbed samples of frozen clay and sandy soils were made by odometers (6.2–8 cm. diam., 4.5 cm. high) at 10°–13° C. and a load of 0.05 kg./sq. cm., and visually on 30 x 30 x 40 cm. stratified samples placed in wooden boxes. The settling of clay soil of 30–50% moisture content recorded with the odometer reached 20–50%, while that of sandy loam and sand (16–32% moisture) did not exceed 1–12%. Settling proceeded more evenly in sandy than in clay soils; stability was reached after 3–5 and 2–4 hr. respectively. Stratified samples of clay and sand, and clay, ice, and sand, settled an average of 12.5% and 23.5% when subjected to surface thawing at 4°–10° C. The settling of soil in 6 x 6.5 m. plots in the field averaged 14 cm. for a thawed depth of 56 cm. Laboratory and field values are compared and evaluated.—From SIPRE.

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54097. PORKHAEV, G. V. Opredelenie koéffi͡sienta temperaturoprovodnosti gruntov po dannym nabli͡udeniĭ v estestvennykh usloviĭa͡kh. (Akademii͡a nauk SSSR. Institut merzlotovedeniĭa. Trudy, 1958. t. 14, p. 80–91, table, graphs.) 2 refs. Text in Russian. ***Title tr.:*** Determination of the thermal conductivity coefficient of soils from data of observations under natural conditions.

Nomograms and formulas are given for determining the coefficient and various parameters in frozen ground based on observed temperature distribution within the active layer in early summer, when the soil is still under the influence of winter cooling, and in autumn and winter before the active layer wholly freezes. Data on observed and calculated soil temperatures and thermal conductivities in various months are tabulated.—From SIPRE. ***Copy seen:*** DLC.

54098. PORKHAEV, G. V. Zaankerivanie fundamentov v talom grunte. (Akademii͡a nauk SSSR. Institut merzlotovedeniĭa. Trudy, 1958. t. 14, p. 56–59, table, diagrs.) 3 refs. Text in Russian. ***Title tr.:*** Anchoring foundations in thawed ground.

A method of computing the anchoring forces required to counteract heaving of foundations laid below the freezing layer in areas of deep frost penetration is described. The forces are calculated under the assumptions that the pressure at the contact surface between frozen and unfrozen ground is equal to that of the entire layer of seasonal freezing, that the unfrozen layer is underlain by an infinite mass of frozen ground, and that frozen ground is incompressible. A sample calculation for a reinforced concrete foundation with a square anchor is presented.—From SIPRE. ***Copy seen:*** DLC.

54099. PORKKA, M. T., *and* **E. E. VESANEN.** Earthquake in Ranua and Pudasjärvi 1956. (Geophysica, 1958. v. 5, no. 4, p. 226–29, tables, map.) 6 refs.

On Dec. 24, 1956, an earthquake was recorded at Sodankylä (67°26′ N. 26°34′ E.) at a southward epicentral distance of 1°.5. It was felt over an area of approx. 7,500 sq. km. extending 130 km. north-south and with macroseismic epicentrum at 65°.7 N. 27°.4 E. Data on the foreshocks, main shock, and aftershocks, also distances from three seismic stations in Finland and one in Sweden, are tabulated. The microseismic data made it possible to estimate roughly the thickness of the earth's crust in northern Finland: 30–40 km.; this is less than in northern Sweden. ***Copy seen:*** DLC.

54100. PORSILD, ALF ERLING, 1901– . Illustrated flora of the Canadian arctic archipelago. Illus. by D. T. Lid. Ottawa, 1957. iii, 209 p. 70 illus., 332 text maps (Canada. Dept. of Northern Affairs and National Resources. National Museum of Canada. Bulletin no. 146, Biological series no. 50.)

Basic reference work. A survey of the physiography, soils and plant habitats of the region (p. 1–10), introduces a systematic account (p. 11–155), with keys, and tabulated statistical data, of 340 species in 115 genera, 38 families. Brief descriptions of species are given with information on habitat and geographic distribution (text maps). The area covered is Canada north of the tree-line, approx. 900,000 sq. mi. of land, of which some 549,000 sq. mi. represents the arctic archipelago. ***Copy seen:*** DLC.

54101. PORSILD, ALF ERLING, 1901– . The North American races of *Saxifraga flagellaris* Wild. (Botanisk tidsskrift, 1954. bd. 51, p. 292–99, text map.) 15 refs.

Contains data on geographic distribution of these races, especially of ssp.

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platysepala, flagellaris, and *mucronulata.* The first is reported from arctic and alpine America and Eurasia; the second from Alaska, northeast Asia, the Caucasus and the Central Asiatic highlands; the third is limited to the last region. Morphology of the races, ecology, reproduction, etc., are noted.

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54102. PORTENKO, LEONID ALEKSANDROVICH, 1896– . Studien an einigen seltenen Limicolen aus dem nördlichen und östlichen Sibirien, I. (Journal für Ornithologie, Oct. 1957. Bd. 98, Heft 4, p. 454–66, illus., plate 15–16.) 12 refs. Text in German. ***Title tr.:*** Studies on some rare Limicolae from northern and eastern Siberia.

Contains a detailed study of the spoon-billed sand-piper, *Eurynorhynchus pygmaeus,* which breeds exclusively on the western coast of the Bering Strait (approx. 60° N. 166° to 170°30′ E.). Its geographic distribution, frequency, arrival, pairing, nesting, care and feeding of the young are dealt with; systematic notes are added. ***Copy seen:*** DSI.

54103. PORTENKO, LEONID ALEKSANDROVICH, 1896– . Die zoogeographische Erforschung Nordost-Asiens. (Journal für Ornithologie, 1958. Bd. 99, Heft 2, p. 192–202, table.) Text in German. ***Title tr.:*** The zoogeographic exploration of northeast Asia.

Reviews work of the earlier ornithologists and that of the author during the last 25 years: in the Anadyr' region (town of Markovo) and the Chukotsk Peninsula during the Arctic Institute expedition of 1931–32, also in 1938; and on Vrangel Island in 1938–39 and in 1956. Typical species are listed, and observations on bird succession in the tundra and forest-tundra zones in these regions are tabulated. Breeding times of various species are noted. Comparison is made of the regions investigated in northeast Asia and in Alaska, with comment on the influence of geological changes in the Bering Strait area. The author doubts the existence of a solid Bering bridge and sees the Anadyr' lowland and some parts of northeast Asia and Alaska as islands.

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54104. PORTER, CHARLES LYMAN, 1889– . The subgenus *Gynophoraria* of the genus *Astragalus.* (American journal of botany, Nov. 1940. v. 27, no. 9, p. 727–28, 6 illus.) 2 refs.

Reduces gen. *Gynophoraria* to subgeneric rank, gives description of *Astragalus falciferus,* a type collected in Yukon Territory between Kluane Lake and Donjek River, Aug. 11–27, 1920, also known from various localities in Alaska.

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54105. POSTEL, ALLEN HANNAN, 1925– , *and others.* The therapeutic effect of hypothermia in experimental hemorrhagic shock. (Annals of surgery, Mar. 1957. v. 145, no. 3, p. 311–16, illus., table.) 35 refs. *Other authors:* L. C.Reid *and* J. W. Hinton.

Hypothermic dogs showed a greater loss of blood into an arterial reservoir, and the take-up of blood from the reservoir was slower than in normothermic animals. The cooled dogs showed a significant decrease in mortality when compared with the controls. The practical implications of the results are discussed.

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POSTOLENKO, G. A., *see* Kondorskaîa, N. V., *and* G. A. Postolenko. Seĭsmicheskaîa aktivnost' . . . *1958.* No. 52380.

54106. POTAPENKO, V. V. Nekotorye zakonomernosti proîavleniîa gornogo davleniîa i ikh ispol'zovanie pri upravlenii krovleĭ v usloviîakh razrabotki vechnomerzlykh rossypeĭ. (*In:* Vsesoîuznoe nauchno-tekhnicheskoe soveshchanie po marksheĭderskomy delu, *Leningrad,* 1956. Trudy, Moskva, Ugletekhizdat, 1958, p. 435–44, graphs, diagrs.) Text in Russian. ***Title tr.:*** Certain characteristics of rock pressure and their application to roof arrangements in placer mines in permafrost.

Reports results of investigations at an unidentified locality in northeast U.S.S.R. on the deformation of roofs in placer mines 8–18 m. deep in permafrost. The vertical displacements of the roof were determined from periodic measurements of the distance between roof and floor, the load on roof supports, and their deformation. Three phases of deformation were observed: at the beginning of operations, little sagging occurred since the deformation of frozen ground was within its elastic limit. In the second phase, the rate of sagging increased as a result of plastic deformations and viscous flow; supports were forced into the roof a distance of 50 mm., whereupon cracks formed in the roof and the supports 20–30 m. from the end of the stope broke. In the third phase the roof began to collapse,

while supports 10–15 m. from the stope end were shattered. The maximum rate of deformation (3–5 mm. per hr.) was observed in the center of the stope.—From SIPRE. ***Copy seen:*** DLC.

54107. POTAPOV, LEONID PAVLOVICH, 1905– . Leninskaîa natsional'naîa politika v deĭstvii. (Sovetskaîa ėtnografiîa, 1957, no. 5, p. 10–30.) Refs. Text in Russian. ***Title tr.:*** Lenin's national policy in action.

Includes (p. 14–15) a report on the creation in 1922 by the Ministry of Nationalities of the "Polar sub-department for the administration of aboriginal peoples of the North" and on its administrative, economic and educational tasks.

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54108. POTAPOV, LEONID PAVLOVICH, 1905– . O natsional'noĭ konsolidatsii narodov Sibiri. (Voprosy istorii, Oct. 1955, no. 10, p. 59–67.) 6 refs. Text in Russian. ***Title tr.:*** National consolidation of the peoples in Siberia.

Under the impact of cultural and economic development, the non-Russian peoples in Siberia have succeeded in consolidating themselves into socialist nations (the Yakuts, Buryats), socialist peoples (the Chukchis, Koryaks, Khanty and Mansi, Nentsy, etc.), or into small ethnic groups. The small national groups, however, cannot create a culture of their own, and further development requires that these adhere to the culture of the larger peoples and nations. The process of consolidation advances in the form of unification and assimilation of the smaller ethnic groups with the bigger nations. The leading role in this development belongs to the Russian nation. These processes of consolidation should be studied. ***Copy seen:*** DLC.

54109. POTĖ, G. Tridtsat' let na promysle. (Okhota i okhotnich'e khozîaĭstvo, Jan. 1958. god 4, no. 1, p. 8, illus.) Text in Russian. ***Title tr.:*** Thirty years of hunting and trapping.

Sketches methods of hunting and trapping sable and squirrel in the Evenki National District, and the habits of these animals. Dogs are trained to catch sable. Author's catch is worth 10,000 rubles a year; he is a hunter of the collective farm "Novaya zhizn'."

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54110. POTTER, J. G. Mean duration and accumulation of snow cover in Canada. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report, 1957. v. 4, *pub.* 1958, p. 82–87, 5 text maps.) 2 refs.

Discusses general features based on data for 15 winters, beginning 1941–42, and presents maps showing mean dates of the beginning and ending of the winter snow cover, its annual duration, and the mean accumulation of snow on the ground. It appears about Aug. 25 on Ellesmere, through Sept. on the arctic islands, Northern Quebec, and through Oct. on the northern mainland west of the Hudson Bay. Maximum depth ranges from less than 10 in. on the arctic islands to more than 50 in. in northern Quebec. ***Copy seen:*** DGS.

54111. POTTER, VAN R. Possible biochemical mechanisms underlying adaptation to cold. (Federation proceedings. Symposium on metabolic aspects of adaptation of warm blooded animals to cold environment, Dec. 1958. v. 17, no. 4, p. 1060–63, illus.) 13 refs.

Discussion of primary and secondary responses to (cold) stress; responses in unexperienced and experienced animals; the role of intermediary metabolism, especially of enzymes and hormones in cold-adaptation. ***Copy seen:*** DLC.

54112. POULSEN, ARTHUR O. The iron ore resources of Norway. (*In:* International Geological Congress. 19th, *Algiers*, 1952. t. 2, p. 389–97, map in atlas vol.) 6 refs.

The Norwegian iron-ore supply is probably over one million tons ore concentrate. In the North are several large, partly explored, deposits, with iron content averaging 28–35% and over. The Sydvaranger deposits, which supply most of the present production are associated with Archean quartz banded rocks. Iron is also found in mica schist-marble rock series in Troms. In addition to these sedimentary deposits, there are several small magmatic deposits in the arctic area. The country has large quantities of low grade, potential iron reserves. The ores are summarized according to location, known and estimated reserves, and other mineral content.

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54113. POULSEN, CHRISTIAN, 1896– . Contribution to the palaeontology of the Lower Cambrian Wulff River formation. København, C. A.

Reitzel, 1958. 24 p. plates, maps. (Meddelelser om Grønland, bd. 162, nr. 2.) 19 refs.

Describes specimens of a brachiopod, a cephalopod and 15 trilobite species, mostly new, collected by Dr. J. C. Troelsen during visits to Inglefield Land, northwest Greenland, in 1939 and 1941. Dimensions of the fossils, locality where found, distinguishing characteristics and photographs are included. Occurrence of several fossils in this formation confirms the view that it is a probable stratigraphic equivalent of the Ella Ø formation of East Greenland.

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POULSEN, ERIK MELLENTIN, 1900– , *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

POULSEN, ERIK MELLENTIN, 1900– , *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

54114. POUTVAARA, MATTI, 1909– . Lappi: Lappland; Keskiyön auringon maa, the Land of the Midnight Sun. Porvoo, W. Söderström, 1953. 192 p. of plates, fold. map in pocket. Text in Finnish, Swedish, English, German.

Photographs of landscapes, people and their activities the year round in northern Finland. Regional aspects, resources, and occupations, indigenous culture and tourist attractions are stressed.

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54115. POUTVAARA, MATTI, 1909– . Suomi: Finland. Helsinki, Porvoo, W. Söderström, 1952. 296 p. of plates, fold map. Text in Finnish, Swedish, German, English, French.

Photographs of landscapes, people and their activities in various sections of the country, many of the far North.

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POVZNER, A. D., *see* Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet. Mezhdunarodnyĭ geofizicheskiĭ god. Informat͡sionnyĭ bŭlleten' . . . *1957.* No. 49182.

54116. POWELL, DONALD E., *and* A. E. PETERSON. Experimental fishing to determine distribution of salmon in the North Pacific. Washington, D.C., July 1957. 30 p. illus., tables, map. (U.S. Fish and Wildlife Service. Special scientific reports, fisheries, no. 205.)

Account of investigation conducted during the summer and early fall of 1955 by three fishing vessels. Gill net operations in the Gulf of Alaska and south of the Aleutians and the Alaska Peninsula showed a wide distribution of North American species of salmon and of steelhead trout at that time of the year. Catch and size analyses of these species are presented graphically. South of about 47° N. albacore was found to replace salmon in the catches.

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54117. POWER, GEOFFREY. The evolution of the freshwater races of the Atlantic salmon, *Salmo salar* L. in eastern North America. (Arctic, 1958. v. 11, no. 2, p. 86–92, illus., tables.) 9 refs.

Information is presented on distribution of landlocked salmon, including the Hamilton, Upper George, Koksoak and Larch Rivers, Knob and other lakes in Quebec-Labrador. Size, weight and growth rate are given on the Ouananiche (landlocked) salmon of Lakes Astray and Aigneau. Theories on the origin and distribution of Atlantic freshwater salmon are discussed; effects of climate and isolation are considered.

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54118. POWER, GEOFFREY. Salmon investigations on the Koksoak River, 1957. (Arctic, 1958. v. 11, no. 1, p. 63–64.)

Notes salmon population studies on this river in northern Quebec and its two major tributaries, the Larch, where most of the fish spawn, and the Kaniapiskau. The Eskimo salmon fishery at Fort Chimo is discussed and improvement suggested in view of the need of salmon for dog food. Physiological studies on the speckled trout and the Atlantic salmon were continued: measurements of basal oxygen consumption under different temperature regimes, etc.

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POWERS, E. L., *see* Webb, R. B., *and others.* A study . . . temperature dependence of radiation sensitivity . . . spores . . . *1958.* No. 55958.

POWERS, HOWARD ADORNO, 1904– , *see* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

54119. POZDNIAKOV, IU. F. Nekotorye dannye po biologii i promyslu mojvy Barent͡seva mori͡a. (*In:* Akade-

miâ nauk SSSR. Murmanskaâ biologicheskaâ stanciâ. Zakonomernosti skopleniĭ . . . 1958. p. 150–75, illus., tables, maps.) 37 refs. Text in Russian. ***Title tr.:*** Some data on the biology and fishery of capelin in the Barents Sea.

Study, based on extensive material, deals with taxonomic position and geographic distribution; spawning migration, oviposition and fry; temperature and salinity during season of spawning and development of fry; length composition of catches (1954, 1955); weight composition; food; fisheries on the Murman coast (1953–1955); catches according to months and areas. ***Copy seen:*** DLC.

54120. POZDNÎAKOV, ÎU. F. O plodovitosti molvy Barenceva morâ. (Akademiâ nauk SSSR. Doklady, 1957. t. 112, no. 4, p. 777–78, illus. tables.) 2 refs. Text in Russian. ***Title tr.:*** On the fertility of capelin in the Barents Sea.

Contains information on size and weight of body and ovaries; numbers of eggs, relation between body weight and number of eggs, etc. Translation by L. Birkett, Fisheries Research Laboratory, Lowestoft, Eng., available at DLC.

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POZDNÎAKOV, ÎU. F., *see also* Mironova, N. V., *and others.* Itogi promysla sel'di . . . *1957.* No. 53323.

54121. POZDNÎAKOV, L. K. Daurskiĭ mozhzhevel'nik v ûzhnoĭ ÎAkutii. (Botanicheskiĭ zhurnal, June 1958. t. 43, no. 6, p. 860–61, diagr.) Ref. Text in Russian. ***Title tr.:*** *Juniperus dahurica* in southern Yakutia.

Presents distributional data of this shrub on the left bank of the Lena River (347 km. north of Yakutsk) and in the valley of the Olekma River, with a list of the associated vascular plants (*Agropyrum jacutorum, Thymus serpyllum* and 13 others) and ecological notes.

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54122. POZDNÎAKOV, L. K. Lesa ÎAkutii. (Lesnoe khozîâĭstvo, Mar. 1958. god 11, no. 3, p. 34–39, illus., table.) Text in Russian. ***Title tr.:*** Forests of Yakutia.

Natural conditions peculiar to Yakut A.S.S.R. are described: the severe cold, permafrost conditions, and forest distribution. Statistical data are given on growth, cutting and destruction of various tree species for the different zones. Larch predominates (88%) and grows above the Arctic Circle along the Yana River as far north as the Khatanga (72°30′ N.), and on mountain slopes up to 1200 m. The height, diameter and volume of the larch trees are tabulated for different ages (40–200 years) and river basins such as Yana, Vitim and Olekma. Fire is the major cause of forest destruction affecting about one-fifth of the forest areas. Fire prevention and reforestation of burned areas are considered the most urgent problems in future planning. Distribution of forests in various localities of the Yakut Republic is described in detail. ***Copy seen:*** DLC.

54123. POZDNÎAKOVA, Z. V. Izuchenie i ispol'zovanie prirodnykh bogatstv Sibiri; vyezdnaâ sessiâ Otdeleniâ biologicheskikh nauk. (Akademiâ nauk SSSR. Vestnik, Apr. 1957. god 27, no. 4, p. 120–23.) Text in Russian. ***Title tr.:*** Study and development of the natural resources of Siberia; itinerant Session of the Biological Sciences Section.

Summary of papers delivered at meetings Nov. 20–24, 1956, called jointly by the Section and the West-Siberian Branch of the Academy. The results on biological research on the West Siberian vegetation cover conducted over a twelve-year period were presented by A. I. Cherepanov and K. A. Sobolevskiĭ. The Forest Institute Laboratory has prepared a monographic description of forests and their topology, stressing their role as a protective zone for river water resources. Combined studies of soils, vegetation, forests and hydroflora were reported especially for the Novosibirsk region of future water resource development. A paper on taiga forest conservation was presented by I. S. Melekhov, noting the timber and fur resources. Taiga forest problems should be studied by scientific and educational organizations cooperating in a common program. Economic-biological investigations carried on by Yakut Branch in the Vilyuy basin and by East-Siberian Branch in Podkamennaya Tunguska basin are noted in a paper delivered by V. B. Sochava.

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POZHARITSKAIÂ, L. K., *see* Ginzburg, A. I., *and others.* Geologiâ mestorozhdeniĭ redkikh èlementov . . . *1958.* No. 51198.

54124. PRAKHOV, N. N. Osnovyne èlementy rastitel'nosti Verkhoîanskogo khrebta. (Akademiâ nauk SSSR. ÎAkutskiĭ filial, *Yakutsk.* Institut biologii.

Trudy, 1957. vyp. 3, p. 39–67, tables, map.) 8 refs. Text in Russian. ***Title tr.:*** Main elements of the vegetation of the Verkhoyansk Ridge.

A study based on materials collected during a summer and winter expedition in 1935. Depending on topography and humidity, three habitats are distinguished: valleys, mountain slopes, alpine zone. The plant associations making up each of the three habitats are described and a sample with a qualitative and quantitative breakdown presented for most. In addition, vertical, zonation, horizontal zones in a south to north direction are distinguished and described. The plants collected, in all 374 species, are listed systematically, Latin and Russian names. ***Copy seen:*** DLC.

54125. PRAT, HENRI. Analyse microcalorimétrique de l'influence du Largactil, du Phénergan et du Nembutal sur la thermogenèse du souriceau. (Revue canadienne de biologie, Feb. 1957. v. 15, no. 4, p. 336–70, illus., tables) 34 refs. Text in French. Summary in English. ***Title tr.:*** Micro-calorimetric analysis on the influence of Largactil, Phenergan and Nembutal on thermogenesis of young mice.

Account of experiments performed with the Calvet micro-calorimeter. Two phenomena were observed: (*a*) regularization of thermic flux (indicated by leveling of thermograms) produced by Largactil and/or Nembutal; (*b*) depression of heat flux, produced by Nembutal alone or in association with Largactil. This depression reaches 50 or even 70%. Largactil was also found to be effective on other living material, e.g. germinating wheat, lowering its thermogenesis by 75%. ***Copy seen:*** DNLM.

54126. PRATT, GERALD H. The treatment of frostbite. (G P, Jan. 1953. v. 7, no. 1, p. 34–42, illus.)

Contains information on frostbite in war, especially in World War II, and on trench foot, immersion foot, etc.; symptoms of frostbite proper; pathogenesis of cold injury; prophylaxis, especially in armed forces; first aid, therapy, including rapid warming and "slow cooling" methods; anticoagulant therapy and other methods; surgery, early and final. Illus. by excellent photographs, some in color. ***Copy seen:*** DNLM.

54127. PRATT, HARRY DAVIS, 1915– . Taxonomic studies of nearctic Cryptini; Ichneumonidae, Hymenoptera. (American midland naturalist, Nov. 1945. v. 34, no. 3, p. 549–661, 12 plates.) 273 refs. *Pub. also as:* paper no. 2233 Scientific Journal ser., Minnesota Agricultural Experiment Station, St. Paul.

Contains a generic key to the tribe Cryptini, a key to species of genus *Cryptus*, descriptions of the new genus *Nasutocryptus* and 46 species, of which 32 are new. Brief account is given of the biology of these ichneumon flies. Some occur in the North: *C. arcticus* (Greenland and Alaska), *C. altonii* (Alaska, Northwest Territories, Labrador), *C. robustus* (Alaska, Yukon Territory), and *C. albitarsis coloradensis* (Alaska).

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PRAWL, MARY LOU, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* no. 49210.

54128. *PRECAMBRIAN.* Alberta (Precambrian, Feb. 1957. v. 30, no. 2, p. 12–16, 2 illus.)

Includes information on mines, mining and exploration in Northwest Territories and Yukon, where 1956 mineral production was valued at $22,949,100, and $15,678,900. Uranium property at Marian River north of Yellowknife, and nickel mines at Rankin Inlet on Hudson Bay come into production in 1957. Yukon explorations, etc. include: asbestos on Cassiar Creek, potential lead-zinc deposits near Whitehorse region; Kluane area copper-nickel deposit; oil drilling on Peel River. Summer 1957 plans are indicated: airborne geological reconnaissance of 100,000 sq. mi. in the upper Mackenzie region; Geological Survey of Canada work in Yukon mineral areas, and preparations for "Operation Pelly," a 1958 airborne reconnaissance in Pelly River region. ***Copy seen:*** DGS.

54129. *PRECAMBRIAN.* Geological Survey places 72 parties in the field. (Precambrian, June 1957. v. 30, no. 6, p. 28–30.)

Canada's 1957 field program includes: "Operation Mackenzie," reconnaissance mapping by helicopters of 100,000 sq. mi. of oil and gas territory in the upper Mackenzie basin; "Operation Fort George," helicopter mapping of 35,000–40,000 sq. mi. in northern Quebec, 52°–56° N. and east from the Hudson - James Bay coast to 68° W. (to be continued in 1958). Along the Manitoba-Keewatin boundary, 59°–60° N. 100°–102° W., aeromagnetic

mapping of approx. 28,000 sq. mi. is to complete a 1956 survey. In the Canadian Arctic Islands, four parties are to carry out exploratory mapping to within 600 mi. of the Pole. ***Copy seen:*** DGS.

54130. *PRECAMBRIAN.* Last spike. (Precambrian, Oct. 1957. v. 30, no. 10, p. 8–10, 6 illus.)

Railroad spur (22-mi.) from Sipiwesk on the Hudson Bay Railway to International Nickel Company's new mining town of Thompson in the Mystery-Moak Lakes area of northern Manitoba (55°51′ N. 97°43′ W.) was completed in Oct. 1957; two shafts had been sunk at the mine and temporary quarters built for 800 workers. Smelter, concentrator and refinery construction, also housing for approx. 8,000 people (2,000 workers) are to begin. Nickel production is to start in 1960, and reach 75,000,000 pounds annually. ***Copy seen:*** DGS.

54131. *PRECAMBRIAN.* Manitoba. (Precambrian, Feb. 1957. v. 30, no. 2, p. 28–32, 2 illus.)

International Nickel Co. of New York is to develop low grade nickel deposits in the Moak-Mystery Lakes area: Hudson Bay Mining and Smelting Co. plans to develop three orebodies in the Snow-Herb Lake region; drilling on copper-nickel deposits at Herb Lake area is underway. ***Copy seen:*** DGS.

54132. *PRECAMBRIAN.* Oceanic Iron Ore. (Precambrian, Oct. 1957. v. 30, no 10, p. 62–65, port.)

Notes claims of the Oceanic Iron Ore of Canada Ltd. west of Ungava Bay and south of Payne River in northern Quebec; also on southwest Baffin. The Ungava properties, explored in 1955–1957, have estimated output of 4,000,000 tons; the Morgan Range and Payne Range orebodies are described. Financing, construction of mine, processing plant, townsite and airport are considered, also possible trans-shipment port in Newfoundland or Greenland, railroad to Payne River, ore markets, and treatment of ore. Company came under direction of Rio Tinto Mining Co. of Canada in May 1956. ***Copy seen:*** DGS.

54133. *PRECAMBRIAN.* A review of Department of Mines and Technical Surveys. (Precambrian, Apr. 1958. v. 31, no. 4, Mining in Canada, p. 23–64, illus., text maps.)

Development and functions of this federal government department are reviewed. Separate articles deal with work of the Survey and Mapping, Mines, and Geographical Branches, the Geological Survey, the Mineral Resources and Explosives Divisions, and relevant activities of the Dominion Observatories. Work underway or planned in the far North is noted throughout, including Operations Mackenzie, Fort George, Pelly, Coppermine, etc.

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54134. *PRECAMBRIAN.* 30,000 tons of supplies for Inco. (Precambrian, Mar. 1957. v. 30, no. 3, p. 24, illus.)

Notes transport of heavy equipment and building supplies, etc., by 24 diesel-powered sled trains from the Hudson Bay Railway at Thicket Portage 35 mi. to the International Nickel Co. project in the Mystery-Moak Lakes region (of northern Manitoba). Plans call for two mines, construction of concentrator, smelter, refinery, transport facilities, including spur to the railway, and townsite installations. ***Copy seen:*** DGS.

54135. PREOBRAZHENSKIĬ, A. I. Mineral'nye bogatstva Sovetskogo Soĭuza. (Geografiiâ v shkole, Sept.–Oct. 1958. god 21, no. 5, p. 6–15, tables, text maps.) 3 refs. Text in Russian. ***Title tr.:*** Mineral resources of the Soviet Union.

Survey of the extent and distribution of the main industrial mineral deposits: petroleum, coal, iron, lead, zinc, nickel, tin, etc. The principal coal (16) and iron ore (37) deposits are given with data on their estimated resources (p. 10, 13), among them Olenegorsk, Afrikanda and Eno-Kovdorsk iron ore deposits in Kola Peninsula, and the Tikhonskoye, Zyryanskoye, Omolonskoye and Anadyrskoye coal deposits in Yakutia and Magadan Province. ***Copy seen:*** DLC.

54136. PREOBRAZHENSKIĬ, A. I. Novye zheleznye dorogi v SSSR. (Geografiiâ v shkole, July–Aug. 1957. god 20, no. 4, p. 14–21, fold. map.) Text in Russian. ***Title tr.:*** New railroads in the U.S.S.R.

In 1956, the U.S.S.R. had 121,000 km. of railroads as against 72,000 in 1914; and another 82,000 km. belonging to industrial plants. Freight carried in 1956 amounted to 1,079 billion tn/km. Some 6,500 km. of new railroads are planned for the sixth five-year period. The Tayshet - Ust'-Kut line through Bratsk and the Korshunovskoye ore

deposits, and the Konosha-Kotlas-Pechora-Vorkuta line, recently extended from Seyda (67°05′ N. 63°05′ E.) to Labytnangi on the Ob' River opposite Salekhard, are noted.

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PREST, VICTOR KENT, 1912– , *see* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

PREUSS, E. G., *see* Heidelmann, G., *and others.* Zur Pathogenese . . . der Kälteurtikaria. *1957.* No. 51651.

54137. PREZIOSI, P., *and others.* Sulla possibilità di prevenire mediante un' associazione neuroplegica le modificazioni cortico-surrenali da esposizione al freddo. (Archives internationales de pharmacodynamie et de thérapie, Oct. 1957. t. 112, no. 1–2, p. 108–121, illus. tables.) 17 refs. Text in Italian. Summary in English. *Other authors:* B. Loscalzo, N. Cocchia *and* R. Cuoculo. ***Title tr.:*** Possibility of preventing adrenocortical changes due to cold exposure, with a neuroplegic combination.

Rats given neuroplegics in doses equivalent to 25 × of those used in human therapy and exposed to low temperature, showed a functional inhibition of the adrenal-pituitary system. This inhibition is linked with a lowering of metabolic and cellular processes which ultimately are responsible for the stress reaction. ***Copy seen:*** DNLM.

54138. PRIBALTIĬSKAIÂ ORNITOLOGICHESKAIÂ KONFERENTSIIÂ. *2d, Tallin,* 1954. Trudy. Moskva, Izd-vo Akademii nauk SSSR, 1957. 427 p. illus. tables, maps (Institut zoologii i botaniki Akademii nauk Ėstonskoĭ SSR.) Text in Russian. ***Title, etc. tr.:*** Baltic Region Ornithological Conference 1954. Proceedings. S. Kh. Onno, head of the editorial board, Ė. V. Kumari, responsible editor.

Contains text of 37 of the 39 lectures given at this conference, May 15–21, 1954, whose main topic was bird migration, especially in the Baltic and White Sea areas. Several of the papers have direct or indirect bearing on the Arctic, and are abstracted in this Bibliography under the authors' names, viz. (titles translated):

KUMARI, Ė. V. The theory of flight routes and migrations on a broad front.

TAMANTSEVA, L. S., *and* T. P. SHEVAREVA. The biology of the pintail duck and the mallard; banding materials.

MIKHEEV, O. V. Regularities in distribution of wintering places of northern and southern bird populations and species.

USPENSKIĬ, S. M. Application of mass banding, marking and statistics of sea colony-forming birds while studying their ecology.

SEGAL', A. N. Significance of environmental light conditions for the level and periodic diurnal changes in activity and gas exchange of birds.

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54139. PRICE, CECELIA SELMER. Thunder in the mountains. (Alaska sportsman, Apr. 1958. v. 24, no. 4, p. 22–25, 33–35, illus.)

Reviews construction by Michael J. Heney of the 110 mi. railroad from Skagway in Southeast Alaska to Whitehorse, Yukon Territory in 1898–99, completed in 1900 by the bridge across Deadhorse Gulch. Part of the line is laid in roadbeds along the mountain side; it reaches a maximum of 2,880 ft. above sea level at White Pass. ***Copy seen:*** DI.

PRICE, HENRY L., *see* Zaimis, E., *and others.* Effects of lowered muscle temperature . . . man. *1958.* No. 56150.

PRINTZ, AXEL, *see* Damm, A., *and* A. Printz. Friluftsliv. *1947.* No. 50428.

54140. PRINTZ, HENRIK, 1888– . Norges forekomster av drivtang og drivtare. Oslo, 1957. 50 p. illus. maps. (Norsk institutt for tang- og tareforskning. Rapport no. 18.) Text in Norwegian. Summary in English. ***Title tr.:*** Norwegian occurrences of driftweed.

An extensive list, with maps, of places in southern and arctic Norway where seaweeds are cast ashore in great quantities. Most of them especially in the North consist of *Laminaria hyperborea,* Gunn. Seasons of maximal appearances of driftweed (spring and fall-winter) and causative factors, past uses of seaweeds for extraction of chemicals and for manure and possible future uses are also discussed.

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54141. *PRIRODA.* Nakhodki mamontov; obzor postupivshikh v redaktsiiû materialov. (Priroda, May 1957. god 46, no. 5, p. 104–106, 3 illus.) Text in Russian. ***Title tr.:*** Finds of mammoth remains; a review of materials received by the Editorial Board.

Includes data on a "graveyard of mammoths" found by N. F. Grigor'ev in 1952, on the left bank of the Bërëlëkh River, a left tributary of the Indigirka in Yakutia, where a great quantity of bones of dwarf mammoths (*Elephas primigenius minor*) and of a very large mammoth (*E. p. sibiricus*) was found. Another find of mammoth bones was made by A. M. Kropachev on the bank of the Taekva River, in the Cape Baranov region on the coast of the East Siberian Sea. ***Copy seen:*** DLC.

54142. *PRIRODA.* Neobychnye polîarnye siîaniîa; obzor postupivshikh v redaktsiîu zametok i soobshcheniî. (Priroda, July 1957. god 46, no. 7, p. 79–80.) Text in Russian. ***Title tr.:*** Unusual auroral displays: a review of notes and communications received by the Editorial Board.

In 1956 auroras were observed in southern and eastern sections of the U.S.S.R where such displays are rare. Letters to the journal from Rostov, Novosibirsk, Tomsk and Kazakhstan are summarized. ***Copy seen:*** DLC.

54143. *PRIRODA.* Neobychnye polîarnye siîaniîa v 1957 godu. (Priroda, Apr. 1958. god 47, no. 4, p. 81–83.) Ref. Text in Russian. ***Title tr.:*** Unusual auroral displays in 1957.

Descriptions of the more important polar lights and the concomitant phenomena of this aurora-rich year, with emphasis on the auroras of Sept. 5–6, and 29–30, as reported and described from all parts of the U.S.S.R.

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54144. *PRIRODA.* Polîarnoe siîanie 21–22 îanvarîa 1957 goda. (Priroda, Dec. 1957. god 46, no. 12, p. 83–85, illus.) Text in Russian. ***Title tr.:*** Aurora borealis of January 21–22, 1957.

Contains a summary of notes received by the editorial board of the journal on this phenomenon observed not only in North but even in southern regions of the U.S.S.R. The unusual beauty (red in color) and intensity (magnetic disturbances and breaks in radio communications) of this aurora, as observed at 42 meteorological stations are noted.

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54145. PRIVITERA, C. A., *and others.* Effects of freezing and storage on oxydative phosphorylation of mitochondria. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 369–70.) *Other authors:* D. Greiff, D. R. Strength, M. Anglin, *and* H. Pinkerton.

Report on experiments with mitochondrial suspensions of rat livers frozen rapidly or slowly to temperatures ranging from −20° to −192° C. At all temperatures except −20° oxydative phosphorylation could be demonstrated. Maximal retention of this activity was observed in suspensions frozen slowly to −192° C. and stored at the same temperature. ***Copy seen:*** DLC.

54146. PRIVITERA, C. A., *and others.* Oxydative phosphorylation by mitochondrial suspensions after freezing and storage at low temperatures. (Journal of biological chemistry, Aug. 1958. v. 233, no. 2, p. 524–27, tables.) 38 refs. *Other authors:* D. Greiff, D. R. Strength, M. Anglin *and* H. Pinkerton.

Oxydative phosphorylation persisted in rat liver mitochondria after freezing and storage at various temperatures down to −192° C. and repeated freezing-thawing. Slow freezing preserved phosphorylation at higher levels than rapid freezing. Suspensions of mitochondria frozen slowly to −192° and stored at this temperature for 120 hrs. showed no change in phosphorylative capacities.

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PROBLEMY SEVERA, *see* Akademiîa nauk SSSR. Komissiîa po problemam Severa. Problemy Severa. *1958.* No. 49181.

PROKAEV, V. I., *see* Gorchakovskiî, P. L., *and* V. I. Prokaev. Ob organizatsii Ural'skogo filiala Geograficheskogo obshchestva SSSR. *1957.* No. 51279.

PROKOF'EV, GEORGIÎ NIKOLAEVICH, 1897–1942, *see* Tereshchenko, N. M. Materialy . . . po îazyku nentsev. *1956.* No. 55383.

54147. PROKOF'EV, V. Bogata Kol'skaîa zemlîa. (Sovetskiî morîak, July 1958. god 18, no. 14, p. 2–3, illus., port.) Text in Russian. ***Title tr.:*** Rich Kola land.

Natural resources of Kola Peninsula and their development are cited by the secretary of the Murmansk party organization on the 25th anniversary of the Northern Fleet based on Kola Peninsula: fisheries with 5 million cwt. output in 1957 (8.8 million cwt. planned for 1965); apatite ores in Khibiny and activities of the "Apatit" combine; nickel ores and activities of the "Severonikel'" combine

in Monchegorsk, and "Pechenganikel'" in the Pechenga District; aluminum plant in Kandalaksha, iron ores in Olenegorsk, rich cyanite deposits in eastern part of peninsula, etc. Cooperation of the peninsula administration with the Northern Fleet is noted. ***Copy seen:*** DLC.

54148. PROKOF'EV, V. V usloviiakh zapoliar'ia. (Arkhitektura SSSR, 1958, no. 7, p. 3–6, illus.) Text in Russian. ***Title tr.:*** Construction above the Arctic Cirele.

Construction of new towns and reconstruction are briefly discussed in connection with mining and industrial development of the Murmansk region (Severomorskoye, Polyarnyy, Kirovsk, Monchegorsk, Olenegorsk, and others). Shortage of local building materials necessitated construction of new plants for mass production of silicate bricks and blocks, "termozit" and slag-cement blocks. High quality cement was prepared from nephelite waste and diatomite from large local reserves. The long winter season necessitated use of prefabricated reinforced concrete panels, flooring, steps, window and door frames, etc. Construction of roads, utility systems (water, sewer and steam supplies) and public buildings are briefly discussed. ***Copy seen:*** DLC.

54149. PROKOPOVICH, A. A., *and* **I. G. BOL'SHAKOV.** Obogashchenie zhelezistykh kvartsitov na Olenegorskoĭ fabrike. (Gornyĭ zhurnal, May 1958, no. 5, p. 53–55, tables.) 3 refs. Text in Russian. ***Title tr.:*** Concentration of ferrous quartzite at the Olenegorsk plant.

Characteristics of the ore and production processes are described from technological and economic viewpoints, with tabulated data. The plant at Olen'ya (new name for Olenegorsk) in the Khibiny region of Kola Peninsula started operation in 1955 and its annual ore production was 6.6 million tons; that of concentrates 2.8 million tons. Average iron content of the ferrous quartzites was 30.4%. The plant has three main divisions: crushing, concentrating and dehydrating. All intermediate processes are shown schematically on a flow-diagram. ***Copy seen:*** DLC.

54150. PRONIN, A. A. Uspekhi izucheniia geologii i poleznykh iskopaemykh Urala za 40 let i zadachi dal'neĭshikh issledovaniĭ. (Akademiia nauk SSSR. Izvestiia vostochnykh filialov, 1957. no. 10, p. 39–51.) Text in Russian. ***Title tr.:*** Progress of the investigation of the geology and industrial minerals of the Ural during 40 years and tasks of further explorations.

Presents a brief survey of work by Soviet scientists and scientific organizations in study of the stratigraphy, paleontology, tectonics, geomorphology, hydrogeology and in mineral prospecting. Though iron ores remain the basic wealth of the Ural, it has become one of the richest sources of non-ferrous and rare metals and of many other, non-metallic minerals: asbestos, magnetite, talc, graphite, marble, corundum, mica, refractory clays, gypsum, kaolin, dolomite, glauconite, semi-precious stones, etc. Investigations of the Northern Ural by S. G. Boch, V. A. Varsanof'eva, and many others are noted; the importance of the Pechora coal basin for development of the Ural is stressed. Further objectives are outlined in each field of geology and mineralogy. ***Copy seen:*** DLC.

54151. PROSHKIN, A. V sovetskoĭ Arktike. (Fizkul'tura i sport, 1957. god 27, no. 11, p. 21, illus.) Text in Russian. ***Title tr.:*** In the Soviet Arctic.

Describes the sports activities (soccer, volley ball, etc.) at the polar station and settlement on Dikson Island. The growing importance of its harbor due to the increased trade turnover on the Northern Sea Route is noted. ***Copy seen:*** DLC.

54152. PROTASOV, IVAN. V lesakh Chukotki; iz putevykh zapisok. (Na severe dal'nem, 1955, vyp. 2, p. 138–47.) Text in Russian. ***Title tr.:*** In Chukotka forests; from a traveler's notes.

Sketches work of lumbermen cutting, rafting and floating timber from the banks of the middle Anadyr' down to Markovo. ***Copy seen:*** DLC.

54153. PROTOD'IAKONOV, VASILIĬ ANDREEVICH (V. KULANTAĬ), 1912– . Okhotnik zapoliar'ia. (Druzhba narodov, 1954, no. 5, p. 209–218.) Text in Russian. ***Title tr.:*** Polar hunter.

Short-story describing fishing and trapping (arctic fox) in a kolkhoz on the Anabar River estuary. Translated from Yakut by Emil' Bekker. ***Copy seen:*** DLC.

54154. PROTOD'IAKONOV, VASILIĬ ANDREEVICH (V. KULANTAĬ), 1912– . Zolotoe zerno. (Druzhba na-

rodov, 1951, no. 5, p. 4–41.) Text in Russian. ***Title tr.:*** Golden grain.

A four-act play on agricultural achievements in a large Yakut collective farm on the Lena River. Translated from Yakut by G. Aldanov.

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PROTOD'IÂKONOV, VASILIĬ ANDREEVICH (V. KULANTAĬ), 1912– , *see also* P'esy iâkutskikh dramaturgov. *1957.* No. 53949.

54155. PROTOPOPOV, I. D. Neskol'ko dannykh o gidrologicheskom rezhime ust'iâ r. Mezeni. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniiâ moreĭ SSSR, 1932. vyp. 16, p. 87–102, illus. tables, map.) 2 refs. Text in Russian. Summary in German. ***Title tr.:*** Some data on the hydrological regime of the Mezen' estuary.

Account of investigations conducted in 1928–1930 where this river flows into Mezenskiy Zaliv of the Barents Sea (approx. 66° N. 44° E.) east of the White Sea narrows. Tides and tidal currents were found to be considerable when compared with those of other northern rivers of the region. Temperature and salinity, transparency and color of the water were studied only during the summer; except for temperature they showed great fluctuations, depending on the tides. ***Copy seen:*** DLC.

54156. PRUDHAM, GEORGE. Northern horizons, 1957. (Western miner and oil review, Feb. 1957. v. 30, no. 2, p. 34–36.)

Minister of Mines and Technical Surveys for Canada reviews recent projects of his Department and outlines those scheduled for 1957–58, with emphasis on geological surveys (Keewatin District, Baker Lake region, Pelly River area, Mackenzie District, Queen Elizabeth Islands, etc.). Use of aircraft, helicopters, and expected discoveries of minerals, gas, and oil are mentioned. Topographic surveys are also noted: in Yukon mapping, the northern part is near completion; shoran surveys are concentrated in the Eastern Arctic and the Arctic Islands. ***Copy seen:*** DI.

54157. PRUITT, WILLIAM OBADIAH, 1922– . A high altitude weasel. (Murrelet, Sept.–Dec. 1957. v. 38, no. 3, p. 36.)

Contains record of a frozen and mummified carcass of *Mustela erminea,* found at 15,000 ft. on Mt. McKinley June 20, 1956, by Mr. Randall, member of the Alaskan Alpine Club Expedition. The specimen falls within the range of measurements for *M. e. arctica* and died presumably of starvation.

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54158. PRUITT, WILLIAM OBADIAH, 1922– . Observations on the bioclimate of some taiga mammals. (Arctic, 1957. v. 10, no. 3, p. 131–38, graphs, table.) 9 refs.

Reports a study at Fairbanks, Alaska, 1954–56, on the thermal environment of the moss-covered forest floor, the habitat mainly of red-backed voles, shrews, weasels, and red squirrels. Thermistors recorded temperatures at the surface, 6 ft. above, and 3, 6, and 9 in. below. Findings during the snow-free and snow periods are discussed, including stable temperature comparatively warm in winter and cool in summer. Effects of various snow cover thickness on the range and fluctuations of subnivean temperatures are noted. Contrast between the under- and above-snow environments causes the mammals to abandon surface activity when the cover reaches 15–20 cm. depth.

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54159. PRUITT, WILLIAM OBADIAH, 1922– . *Qali,* a taiga snow formation of ecological importance. (Ecology, Jan. 1958. v. 39, no. 1, p. 169–72, illus.) 5 refs.

A discussion of the ecological importance of *qali,* a Kobuk valley Eskimo word for snow that collects on the trees. Its effect on trees and on movements and vertical migrations of some birds and mammals is discussed. A method for standardizing *qali* observations is also described. ***Copy seen:*** DLC.

54160. PRUITT, WILLIAM OBADIAH, 1922– . Tooth reduction in a tundra shrew. (Journal of mammalogy, Feb. 1957. v. 38, no. 1, p. 121.)

Notes and morphometric data on a skull of *Sorex tundrensis* from Alaska, with the fourth unicuspid (P3/) apparently missing. Several reports on dental anomalies in shrews are mentioned.

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54161. PRUITT, WILLIAM OBADIAH, 1922– , *and* **C. V. LUCIER.** Winter activity of red squirrels in interior Alaska. (Journal of mammalogy, Aug. 1958. v. 39, no. 3, p. 443–44, illus.)

Report on almost daily observations in a white spruce forest near Fairbanks. The squirrels were virtually never active above snow when air temperature fell below −25° F. Similarly they were not active when differences between air and surface-moss temperature was more than 20° F. or more than 30° between air and moss, 9 in. below the surface.

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54162. PRYCHODKO, W. Effect of aggregation of laboratory mice, *Mus musculus*, on food intake at different temperatures. (Ecology, July 1958. v. 39, no. 3, p. 500–503, illus., tables.) 12 refs.

Account of experiment with 1, 2 and 5 animals per cage. Food consumption per gram of body weight varied inversely with the number of animals per group. At lowered temperatures there was an increasing divergence in amount of food consumed by the three groups. Crowding was thus found to represent an ecological factor at room and at low temperature. ***Copy seen:*** DLC.

54163. PRYER, R. W. Frost action and railroad maintenance in the Labrador Peninsula. (Roads and engineering construction, Dec. 1957. v. 95, no. 12, p. 74, +, map, graphs.)

Studies of frost penetration beneath the railroad subgrade were undertaken at points along the Sept Îles - Schefferville railway, considered typical of terrain and climatic conditions for most of the southern part of the Labrador-Ungava Plateau. Data on frost penetration as determined from Nov.-July ground temperature records are graphed. Observation procedures are described and results are summarized. A practical means for reducing effects of frost heaving is indicated.

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PSHENNIKOV, E. M., *see* Akademiîa nauk SSSR. Îakutskiĭ filial. Za sovetskuû vlast' . . . *1957*. No. 49170.

54164. PSYCHOYOS, A. Action de la lumière sur la thyroide du rat. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 2, p. 306–309, tables.) 19 refs. Text in French. ***Title tr.:*** Action of light upon the thyroid of the rat.

Account of experiments with rats kept under normal conditions, in darkness or in continuous light. It appears that light initially stimulates thyroid activity, but prolonged illumination produced functional fatigue. ***Copy seen:*** DNLM.

54165. PUCHKOV, S. V., *and others.* Novoe sil'noe zemletrîasenie v Vostochnoĭ Sibiri. (Akademiîa nauk SSSR. Sibirskoe otdelenie. Izvestiîa, 1958, no. 3, p. 42–51, illus. maps.) Text in Russian. *Other authors:* V. P. Solonenko, A. A. Treskov, *and* N. A. Florensov. ***Title tr.:*** A new heavy earthquake in East Siberia.

On June 27, 1957, an earthquake of grade 10 (intensity *M* 7½–7¾.) occurred in the Vitim River basin, with epicenter at 56.1° N. 116.7° E., a region hitherto regarded as non-seismic. This was the heaviest earthquake in Eastern Siberia in the last 250 years; it was felt over a vast area, including parts of Yakutia. A description is given, based on records of 29 seismic stations and study of the devastation; photographs and text maps indicate its force and extent.

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PUGACHEV, N., *see* Voskoboĭnikov, M. G. Chukotka . . . *1957*. No. 55891.

PUGH, EUGENE V., *see* Scott, R. F. Resource planning . . . *1957*. No. 54647.

54166. PUGH, L. G. C. E. Physiological expedition to the Antarctic. (Nature, *London*, Oct. 1957. v. 180, no. 4588, p. 683.)

Contains information on an Anglo-American party about to leave California in November for a study of human acclimatization to cold. Route, methods and apparatus to be used, participants, problems to be studied (effect of cold on blood lipids and stress effects of cold, etc.) are discussed. The study is part of Operation Deep Freeze II of the IGY.

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54167. PUK, P. S. O gidrogeologii i geotermike ûgo-zapadnoĭ chasti Gydanskogo poluostrova. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biûlleten', 1958. vyp. 7, p. 38–42, table, diagrs.) Text in Russian. ***Title tr.:*** On hydrogeology and geothermy in the southwestern part of the Gydan Peninsula.

Reports on a 420 m. deep core drilled in 1957 at Anti Payuta by the Institute of Geology of the Arctic. The cross-section of this bore is briefly reviewed. Hydrogeologic and geothermic investigations were made only in Quaternary deposits, which are 145 m. deep. Chemical composition of water at 104–118 m. depth is presented in table. Geothermal

measurements were made twice down to 106 m. and the results are diagrammed.
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54168. PUKHOV, I. V. Platon Oĭunskiĭ, 1893–1939. (Novyĭ mir, Dec. 1957. god 33, no. 12, p. 97–107.) Text in Russian.

Biography of the Yakut poet and prominent communist leader, Platon Alekseevich Oĭunskiĭ. His political life and literary works are reviewed and eight poems given in Russian translation.
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PUKHOV, I. V., *see also* Gurvich, I. S., *and* I. V. Pukhov. E. K. Pekarskiĭ . . . *1958.* No. 51438.

54169. PUMINOV, A. P. O pervykh nakhodkakh piropa v allîvial'nykh otlozheniîakh Sibirskoĭ platformy. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 318–21, 2 tables) 3 refs. Text in Russian. ***Title tr.:*** On the first finds of pyrope in alluvial deposits of the Siberian platform.

Presents results of author's 1952 investigation of slicks in alluvial deposits in the valley of the Muna, left tributary of the Lena at approx. 68° N. 123° E. The mineral composition of the slicks is presented (table) and the discovered minerals reviewed. The finding of pyrope is stressed and its properties described. Discovery of pyrope in the Daldyn basin, tributary to the Markha, is also mentioned. ***Copy seen:*** DLC.

PUMINOV, A. P., *see also* Baranova, ÎÛ. P., *and others.* Paleogeografiîa . . . Olenek i Markhi. *1958.* No. 49529.

PUMINOV, A. P., *see also* Okladnikov, A. P., *and* A. P. Puminov. Drevneĭshie sledy cheloveka . . . *1958.* No. 53729.

PUMINOV, A. P., *see also* Strelkov, S. A., *and others.* O vozmozhnoĭ tektonicheskoĭ prichine . . . *1957.* No. 55196.

PUNDLIK, P. G., *see* Anand, B. K., *and others.* Effect of hypothermia . . . *1958.* No. 49282.

54170. PURPURA, DOMINICK P., *and others.* Hypothermic potentiation of centrally induced cardiac irregularities. (Anesthesiology, Jan.–Feb. 1958. v. 19, no. 1, p. 27–37, illus.) 33 refs. *Other authors:* J. L. Pool, E. M. Housepian, M. Girado, S. A. Jacobson, *and* R. J. Seymour.

Account of experiments on unanesthetized-paralyzed cats. Stimulation of a limited area of the brain stem reticular system produced cardiac irregularities similar to those seen during various neurosurgical procedures. These irregularities are markedly potentiated by hypothermia prior to the onset of the "pseudoanesthetic" state.
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PURPURA, DOMINICK P., *see also* Pool, J. L., *and others.* Mechanism . . . centrally induced cardiac irregularities . . . hypothermia. *1958.* No. 54076.

54171. PUSHCHAROVSKIĬ, ÎÛ. M. Soveshchanie po razrabotke unifitsirovannykh stratigraficheskikh skhem Severo-Vostoka SSSR. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Jan. 1958. god 23, no. 1, p. 112–14.) Text in Russian. ***Title tr.:*** Conference to unify the stratigraphic division for northeastern U.S.S.R.

Geologic achievements of the last 15–20 years were reviewed at this conference in Magadan, May 10–21, 1957. An attempt was made to work out a new and unified stratigraphic division for geologic eras and periods for the area between the Lena and the Chukotsk Peninsula. Twenty-one institutions were represented by 239 participants. Sessions were held on the Precambrian and Paleozoic; Permian, Triassic and Jurassic systems; Cretaceous; and Cenozoic. 104 papers were delivered, some of them are mentioned by name and topic. The work of the conference is to be published in 1958.
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54172. PUSHKARSKIĬ, ÎÛ. M. Problema neftenosnosti tsentral'noĭ Sibiri. (Priroda, Dec. 1957, no. 12, p. 91–94. illus., text maps.) Text in Russian. ***Title tr.:*** Problem of oil presence in Central Siberia.

Contains a discussion of geologic structure of the Siberian platform especially of the so-called Verkhoyansk marginal deflection, from the viewpoint of its potential oil and natural gas sources. Natural gas outlets are known in three localities in the Vilyuy River basin. Oil drilling is going on in the Lena, Aldan and Vilyuy basins. The Lower Cambrian deposits (especially Sinsk series) are considered the most promising.
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PUSHKOV, N. V., *see* Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet. Mezhdunarodnyĭ geofizicheskiĭ god. Informat͡sionnyĭ bŭlleten' . . . *1957*. No. 49182.

54173. PUTKISTOS, KALLE. Lantbrukets hjultraktorer vid virkestransport vintertid. (Skogen, *Stockholm*, Jan. 1, 1952. årg. 39, no. 1, p. 3, 18, illus.) Text in Swedish. Summary of article in the Finnish journal *Teho*, no. 4, 1950. ***Title tr.:*** Agricultural wheeled tractors for transportation of timber in the winter.

Reviews the Finnish Pulp and Paper Association experiments in use of various types of wheeled agricultural tractors for transportation of lumber on snow-packed roads. None of these tractors, as now equipped, will serve as a universal vehicle for winter transportation of timber, but under specified conditions, it is technically and economically feasible for the wheeled tractor to replace horse-drawn equipment. ***Copy seen:*** DA.

PUTNINS, P. H., *see* Bender, T. A., *and others*. Bibliography . . . climate of Greenland. *1957*. No. 49646.

54174. PUT͡SILLO, VERA GEORGIEVNA, *and* **S. I. MIRONOV.** Bitumy Turukhanskogo raĭona. (*In:* Put͡sillo, V. G., *and others*. Nefti i bitumy Sibiri, 1958, p. 103–117, tables, cross-sections.) 4 refs. Text in Russian. ***Title tr.:*** The bitumen of the Turukhansk region.

Reviews in general, the oil-bearing properties of the northern part of this region, which lies between the Taymyr folded zone and north Siberian block masses; and presents analyses of Cambrian and Silurian bituminous matter found in Nizhnyaya-, Podkamennaya-, and Sukhaya-Tunguska River regions. Special attention is given to the Sukhaya Tunguska district, near the mouth of the D'yavol'skaya where Silurian bitumen and bituminous matter were studied in detail. Pertinent data are illustrated (tables). These investigations are said to have established a similarity with Permian oil-bearing deposits of the Anabar massif. Oil-bearing deposits of both these areas are characterized by predominance of petroleum asphalt and tarry particles, and have similar content of oil matter. ***Copy seen:*** DLC.

54175. PUT͡SILLO, VERA GEORGIEVNA, *and others*. Nefti i bitumy devonskikh otlozheniĭ o-va Severnaĭa Zemli͡a, Salekharda i Minusinskoĭ kotloviny. (*In:* Put͡sillo, V. G., *and others*. Nefti i bitumy Sibiri, 1958, p. 145–54, tables.) Text in Russian. *Other authors:* S. I. Mironov *and* S. I. Vorob'eva. ***Title tr.:*** Oil and bitumen of the Devonian deposits in the Severnaya Zemlya Islands, Salekhard, and the Minusinsk trough.

Presents the physical and chemical composition of oil, tar, asphaltenes, and other oily bituminous matter of Severnaya Zemlya, Salekhard, and the Bystryanskaya structure of the Minusinsk trough and evaluates the oil-bearing properties of their Devonian deposits. Analyses of component elements, oil refining, asphalt-tarry particles; acid and ester numbers, saponification, and other properties within each region are analyzed and compared. The Middle Devonian of Severnaya Zemlya and Salekhard, which appear to comprise the oil series, are characterized by low content of sulphur and differ from the Minusinsk region, which are characterized by light naphtha, and by content of sulphurous and (high) nitrogenous compounds. ***Copy seen:*** DLC.

54176. PUT͡SILLO, VERA GEORGIEVNA, *and others*. Nefti i bitumy Sibiri. Moskva, Izd-vo Akademii nauk SSSR, 1958. 246 p. illus., tables incl. 1 fold., diagrs., maps. (Akademiĭa nauk SSSR. Institut nefti.) Refs. Text in Russian. *Other authors:* M. N. Sokolova, *and* S. I. Mironov. ***Title tr.:*** Oil and bitumen of Siberia.

Presents a part of the report of the Complex Eastern Oil-Gas Expedition (Kompleksnaĭa Vostochnaĭa neftegazovaĭa ėkspedit͡siia) under the leadership of S. F. Fedorov and K. R. Chepikov. The eight papers offer a comprehensive description of the conditions of occurrence, chemical composition, and genesis of bitumen and oil in Siberia. The investigations were carried out in the Lake Baykal region, Khatanga depression, Turukhansk region, Minusinsk basin, Western Siberian lowland; Tuva depression, and the Severnaya Zemlya archipelago. The oil and gas investigation of Siberia is reviewed (p. 3–5) by the editor, S. Mironov, who also introduces the participants in this expedition. Of the following papers (titles tr.) which comprise this volume, the second, third, fifth, and last are described under their authors' names, q. v.

Put͡sillo, V. G., *and* S. I. Mironov.

Oil, bitumen and bituminous formations in the Lake Baykal region.

PUTSILLO, V. G., *and others.* The Siberian platform.

PUTSILLO, V. G., *and* S. I. MIRONOV. The bitumen of the Turukhansk region.

Putsillo, V. G., *and* S. I. Mironov. Some data on bitumen and oil in the West Siberian lowland.

PUTSILLO, V. G., *and others.* Oil and bitumen of the Devonian deposits in the Severnaya Zemlya Islands, Salekhard, and the Minusinsk trough.

Sokolova, M. N., *and others.* Oil and bitumen of the Minusinsk basin,

Sokolova, M. N., *and* S. I. Mironov. Petroliferous signs in the Tuva depression.

MIRONOV, S. I. Prospects of oil in the stratigraphic cross-section of Siberian deposits. ***Copy seen:*** DLC.

54177. PUTSILLO, VERA GEORGIEVNA, *and others.* Sibirskaia platforma. (*In:* Putsillo, V. G. Nefti i bitumy Sibiri, 1958, p. 54–102, tables.) 4 refs. Text in Russian. *Other authors:* S. I. Mironov, *and* S. I. Vorob'eva. ***Title tr.:*** The Siberian platform.

Reports results of prospecting for oil in the Cambrian deposits in the Tolba, Maya, Olenek, Amga, Lena and Tunguska River regions and in Permian deposits in the Khatanga and the Lena-Vilyuy depressions. Various bitumen and bituminous materials such as oil, tar, asphaltenes, benzene, benzoin, chloroform and others were studied, and their chemical analyses, organic and mineralic properties and fractional composition are outlined and data presented. Cambrian bituminous matter of the Siberian platform is divided into two genetic groups: one characterized by high content of greasy fractions and low content of asphaltenes, the other, in contrast, characterized by low oil and high asphaltene content. To the first belong the Maya, Tolba and Olenek bitumens; to the second, the bitumens in Amga, Lena and Tunguska River regions. Bitumens from the Khatanga depression are also analyzed and compared.

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PUTSILLO, VERA GEORGIEVNA, *see also* Mironov, S. I., *and others.* Asfal'topodobnyĭ bitum . . . *1958.* No. 53318.

54178. PUZANOVA, V. F. Gornaia promyshlennost' severo-zapadnoĭ Kanady. (Problemy Severa, 1958, vyp. 1, p. 257–70, map, table.) 18 refs. Text in Russian. ***Title tr.:*** Mining in northwestern Canada.

Reviews, on the basis of Canadian periodical articles, the extent of mineral deposits and production (uranium, gold, non-ferrous metals, oil), also progress in mapping and surveying activities, aerial transportation, etc.

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PYTLIAKOV, G. A., *see* Lisitsyna, N. K. Arkheologicheskie . . . RSFSR 1955. *1958.* No. 52859.

QUAM, LOUIS OTTO, 1906– , *see* Arctic sea ice conference. *1958.* No. 49364.

QUANTINETZ, MAX, *see* Lacks, H., *and others.* Ice adhesion apparatus . . . *1957.* No. 52617.

QUARTIN, GLICINIA, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

54179. QUAY, WILBUR BROOKS, 1927– . Pancreatic weight and histology in the white whale. (Journal of mammalogy, May 1957. v. 38, no. 2, p. 185–92, illus., table.) 18 refs.

Weight of pancreas in four belugas from Churchill, ranged from 230 gm. to 561 gm. The histology, studied in 12 specimens, showed a high content of duct cells in the exocrine pancreas; numerous large pancreatic islets; numerous alpha and beta cells with the latter generally located in the center of the islet and, chromophobic cells, present but not numerous. ***Copy seen:*** DI.

54180. QUEBEC. DEPT. OF MINES. The mining industry of the province of Quebec in 1956, 1957. Quebec, Queen's Printer, 1958, 1959. 2 v.: 143, 147 p. illus., tables, fold. map, graph.

Annual report, separate from the general report of the Minister of Mines; the 1956 and 1957 issues, prepared by E. E. Bérubé, present a review of mineral production, mining operations in metals, industrial minerals, and building materials; and detailed treatment of mining operations and development in western Quebec. Employment, wages and accidents in mines and quarries during the years, are summarized. Rapid rise of iron ore production is noted, also extensive prospecting in northern Quebec. Value of mineral production decreased by

$19,871,988 in 1957 from the record of $463,680,968 set in 1956, because of the decline in value of metal production.

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QUERCI, MARIO, *see* Cattaneo, A. D., *and others.* La resistenza cerebrale all'ipossia, 1 . . . ipotermia., *1957.* No. 51053.

QUILLETTE, STANLEY, *see* Hall, J. F., *and others.* Body cooling in wet and dry clothing. *1958.* No. 51513.

54181. QUIMBY, GEORGE IRVING, 1913– . Acculturation and material culture, I. (Field Museum of Natural History. Publications. Anthropological series, July 17, 1951. v. 36, no. 6, p. 107–147, illus.) 2 refs.

Discusses the influence of Western civilization on the culture of primitive peoples, including Northwest Coast Indians (Haida, Kwakiutl, Nootka, etc.) and Alaskan Eskimos. Selected items from the Museum's collection representing new types introduced through contact, or native types modified by contact, are illustrated and described.

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QUINTUS, RICHARD, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

54182. QUIROZ, RODERICK S. Lowest temperature in Greenland. (U.S. Weather Bureau. Monthly weather review, Mar. 1958. v. 86, no. 3, p. 99.) 2 refs.

Comment on No. 55156, offering −86.8° F. at Northice, Greenland as the lowest temperature on the icecap, recorded by the British North Greenland Expedition on Jan. 9, 1954.

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54183. R.S.F.S.R. STATISTICHESKOE UPRAVLENIE. Narodnoe khozяĭstvo RSFSR; statisticheskiĭ sbornik. Moskva, Gos. statisticheskoe izd-vo, 1957. 371 p. tables. Text in Russian. ***Title tr.:*** The economy of the R.S.F.S.R.; a statistical handbook.

Contains data to the end of 1955 on population, administrative division, cities, towns, etc., industry, agriculture, transportation, labor, commerce, education, public health, welfare, and urban conditions. The Russian Soviet Federated Socialist Republic includes Karelian, Komi and Yakut A.S.S.R. and Murmansk, Arkhangel'sk, Tyumen', Krasnoyarsk, Magadan and Kamchatka provinces. The data are presented mostly by provinces, and, stressing economic development, are compared with those for 1913, 1928 (pre-five-year-plans), and 1940. For the far North regions (raĭony Kraĭnego Severa) covering 10.5 million km.^{2} with 3.8 million population, basic indexes of development (since 1940) are summarized without geographic breakdown (p. 42–44). List of cities with population exceeding 50 thousand (p. 48–49) includes Arkhangel'sk (258 thousand), Murmansk (168), Noril'sk (92), Yakutsk (63), Petropavlovsk-in-Kamchatka (58) and Magadan (55 thousand). Reindeer increased from 1911.2 thousand in 1940 to 2135.7 in 1953 and decreased to 1988.7 in 1955; with the largest herds in Magadan (over 500 thousand) and Tyumen' (over 400 thousand) provinces. The number of collective farms in the northern provinces reflects the process of consolidation ("ukrupnenie") notable throughout R.S.F.S.R.: 167,291 in 1940; 48,163 in 1956. ***Copy seen:*** DLC.

RAABEN, M. E., *see* Menner, V. V., *and* M. E. Raaben. K voprosu o prirode melkikh skladok . . . *1958.* No. 53231.

54184. RAAF, HERMANN. Lappland-Fahrt 1957, ein Bericht über die Kosmos-Studienreisen nach dem hohen Norden. (Kosmos, May 1958. Jahrg. 54, Heft 5, p. 201–208, illus., maps.) Text in German. ***Title tr.:*** Lapland trip 1957, an account of the *Kosmos* study-tours to the high North.

Relates impressions from two tours of northern Sweden, Finland, and Norway, with descriptions of landscape and brief notes on the Lapps. The Kiruna ore mines were visited. ***Copy seen:*** DLC.

54185. RABKIN, M. I. Ul'traosnovnye porody Anabarskogo shchita. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik stateĭ po geologii Arktiki, vyp. 5, p. 118–33, illus., tables.) 13 refs. Text in Russian. ***Title tr.:*** Ultrabasic formations of the Anabar shield.

Outlines Archean ultrabasic rocks collected by author and others in the upper Anabar basin (approx. 68°–70° N. 100°–112° E.). Archean deposits are sparsely distributed and are represented by amphibolitic and serpentinized peridotites, amphibolized pyroxenites and amphibolites. Petrographic description for each of these groups is given; mineralogic

characteristics are outlined and chemical analyses presented. The genesis of ultrabasic rocks is discussed.

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RABKIN, M. I., *see also* Tkachenko, B. V., *and others.* Geologicheskoe stroenie . . . *1957.* No. 55460.

RABOT, CHARLES, 1856–1944, *see* Guerne, J. de, *and* J. Richard. Sur la faune des eaux douces du Groenland. *1889.* No. 51415.

54186. *RABOTNITSA.* Glîadîa na kartu. (Rabotnitsa, Apr. 1958. god 36, no. 4, p. 15–17, illus., map.) Text in Russian. ***Title tr.:*** Looking at the map.

Recounts achievements of urban construction during the Soviet period and maps settlements founded during the fifth and sixth five-year plans, including Severomorsk, Olenegorsk, Dudinka, Noril'sk, etc. The map is derided by D. Zolotov (Sibirskie ogni, June 1958, god 37, no. 6, p. 190) for including such old settlements as Dudinka and Noril'sk and omitting Mirnyy. ***Copy seen:*** DLC.

RADER, VIRGINIA, *see* Fournelle, H. J., *and others.* A bacteriological and parasitological survey . . . *1958.* No. 50960.

54187. RADFORTH, ISOBEL. Some considerations on the distribution of fishes in Ontario. Toronto. Univ. of Toronto Press, 1944. 116 p. 32 text maps. (Toronto. Royal Ontario Museum of Zoology. Contributions, no. 25.) 174 refs.

Contains a taxonomic list of 122 species. The geological history of the Ontario drainage system is outlined and related to the glaciation of the region; the more important waterways are discussed. The fishes are placed in twelve groups depending on the nature of their occurrence in Ontario waters; notes are given on their habitats, range (text maps), etc., including distribution in northern Ontario. ***Copy seen:*** DSI–M.

54188. RADFORTH, NORMAN WILLIAM, 1912– , *and* I. C. MacFARLANE. Correlation of palaeobotanical and engineering studies of muskeg (peat) in Canada. (National Research Council of Canada. Division of Building Research. Research paper no. 35, Aug. 1957, p. 93–97, illus.) 9 refs.

Studies were carried out using the principles of paleobotany to evolve a system of muskeg classification for engineers, based on surface and subsurface characteristics of the organic terrain. Pertinent surface characteristics include vegetative cover and topography; sub-surface characteristics were determined from microscopic examinations and the results interpreted in terms used by engineers. In the application of the system, relevant macroscopic sub-surface characteristics are fibrousness and woodiness of the material. Preliminary engineering studies of the properties of muskeg, employing soil mechanics principles, are being linked to the classification system.—From author's abstract.

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54189. RADFORTH, NORMAN WILLIAM, 1912– . Organic terrain organization from the air, altitudes 1,000 to 5,000 feet. Ottawa, Queen's Printer, Feb. 1958. 23 p. 21 p. of illus., tables. (Canada. Defence Research Board. Directorate of Physical Research. Handbook no. 2.) 9 refs.

Provides mechanics by which interpretation from the air can be extended beyond the limit (1,000 ft.) covered in No. 47495, on the basis of natural botanical relations and topography. Selection and analysis of terrain pattern are discussed, with summary tables and representative photos. Six new form values or primary patterns, as observed from altitudes of 1,000 to 5,000 ft., are named, described, and illustrated. Three secondary patterns, or sub-types are suggested. The air form is explained in terms of ground character, relating the text to plates and to summary tables. Access problems are analyzed by applying inspection from 5,000 ft. altitude, also illustrating conditions with air photos. New terms are defined. ***Copy seen:*** DGS.

54190. RADFORTH, NORMAN WILLIAM, 1912– . Palaeobotanical evaluation of fossil wood in Onakawana lignites. (Royal Society of Canada. Transactions, June 1958. v. 52, ser. 3, sect. 5, p. 41–53, illus., diagr.) 6 refs.

Discusses investigations of fossil samples of coniferous wood, probably Cretaceous, taken from lignites at Onakawana on the Abitibi River, northern Ontario. Specimens of a large trunk or branch segment, a small branch segment with pith, and a bristle-type fossil occurring frequently in association with the woody fragments are described, and results of analyses are given. The wood specimens

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are assigned to the genus *Cupressinoxylon* Goppert, with new species, *Cupressinoxylon bannani* Radforth, sp. nov., proposed for the trunk and branch segment, and *Cupressinoxylon lignomedullosum* Radforth, sp. nov., for the small branch segment. New genus and species are proposed for the fossil fungus *Onakawananus* Radforth, gen. nov., and *Onakawananus varitas* Radforth, sp. nov.

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RADFORTH, NORMAN WILLIAM, 1912– , *see also* MacFarlane, I. C. Guide . . . muskeg. *1957*. No. 53001.

RADFORTH, NORMAN WILLIAM, 1912– , *see also* National Research Council of Canada. Muskeg research conf. *1957*. No. 53502.

RADIGAN, LEO ROBERT, 1923– , *see* Lombardo, T. A., *and others*. Myocardial failure in experimental hypothermia. *1957*. No. 52906.

54191. *RADIO.* Khronika. (Radio, May 1957, no. 5, p. 23.) Text in Russian. ***Title tr.:*** News.

Notes on radio amateurs operating with short wave at Khatanga (71°59′ N. 102°28′ E.) and Noril'sk and on the contact made by amateurs at Novosibirsk with Yakutsk, Tiksi and other distant places in the far Northeast.

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54192. *RADIO.* Khronika. (Radio, Sept. 1957, no. 9, p. 32.) Text in Russian. ***Title tr.:*** News.

Includes notes on the good reception in European U.S.S.R. of the 20-m. wave length used by the amateur radio station in Yakutsk; also on the messages broadcast by a Soviet amateur cruising in Jan Mayen waters. ***Copy seen:*** DLC.

54193. *RADIO.* Mezhdunarodnyĭ geofizicheskiĭ god. (Radio, May 1957, no. 5, p. 20–21, illus.) Text in Russian. ***Title tr.:*** The International Geophysical Year.

Notes the geophysical investigations planned for the IGY 1957–58 in the U.S.S.R., with photographs of auroral research work at an "arctic polar observatory" (in Murmansk?).

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54194. *RADIO.* V Arktike i Antarktide. (Radio, May 1957, no. 5, p. 12–13, illus.) Text in Russian. ***Title tr.:*** In the Arctic and Antarctic.

Radio operators of an antarctic and several arctic stations outline briefly plans of their participation in geophysical investigations during IGY; among them are V. Ignatenko, chief of radio meteorological center on Dikson Island, I. Titovskiĭ of North Pole-6, P. Kleĭmenov from Vrangel Island, and I. Betanov of the Uyedineniya station. Ignatenko notes their close cooperation with the Arctic Institute at Leningrad, which furnishes monthly and daily forecasts of radio conditions. ***Copy seen:*** DLC.

54195. RADNÓT, MAGDA, *and* I. OLÁH. Die Wirkung des Lichtes auf die Zahl der eosinophilen Blutzellen. (Acta medica academiae scientiarum hungaricae, 1958. t. 11, fasc. 3, p. 393–95, illus. table.) 2 refs. Text in German. ***Title tr.:*** The effect of light upon the number of eosinophil blood cells.

Exposure of the human eye to a light source of 100 watts caused within 3 hrs. a 50% eosinopenia; as little as 20-min. exposure showed a detectable reduction in these cells. Red, blue and green light had similar effects.

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RADULOVIĆ, JEVTO, *see* Giaja, J., *and others*. L'état posthypothermique. *1957*. No. 51172.

54196. RAE, BENNET B., *and* E. WILSON. Rare fishes from distant northern seas; Scotland. (International Council for the Study of the Sea. Annales biologiques 1955, *pub*. 1957. v. 12, p. 55.)

A list of rare fishes landed in Aberdeen, in 1954 and 1955: ten species, with notes on size, location and date of find.

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54197. RÄNK, GUSTAV, 1902– . Zum Problem des Sippenkultes bei den Lappen. (Archiv für Völkerkunde, 1954. Bd. 9, p. 79–91.) Approx. 35 refs. Text in German. ***Title tr.:*** The problem of the kin-cult of the Lapps.

Analyzes the religion of the Lapps, specifically their worship of lower deities or spirits, from the sociological standpoint. The social structure and kinship ties of the "spiritus familiares" are based on the "siida", the Lapp kin group or village unit, to which the spirit families belong. The historical development of Lapp social organization, the cults of their tutelary spirits, etc., are discussed

and the possibility of an original shamanism speculated upon.

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54198. RÄSÄNEN, VELI, 1888– . Contribution to the lichen flora of North America. (Missouri Botanical Garden. Annals, Feb. 1933. v. 20, no. 1, p. 7–21.)

Contains an annotated list of 171 species, of which five are described as new. "The Alaskan lichens, fifteen species in all, are largely the usual arctic ground lichens." No localities are given.

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54199. RAFAILOVA, KH. KH. Ob usloviiakh obrazovaniia taĭmyrskogo maksimuma. (Meteorologiia i gidrologiia, Jan. 1958, no. 1, p. 10–16, tables, text maps.) Text in Russian. ***Title tr.:*** Conditions of formation of the Taymyr high.

The Taymyr high has an important effect on weather characteristics of Europe and Asia. Analysis of daily maps shows that not all heat flow to the Barents and Kara Seas can lead to anticyclogenesis above the Taymyr Peninsula. Formation of anticyclones above the Taymyr can be forecast with 75.5% probability within three-four days by analysis of these maps. Similar anomaly maps can be used for diagnoses and prognosis of pressure in other regions.

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54200. RAFIENKO, D. I. Analiz sistemy s magazinirovaniem rudy i shtangovoĭ krep'iu. (Gornyĭ zhurnal, May 1958, no. 5, p. 15–18, illus. tables.) Text in Russian. ***Title tr.:*** Analysis of a system with temporary storage of ore and reinforcing rods.

Describes the mining of ore deposits in unstable rock or in steeply inclined veins as in the Nittis-Kumuzh'ye mines of Kola Peninsula. Sulfide-nickel veins 20 cm. thick, inclining among proxenites and peridotes are broken and laminated by cracks and cleavages. Mining work is carried on with special reinforcement of these veins, which is described in detail with analysis of production economics.

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54201. RAFN, EYVIND. En 100 års dag. (Grønland, Dec. 1957. nr. 12, p. 441–46, illus.) Text in Danish. ***Title tr.:*** A centenary.

Notes on the printing works at Godthåb in West Greenland, on Hinrich Rink who established it and on some of his assistants, especially Lars Møller, born in 1842, a Greenlander who played an important part as printer, contributor to the newspaper *Atuagagdliutit*, illustrator, etc.

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54202. RAGLE, RICHARD H., 1923– . Polar glaciology study course. Wilmette, Ill., July 1958. 14 p. map, diagr., tables. (U.S. Army. Snow Ice and Permafrost Research Establishment. SIPRE special report 26, *pub.* in U.S. Army. Corps of Engineers. Greenland Ice Cap Research Program. Studies conducted in 1955–56. June 1959. v. 3.) 17 refs.

Describes course held by SIPRE Aug. 1–22, 1956 on the icecap, with discussions before and after at TUTO. Techniques concerned with snow-pit, etc. studies, crevasse rescue, high polar logistics, travel, and working conditions were practiced/observed. Participants (17 visiting and five SIPRE scientists, and eight service personnel), program, equipment and supplies are reported.

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RAGLE, RICHARD H., 1923– , *see also* Benson, C. S., *and* R. H. Ragle. Project "Jello", SIPRE Greenland Expedition. *1957.* No. 49650.

54203. RAGOZIN, L. A. Plastinchatozhabernye mollîuski iz triasovykh otlozheniĭ Angaridy. (Moskovskoe obshchestvo ispytateleĭ prirody. Biûlleten', nov. seriia, 1958. t. 63, otdel geologicheskiĭ, t. 33, vyp 1, p. 79–90, illus., plate, tables.) 17 refs. Text in Russian. ***Title tr.:*** Lamellibranchian Mollusca from the Triassic deposits of the ancient Angara continent.

Contains description and comparison of Mollusca in the Triassic coal-bearing Mal'tsevo series in the central Kuznetsk basin and Korvucha tributary area (approx. 65°30′ N. 100° E.) of the Nizhnyaya Tunguska. These series are characterized by index fossil molluscs *Utschamiella* Ragozin and *Ferganoconcha*(?) Tschern. Three of the six described species are regarded as new. Lamellibranchian Mollusca, it is stressed, are index fossils for Triassic coal-bearing deposits of Siberia as a whole.

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54204. RAGOZIN, L. A. Soveshchanie po geologii i poleznym iskopaemym Krasnoiarskogo kraia. (Moskva. Universitet. Vestnik. Seriia biologii, pochvovedeniia, geologii, geografii, 1958, no. 2,

p. 267–69.) Text in Russian. ***Title tr.:*** Conference on the geology and mineral resources of Krasnoyarskiy Kray.

Outlines a conference held in Moscow, Feb. 3–6, 1958 under auspices of Moscow State University. Over 350 scientists from 57 organizations took part. The principal speakers and their topics are mentioned. In the plenary session, opened by G. P. Gorshkov, L. A. Ragozin reported on the Yenisey expedition carried out by Moscow University, and S. V. Levchenko on the mineral resources and ways of their development in Krasnoyarskiy Kray. The conference met in four sections: Paleozoic and Precambrian, Mesozoic and Triassic, Quaternary and Tectonics, and mineral resources. In the first, and most numerous section, presided over by V. E. Khain, several papers were presented on the geology of northern part of Krasnoyarskiy Kray by the representatives of the Institute of Geology of the Arctic: N. N. Urvant͡sev, ÍA. N. Polkin, N. A. Sîgaev, B. V. Tkachenko, I. P. Atlasov. Despite the great achievements to date, exploration of the Archeozoic and Proterozoic eras is still insufficient. The mineral resources section chaired by A. V. Milovskiĭ, heard several reports on mineralization and occurrence of rare-earth minerals (ÍÛ. A. Burmin, ÍÛ. D. Gushchin, L. B. Zubkov, E. M. Épshteĭn.). K. V. Radugin presented a new method for prospecting of blind ore bodies, and A. V. Milanovskiĭ a paper on processes of progressive metamorphism in rare-earth minerals and micaceous pegmatites. S. P. Mikut͡skiĭ, R. V. Chaĭkovskaîa and T. K. Bazhenova reported on the petroliferous exploration in the western part of the Siberian platform. Further exploration for coal, metals and oil and the need for construction of a power station on the Yenisey and improvement of transportation were stressed.

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54205. RAĬKO, Z. A., *and others.* O vliîanii gipotermii i ganglioblokiruûshchikh veshchestv na uglevodno-fosfornyĭ obmen v golovnom mozge u zhivotnykh s vremennym vyklûcheniem serdt͡sa iz krovoobrashcheniîa. (Vestnik khirurgii, May 1957. t. 78, no. 5, p. 56–63, illus. tables.) 16 refs. Text in Russian. *Other authors:* I. R. Petrov *and* T. E. Kudrit͡skaîa. ***Title tr.:*** Effect of hypothermia and ganglionic blocking agents upon the carbon and phosphorus metabolism in the brain of animals with temporary exclusion of cardiac circulation.

Account of experiments with cats made hypothermic to 24°–22° C. and treated with hexametonium and complex intravenous feeding. In such animals it was possible to exclude heart circulation for 20 min. without injury to the central nervous system. There was no significant change in phosphorus metabolism.

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54206. RAILSBACK, H. E., *and* **Q. L. MORRIS.** Low temperature properties of 80% cispolybutadiene. (Rubber world, Apr. 1958. v. 138, no. 1, p. 75–80, 84, graphs, tables.)

Presents results of tests on rubber with a Mooney viscosity (ML–4 at 212° F.) of 18; the configuration was 78.6% *cis*, 16.6% *trans*, and 4.8% vinyl. Tests included Gehman freeze point, rate of retraction, cold compression set, resilience and Shore hardness; properties were determined at temperatures to −115° C. and conditioning up to 70 hrs. The polymer gave a Gehman f.p. of −97° C. and less tendency to crystallize than natural rubber or emulsion polybutadiene; it gave softer and more elastic stocks at low temperature than did any of the controls, and displayed stress-strain properties similar to those of emulsion polymerized polybutadiene and hysteresis properties equivalent to those of natural rubber. ***Copy seen:*** DLC.

54207. RAINEY, FROELICH GLADSTONE, 1907– . Arkheologiîa amerikanskoĭ Arktiki. (Sovetskaîa ėtnografiîa, 1958, no. 2, p. 54–62.) 22 refs. Text in Russian. Paper read at the Institute of Ethnography of the Academy of Sciences, U.S.S.R., in July 1957. ***Title tr.:*** Archeology of the American Arctic.

Reviews major archeological finds of the last 30 years. Advantages are stressed of American-Russian collaboration for solution of the Eskimo origin problem, for better interpretation of historical sequence and proper dating of different Eskimo cultures. The Bering Sea excavations of the 1930's resulting in recognition of the Okvik, Old Bering Sea and Punuk culture stages, the discovery of the Point Hope Ipiutak site in 1939, further Ipiutak and Dorset finds in Alaska and Canada and, finally, in 1948, the discovery of the mesolithic Denbigh flint complex are sketched. G. F. Debet͡s' opinion, based on his study of the New York Natural History Museum material, that Ipiutak skeletal remains belong to the Yukaghir physical

type while the Old Bering Sea skeletons show pure Eskimo traits, may change the present-day assumption of a racial and linguistic affinity between Paleo-Eskimos (Ipiutak, Dorset) and Neo-Eskimos (Old Bering Sea, Punuk). ***Copy seen:*** DLC.

RAINONE, SALVATORE, *see* Redisch, W., *and others.* Chronic trench foot . . . *1951.* No. 54250.

54208. RAITT, W. LINDSAY, *and* **A. S. FRASER.** A new East Greenland community. (Scottish geographical magazine, Apr. 1958. v. 74, no. 1, p. 13–27, maps.) Refs.

Deals with the Fjord Region, considering mainly its economic prospects. Permanent settlement there depends on discovery and exploitation at reasonable cost of minerals in demand on world markets. Geographic location, climate and terrain are described, and their effects on mineral exploration and exploitation discussed. Problems and characteristics of the community at Mesters Vig (72° N. 24° W.) are examined. ***Copy seen:*** DGS.

RAJALA, PAAVO, *see* Koskimies, J., *and* P. Rajala. The winter bird census of 1956–57. *1957.* No. 52426.

RAJALA, PAAVO, *see* Koskimies, J., *and* P. Rajala. The winter bird census of 1957–58. *1958.* No. 52427.

54209. RAKITIN, A. I. Krest'ianskaia promyshlennost' v Arkhangel'skoĭ gubernii v 40–50-e gody xix v. (Istoricheskie zapiski, 1957. t. 59, p. 180–210.) Approx. 20 refs. Text in Russian. ***Title tr.:*** The peasant economy in Arkhangel'sk Province in the 1840's and 1850's.

Discusses the evolution toward capitalism in the north Russian peasant economy due to a change from agriculture, fishing and crafts to industrial labor and trade. Selected statistical data are tabulated for total non-agricultural incomes, fish catches brought to Arkhangel'sk by Russian and foreign (Norwegian) fleets, peasant-built and operated fishing boats, number of peasants seeking employment in other provinces, factories and workers, industrial output, exports (tar and pine), freight traffic on the Severnaya Dvina, Onega, Pinega, Pechora, Mezen', etc., investment of foreign (esp. English) capital, etc. The analysis follows the accepted Marxist doctrine of feudal-capitalistic demoralization of the peasant class. ***Copy seen:*** DLC.

RAKOVSKIĬ, SERGEĬ DMITRIEVICH, *see* Morozov, S. T. Zoloto Kolymy. *1957.* No. 53402.

54210. RALLI, ELAINE PANDIA, 1894– . The effect of certain vitamins on the response of normal subjects to cold water stress. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 81–90, illus., table.) 23 refs.

A study of the effects of calcium pantothenate and of vitamin B_{12} on cold resistance of normal and adrenalectomized rats, followed by a similar investigation on young, normal subjects. White cell counts and extensive blood and urine tests are presented with the latter group. The possible role of the two vitamins in increasing the resistance to cold is discussed. ***Copy seen:*** DNLM.

RAND, M. J., *see* Burn, J. H., *and* M. J. Rand. Excitatory effects of vagal stimulation on cooled atria . . . *1958.* No. 50014.

54211. RAND, R. W. Branding in fieldwork on seals. (Journal of wildlife management, Apr. 1950. v. 14, no. 2, p. 128–32, illus.) 3 refs.

Description of tagging, painting and especially branding methods applied by the author. Ways of handling the different ages and sexes; branding irons and marks; effects and objects of branding are described. ***Copy seen:*** DI.

RANDT, CLARK T., *see* Stevenson, G. C., *and others.* Effects . . . hypothermia on subcortical . . . potentials . . . cat. *1958.* No. 55160.

RANSOM, JAY ELLIS, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

54212. RAPATZ, G. L., *and* **B. J. LUYET.** Apparatus for cinematography during rapid freezing. (Biodynamica, Oct. 1957. v. 7, no. 155, p. 347–55, illus.) 3 refs.

Description of an automatic arrangement consisting of a cooling unit, microscope and camera. It permits filming of specimen at the rate of 64 frames per second during the first instants of freezing. Temperatures can be regulated to within 0.1° C. ***Copy seen:*** DNLM.

RAPATZ, G. L., *see also* Luyet, B. J., *and* G. L. Rapatz. An . . . refrigeration

system . . . laboratory equipment . . . microscope cooling stage. *1957.* No. 52975.

RAPOPORT, K. A., *see* Kandror, I. S., *and* K. A. Rapoport. Gazoobmen u cheloveka . . . v usloviiâkh rezkogo okhlazhdeniiâ. *1957.* No. 52158.

54213. RAPP, ANDERS. Studien über Schutthalden in Lappland und auf Spitzbergen. (Zeitschrift für Geomorphologie, Oct. 1957. Bd. 1, Heft 2, p. 179–200, 6 illus., 2 text maps, diagrs.) 25 refs. Text in German. Summaries in English and French. ***Title tr.:*** Studies of talus slopes in Lapland and in Spitsbergen.

Results of author's investigations 1952–1957 in the valley of Kärkevagge, extreme northwest Sweden (approx. 68°20′ N. 18°10′ E.), and at Bjonahamn, Tempelberg in the Tempelfjorden region, Vestspitsbergen (78°20′ N. 16°30′ E.) in 1954. About 70 rock falls were observed, or traced and measured at Kärkevagge; most occurred in May and June. Transport and removal processes are discussed; removal of debris seems to be unimportant. In the Tempelfjorden area, talus slopes are generally larger and thicker than in Lapland. The talus cones at Bjonahamn were compared with photographs of 1908, 1924, and 1936; no noteworthy transport of debris has occurred in the central and distal parts of the cones since 1908, contrary to the opinion that talus in the Arctic is transported relatively fast, especially through creep and solifluction. The talus slopes investigated probably accumulated mainly at the melting off of the inland ice or shortly afterward, and thereafter were supplied with rock waste at a slower rate during the postglacial period.—From English summary. ***Copy seen:*** DGS.

RAPPORT, DAVID, *see* Masoro, E. J., *and others.* Lipogenesis from carbohydrate . . . cold. *1957.* No. 53176.

54214. RASCH, OLE ANKER, 1905– . Å bidra til å øke skogproduksjonen den vesentligste oppgave for Det norske Skogselskap. (Norsk skogbruk, June 1955. årg. 1, nr. 3, p. 97, 112, illus.) Text in Norwegian. ***Title tr.:*** The main problem of the Norwegian Forestry Association is to further increased forest production.

Discussion of forestry problems including reference to north Norway. Forests should be increased within the next century by cultivation on all areas with suitable soil and climate.

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54215. RASMUSSEN, BIRGER, 1907– . Exploitation and protection of the East Greenland seal herds. (Norsk hvalfangst-tidende, Feb. 1957, årg. 46, nr. 2, p. 45–59, illus., map, diagrs., table.) 9 refs. Text in Norwegian and English.

Deals in detail with the biology, the feeding, breeding and migration habits, etc. of two species caught commercially in the pack ice east of Greenland: harp seal (*Phoca groenlandica*) and hooded seal (*Cystophora cristata*). Tagging and age determination (based on structural variations in teeth) are discussed. Data are considered and graphically presented on age distribution and composition of catches, growth rate, etc. Sealing in the area and protective measures are reviewed. Death rate among pups (probably 50%) and their commercial importance show that to maintain sealing at a profitable level the sexually mature population must be protected. Norwegian regulations exist and Norway alone sealed in the Jan Mayen area till 1955, when the Russians began and in 1956 had ten vessels operating there (Norwegians: 44). No international agreement covers this or the Denmark Strait sealing grounds.

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54216. RASMUSSEN, BIRGER, 1907– . Om fløytelinefisket i Holstensborgdjupet, Vest-Grønland, 1953. (Fiskets gang, Apr. 1, 8, 1954. årg. 40, nr. 13, p. 160–62, nr. 14, p. 174–77, illus., diagrs., tables.) Text in Norwegian. ***Title tr.:*** On floatline fishing in the Holsteinsborg deep, West Greenland, 1953.

The Norwegian fishing fleet in West Greenland at the end of May (a month earlier than usual) found abundant catch of good quality. Measured temperatures at different depths were relatively much higher than in 1952, and the warmer waters contained abundant food. By August good cod fishing was confined largely to the Holsteinsborg deep. Studies there indicate increased catch with increased depth and decreased temperature to 128 m. depth, below which catch diminished.

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54217. RASMUSSEN, BIRGER, 1907– . Svalbard-Grønlandstoktet 1949. (Nor-

way. Fiskeridirektoratet. Årsberetning vedkommende Norges fiskerier 1949, *pub.* 1950, no. 7, p. 110–27, illus.) Text in Norwegian. ***Title tr.:*** The Svalbard-Greenland cruise 1949.

Chronological account of a study cruise over arctic fishing banks, with information on water temperatures and fishing conditions at various depths off Bjørnøya, Spitsbergen, Jan Mayen, and East and West Greenland. The strong current of warm Atlantic water observed in the Spitsbergen region may have disturbed the polar pack ice and caused its drift toward Greenland, where ice conditions in 1949 were unusually severe. The cooperation of trawlers, freighters, hydrology investigators, and shore depots in the Greenland fishery is described. The recently developed fishing bases near Faeringerhavn provide means of increasing both quantity and quality of catch. ***Copy seen:*** DLC.

RASMUSSEN, BIRGER, 1907– , *see also* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

RASMUSSEN, BIRGER, 1907– , *see also* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

RASPOPOV, I., *see* Alekseev, P., *and others.* Cherez Chorrgor. *1958.* No. 49245.

RASPOPOV, O., *see* Alekseev, P., *and others.* Cherez Chorrgor. *1958.* No. 49245.

54218. RASS, TEODOR SAULOVICH. Ikhtiologicheskie issledovaniĭa Instituta okeanologii AN SSSR na dal'nevostochnykh morĭakh; sokrashchennyĭ doklad. (Akademiĭa nauk SSSR. Okeanograficheskaĭa komissiĭa. Trudy, 1958. t. 3, p. 118–21, map.) Text in Russian. ***Title tr.:*** Ichthyological investigations of the Far Eastern seas by the Institute of Oceanology, Academy of Sciences, U.S.S.R.; a summary.

Three little explored problems were followed in the main: propagation and development, deep-sea fishes, oceanic fishes. Anadromous forms were studied in fresh-water phases and work was conducted both from vessels and at fixed stations. ***Copy seen:*** DLC.

54219. RASS, TEODOR SAULOVICH. On the endemism of the abyssal oceanic ichthyofauna of the North Pacific. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 181.)

Reports the existence of three endemic groups according to data from the *Vitĭaz* and other expeditions. Lists species assemblages and intermixtures of the northern Asiatic-American group whose southern limit of distribution lies between 35°–40° N. on the west and between Vancouver Island and northern California on the east. ***Copy seen:*** DLC.

54220. RASS, TEODOR SAULOVICH. Puti obogashcheniĭa ikhtiofauny moreĭ SSSR. (Priroda, Apr. 1958. god 47, no. 4, p. 44–47, map.) 8 refs. Text in Russian. ***Title tr.:*** Ways of enriching the fish fauna of Soviet seas.

Author discusses earlier attempts, successful and unsuccessful, of transportation of fish into new regions; safeguards for success of such operations and the feasibility of introducing a North Pacific "sea perch" into the Barents Sea, of the Siberian cod into the Barents and Okhotsk Seas, etc. The biology of these fish and ecology of the new areas, are discussed. ***Copy seen:*** DLC.

RASS, TEODOR SAULOVICH, *see also* Sinel'nikov, A. Taĭny okeana. *1957.* No. 54905.

54221. RASSADINA, KSENIĬA ALEKSANDROVNA, 1903– . Novye i interesnye lishaĭniki, II. (Akademiĭa nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1956. t. 11, p. 5–12, 3 illus.) 9 refs. Text in Russian. ***Title tr.:*** New and interesting lichens, II.

Contains descriptions of five species and seven forms of lichens from the Asiatic section of the U.S.S.R. *Hypogymnia enteromorpha* with three forms, *enteromorpha, rugosa* n. comb., and *compacta* n. form, occurring on the Okhotsk Sea coast (Udskoye and Magadan), are included. Pt. I (1953) of this work does not contain arctic material. ***Copy seen:*** DLC.

54222. RASSKAZOVA, E. S. K stratigrafii verkhnepaleozoĭskikh otlozheniĭ Tungusskogo basseĭna. (Moskovskoe obshchestvo ispytateleĭ prirody. Biŭlleten', nov. seriĭa, god 129, t. 63, otdel geologicheskiĭ, Sept.–Oct. 1958. t. 33, vyp. 5, p. 91–109, cross-sections, map.) 26 refs. Text in Russian. ***Title tr.:*** On the stratigraphy of Upper Paleozoic deposits of the Tungusska basin.

Four cross-sections (two from the Nizhnyaya Tunguska, one the Kureyka and the Chunya) of continental coal-bearing Upper Paleozoic deposits are studied in turn and fossil flora from various series are given. Comprehensive fauna study and find of new species supplements the stratigraphy of Upper Paleozoic deposits in the Tungusska syncline and clarifies the deposits in the Kuznetsk region, which are of the same age. ***Copy seen:*** DLC.

54223. RASSKAZOVA, E. S. Kontinental'nye kamennougol'nye otlozheniia Tungusskogo basseina. (Akademiia nauk SSSR. Doklady, Sept. 21, 1958. god 26, t. 122, no. 3, p. 465–68, diagr., map.) 12 refs. Text in Russian. ***Title tr.:*** The continental Carboniferous deposits of the Tungusska basin.

Outlines the Kata River continental series of the Middle and Upper Carboniferous, widely distributed in the Podkamennaya, Nizhnyaya Tunguska and the Vilyuy basins. Attached maps show more exactly the geographic distribution and the locations where floral fossils of the Kata series have been found. According to floral characteristics, cross-sections were examined, and various horizons are distinguished and compared. Some accordance is indicated with the Kuznetsk Carboniferous flora; Kata series is stressed for identification of Permian deposits. ***Copy seen:*** DLC.

54224. RASTRUP, ERIK. Om betydningen af hurtig tildaekning af beton støbt om vinteren. (Ingeniøren, Jan. 14, 1950. årg. 59, nr. 2, p. 60–62, diagrs.) Text in Danish. Summary in English. ***Title tr.:*** The importance of rapid covering of concrete, poured in winter.

Presents graphed data on the initial extra heat required to counteract a delay from five min. to four hours in covering, computed for all practical values of temperature difference concrete/air and for any thickness of concrete slab. The formula on which the diagram is based is supplied. ***Copy seen:*** DLC.

54225. RATEEV, M. A. Prozhilki ėpigeneticheskogo kaolinita v glinistykh porodakh Vorkustkoĭ svity. (Akademiia nauk SSSR. Doklady, July 1, 1957. t. 115, no. 1, p. 168–70, illus.) 5 refs. Text in Russian. ***Title tr.:*** Veins of epigenetic kaolinite in argillaceous rocks of the Vorkuta series.

Contains results of X-ray analyses of an argillaceous mineral, of white or cream color, found in the fissures of argillites. Seven samples were obtained by A. V. Makedonov from the Vorkuta series in the Pechora coal basin. This mineral consists chiefly of epigenetic kaolinite with admixture of some chloritic mineral; it is often associated with calcites. ***Copy seen:*** DLC.

54226. RATMANOV, GEORGIĬ EFIMOVICH, 1900– . K gidrologii Beringova i Chukotskogo moreĭ. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia moreĭ SSSR, 1937. vyp. 25, p. 10–118, illus., tables, maps.) 26 refs. Text in Russian. Summary in English. ***Title tr.:*** The hydrology of the Bering and Chukchi Seas.

A comprehensive survey of the oceanography of these seas based on work conducted during the summers of 1932 and 1933 by the State Hydrological Institute and the Pacific Institute of Fisheries with the trawlers *Dal'nevostochnik* and *Krasnoarmeets* as part of the Second International Polar Year studies. Introductory account is given of methods, vessels, itinerary, the work performed, and stations, with data on their location, depth, currents, wind, etc. The Bering Sea is treated *in extenso* (p. 36–92): its area, bottom relief, currents both surface and depth, temperature and salinity and their distribution, horizontal and vertical; profiles of selected areas are given, cold spots indicated; transparency discussed. Conditions in Bering Strait are presented, with cross sections. The Chukchi Sea is similarly treated (p. 92–114). Ice conditions in this sea and in the Bering Strait are discussed and ice types indicated on maps. ***Copy seen:*** DLC.

54227. RATMANOV, GEORGIĬ EFIMOVICH, 1900– . K gidrologii Vostochno-Sibirskogo moria. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia moreĭ SSSR, 1931. vyp. 13, p. 5–103, illus., tables, maps.) 7 refs. Text in Russian. Summary in German. ***Title tr.:*** The hydrology of the East Siberian Sea.

Account of hydrological observations made in the summer 1929 from the icebreaker *Litke* on its voyage to the Vrangel Island. Following an outline of the itinerary and working methods, four profiles are presented with conditions of their temperature and salinity, oxygen content and reaction. In addition, conditions at a number of scattered stations are discussed. The earlier-

assumed presence of a cold and warm current is confirmed and worked out in detail. Salinity varies between 1.58°/₀₀ and 35.19°/₀₀; aeration was found to be active; high alkalinity was noted on the surface of the ice. ***Copy seen:*** DLC.

54228. RATMANOV, GEORGIĬ EFIMOVICH, 1900– . K voprosu o gidrologicheskom rezhime Onezhskikh prolivov Belogo morîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1928. vyp. 9, p. 71–96, illus., tables, map.) Text in Russian. Summary in German. ***Title tr.:*** The problem of the hydrological regime of the Onega Straits of the White Sea.

Account of investigations conducted in 1925 and 1926 in the eastern and western approaches to Onezhskiĭ Zaliv and in Salma Rebolda (now Anzerskaya), the strait between Anzerskiy and Solovetskiy Islands in the mouth of the Bay. The outflow of water from Onega Bay was found to run mainly through the western part of the western strait; its depth does not exceed 25 m. and its character resembles that of the water in the bay. Currents of the area are also discussed. ***Copy seen:*** DLC.

54229. RATMANOV, GEORGIĬ EFIMOVICH, 1900– . K voprosu o gidrologicheskom rezhime "Sukhogo morîa". (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1928. vyp. 6, p. 73–80, maps.) Text in Russian. Summary in German. ***Title tr.:*** The problem of the hydrological regime of the "Dry Sea."

Account of investigations conducted in this, the northeastern part of the White Sea, during 1925–1926. The temperature and salinity regimen were determined. The southern part of the "Dry Sea" showed a low salinity due to the fresh water coming down the Dvina River. Mixing of water masses was good. Currents were also investigated. ***Copy seen:*** DLC.

54230. RATMANOV, GEORGIĬ EFIMOVICH, 1900– . K voprosu o vodoobmene cherez Beringov proliv. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1937. vyp. 25, p. 119–35, illus., tables, maps.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** The problem of water exchange through the Bering Strait.

Following a geographical outline of the area, the author presents the results of his investigations in 1932 and 1933 on 23 hydrological stations. In addition to current velocities and direction, salinity, temperature and other elements are discussed. The almost exclusive direction of the current was found to be to north, carrying relatively warm Pacific water through the Strait. The role of atmospheric pressure, and winds in this current is also evaluated. ***Copy seen:*** DLC.

54231. RATNER, BENJAMIN. Upper-air climatology of the United States. Washington, D.C., U.S. Govt. Print. Off., 1957–1958. 2 pt.: 199, 140 p. tables, maps, diagrs. (U.S. Weather Bureau. Technical paper no. 32.) Refs.

Part 1, *Averages for isobaric surfaces: height, temperature, humidity, and density,* presents climatological statistics of the upper air, including tables for 12 stations in Alaska, based on 8–10-year records. Data up to the 50 mb. surface generally are shown.

Part 2, *Extremes and standard deviations of average heights and temperatures,* presents data for eight pressure surfaces, ranging from 950 to 100 mb. for each month; charts (Jan., April, July, Oct.), for seven pressure surfaces, showing height contours and isotherms, with standard deviations and extreme values for each station. Absolute extremes of height, temperature, and density are also tabulated. ***Copy seen:*** DWB.

54232. RATSIMAMANGA, ALBERT RAKOTO, *and others.* Le comportement du rat surrénaloprive soumis au froid en fonction de sa graisse interscapulaire. (Société de Biologie, Paris. Comptes rendus, 1958. t. 152, no. 6, p. 956–60, illus.) 5 refs. Text in French. *Other authors:* G. Costes-Sodigné and M. Nigeon-Dureuil. ***Title tr.:*** Behavior of the adrenalectomized rat exposed to cold, with respect to the function of its interscapular fat.

Account of experiments with adrenalectomized male rats exposed to near-freezing temperatures. Removal of the interscapular fat, administration of its extract, or of some hormones, indicate the presence in this tissue of a principle similar to that of the adrenal; it enables the adrenalectomized rats to survive the cold stress. ***Copy seen:*** DLC.

RATTRAY, M., *Jr., see* Danielsen, E. F., *and others.* Intensity . . . severe storms . . . *1957.* No. 50431.

54233. RAUHALA, AARRE. Kotimaisia härmäsienilöytöja sekä tähänastiset tiedot härmäsienilajien kasvimaakunnittasesta levinneisyydestä maassamme. (Karstenia, 1957. v. 4, p. 14–26.) 17 refs. Text in Finnish. ***Title tr.:*** Erysiphaceae from Finland with notes on the present distribution.

Lists 54 species of fungi of fam. Erysiphaceae, with hosts, distribution and enumeration of specimens. Four of the species are native to the northern parts of Finland. A list of the host plants is added.

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54234. RAUHALA, AARRE. *Puccinia veratri* Niessl in Ostfennoskandien. (Karstenia, 1953. v. 2, p. 47.) Text in German. Summary in Finnish. ***Title tr.:*** *Puccinia veratri* Niessl in eastern Fennoscandia.

Records find of this rust fungus on an herbarium specimen of *Veratrum album* v. *lobelianum*, collected in Aug. 1887 by V. F. Brotherus in Russian Lapland (Kola Peninsula), near lake Shagajaur.

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RAUN, ALO, 1905– , *see* Indiana. University. The Ostyak . . . and . . . Vogul . . . *1955*. No. 51921.

54235. RAUP, LUCY C. A list of lichens of the Athabasca Lake region of northwestern Canada. (Bryologist, July 1928. v. 31, no. 4, p. 83–85, no. 5, p. 100–104.)

Contains a systematic list, representing 77 species (1,200 specimens) of lichens collected in 1926 in this northern part of Alberta. Distributional data are added. Some of the species spread to Alaska.

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54236. RAUSCH, DONALD O., 1902– . Ice tunnel, TUTO area, Greenland, 1956. Wilmette, Ill., Feb. 1958. 34 p. illus., diagrs., tables. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–56, v. 2. SIPRE technical report 44.) 10 refs.

Interim report on summer 1956 field work by a four-man party, to study feasibility of excavating rooms and tunnels under ice. At a site approx. one mile from Camp TUTO, a 2500 cu. ft. room, 10–25 ft. height and 3,600 sq. ft. floor space, was excavated. The extension of the tunnel (started 1955) indicated that an overburden depth (approx. 160 ft.) had been reached at which hand methods of tunnel driving were not practical; explosives or automatic coal mining machinery would be needed. Excessive deformation did not occur at the overburden depth reached in the extension.—From author's summary.

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54237. RAUSCH, ROBERT LLOYD, 1921– . The occurrence and distribution of birds on Middleton Island, Alaska. (Condor, July–Aug. 1958. v. 60, no. 4, p. 227–42, 6 illus.) 12 refs.

Results of a survey in June 1956 on this island (56°26′ N. 146°20′ W.) south of Prince William Sound. Its general geography, flora, fauna and biology are characterized. Forty-five species of birds were recorded, at least 16 were breeding, four others possibly breeding, and 25 regarded as transients. Distribution of the breeding was correlated with six major ecological formations, including a rocky cliff.

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54238. RAUSCH, ROBERT LLOYD, 1921– . Some observations on rabies in Alaska, with special reference to wild Canidae. (Journal of wildlife management, July 1958. v. 22, no. 3, p. 246–60, illus., maps.) 30 refs.

A study of the disease based on observations during 1949–1957, with the following found rabid: arctic fox (19 animals), red fox (14), wolf (2), dog (8). The majority of outbreaks occurred in the tundra during the colder months and at high population density. Three cases of rabies in man have been diagnosed clinically. All cases in dogs have been traced to contacts with wild animals. Evidence is presented that "arctic dog disease" is in fact rabies.

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54239. RAUSCH, ROBERT LLOYD, 1921– , *and* **V. L. JENTOFT.** Studies on the helminth fauna of Alaska, 31; observations on the propagation of the larval *Echinococcus multilocularis* Leuckart, 1863, *in vitro*. (Journal of parasitology, Feb. 1957. v. 43, no. 1, p. 1–8, illus.) 6 refs.

Preliminary report on attempts to propagate larval echinococcus in tissue culture. Cestode tissue was collected from the livers of experimentally infected field voles, red-backed voles and brown lemmings. The main conclusion from the investigation is that proliferation in this parasite takes place through external budding of new vesicles. ***Copy seen:*** DSI.

54240. RAUSH, V. A. Vneklassnaîa rabota po geografii v sovetskoĭ shkole.

(Geografiia v shkole, Sept.–Oct. 1957. god 20, no. 5, p. 40–46.) Text in Russian. ***Title tr.:*** Extra-curricular geographic work in the Soviet schools.

Notes work of numerous school geographic societies or groups active in the U.S.S.R.: their exchange of information, e.g., between the Arkhangel'sk and Vorkuta societies, and Alma-Ata; a local history museum organized by the Taybokhoy secondary school group on the upper Vilyuy in Yakutia.

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RAUTAVAARA, TOIVO, *see* Kujala, V. V., *and others.* Agaricales. *1953* No. 52545.

54241. RAVICH, M. G., *and others.* O stat'e A. M. Daminovoĭ "Vozrast kompleksa kristallicheskikh slantsev Taĭmyrskogo poluostrova." (Sovetskaia geologiia, Mar. 1958. god 1, no. 3, p. 130–32.) Text in Russian. *Other authors:* V. A. Vakar, *and* I. S. Gramberg. ***Title tr.:*** On the article "The age of the crystalline schist complex of the Taymyr Peninsula" by A. M. Daminova.

Criticism of No. 50427 for errors of method and fact, and for several false conclusions, due mainly to oversight or disregard of recent literature, especially papers of Ravich, Gramberg and others.

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RAVICH, M. G., *see also* Markov, F. G., *and others.* Geologicheskoe stroenie Taĭmyrskogo p–va. *1957.* No. 53144.

54242. RAVSKIĬ, Ė. I. ÎAkutskie almazy. (Nauka i zhizn', Apr. 1957. god 24, no. 4, p. 17–19, col. plate.) Text in Russian. ***Title tr.:*** Diamonds in Yakutia.

Brief account of systematic prospecting for diamantiferous fields in Central Siberia. Started in 1938, increased in 1947, it resulted in discovery in 1954 of a diamantiferous pipe in the Markha River basin, and in quick succession (1954–55) on both sides of the Vilyuy basin, some 40 other primary diamond deposits, among them the richest, "Mirnyy." A 32-carat diamond, the largest ever found in Russia, is noted. The difficulties of developing these fields in an almost uninhabited area are stressed, with mention of the new settlements of Mirnyy and Novyy. ***Copy seen:*** DLC.

54243. RAWSON, DONALD S., 1905– . The profundal bottom fauna of Great Slave Lake. (*In:* International Congress of Zoology, 14th, Copenhagen, 1953. Proceedings, 1956, p. 461–62).

Describes as fairly uniform, the bottom of this lake (61° N. 114° W.) 200–600 m. deep. The sparse bottom population includes single species of amphipod, ostracod, nematode, oligochaetes, sphaeriid and chironomid. ***Copy seen:*** DSI.

RAY, LOUIS LAMY, 1909– , *see* International Geographical Congress, 1952. Proceedings. *1957.* No. 51939.

54244. RAYMOND, MARCEL. Le *Carex rotundata* Wahlenb. en Amérique du Nord. (Naturaliste canadien, Aug.–Sept. 1957. v. 84, no. 8–9, p. 175–78, text map.) 20 refs. Text in French. ***Title tr.:*** *Carex rotundata* Wahlenb. in North America.

Contains historical notes and distributional data on this sedge, occurring in Alaska and in northern Canada from Mackenzie District to northern Labrador. Reports of its presence in Greenland seem to be wrong. ***Copy seen:*** DA.

54245. RAYMOND, MARCEL. The identity of *Carex misandroides* Fern. with notes on the North American Frigidae. (Canadian field-naturalist, July–Aug. 1952. v. 66, no. 4, p. 95–103, 3 plates, table 2.) 15 refs. Mémoire du Jardin Botanique de Montréal, no. 29.

Contains a key to the Canadian Frigidae, a table of comparison of *C. misandroides* (through arctic Europe, Asia, and North America from Alaska to Greenland) and *C. franklinii;* and descriptions of six species (two as new) also five varieties and forms.

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54246. RAYMOND, MARCEL. A new *Eriophorum* hybrid. (Naturaliste canadien, Aug.–Sept. 1957. v. 84, no. 8–9, p. 182–84, illus., text map.) 4 refs.

Contains a description of *E. beringianum* n. hybr. (*E. chamissonis* x *E. angustifolium* var. *majus*) distributed on both sides of the Bering Strait.

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RAYMOND, MARCEL, *see also* Löve, Å., *and others.* Cytotaxonomy of *Carex* section *Capillares. 1957.* No. 52891.

54247. RAYMOND, V., *and* **J. PARISOT.** Le pied de tranchée; symptomatologie, étiologie, pathogénie, traitement. (Journal de chirurgie, 1918. t. 14, no. 4, p. 329–63, illus. tables.) 7 refs. Text in French. ***Title tr.:*** Trench foot, symp-

tomatology, etiology, pathogenesis, treatment.

A comprehensive study of the disorder based on French casualties of World War I (French, Arab and Negro). Symptomatology indicates four degrees which are described in detail and illustrated. General symptoms, such as temperature, pulse, blood pressure are discussed, followed by consideration of complications, late developments, relapses, etiology and incidence are analyzed too, the latter indicating a great prevalence of the malady during the fall and spring periods of humid, cool conditions. The problem of pathogenesis is also elucidated on authors' experimental material, and treatment, mostly topical, is dealt with in detail. A short section on prophylaxis concludes the treatise. ***Copy seen:*** DNLM.

RAYNAL, RENÉ, *see* Dylik, J., *and* R. Raynal. Program prac komisji . . . *1958*. No. 50669.

54248. RAZNITSYN, V. A. Osnovnye cherty paleogeografii karbona Timano-Pechorskoĭ provintsii. (Akademiia nauk SSSR. Doklady, June 1, 1957. t. 114, no. 4, p. 865–68, 2 text maps.) Text in Russian. ***Title tr.:*** The main features in the paleogeography of the Carboniferous of the Timan-Pechora province.

Contains results of a comparative geological study. The province may be divided into three sections: the Timan, the elevated part of the middle Pechora, and (between them) the Pechora depression. Two stages of geological history can be discerned: lower Carboniferous, and middle+upper Carboniferous. Subdivisions (8) of lower Carboniferous deposits and those (10) of middle and upper Carboniferous formations are mapped. The tectonic history of the region, the sinking and elevation of various sections and transgressions of the Bashkir Sea are noted. ***Copy seen:*** DLC.

54249. RAZUMIKHIN, N. V. Gidravlicheskaia krupnost' almaza i ego osnovnykh sputnikov. (Leningrad. Universitet. Vestnik, 1958. god 13, no. 6, seriia geologii i geografii, vyp. 1, p. 132–40, diagrs., tables.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** Hydraulic size of the diamond and of its main associated minerals.

Reports results of a study of the speed at which a diamond sinks in water at rest, and similarly for kimberlite, quartz, pyrope, ilmenite, magnetite and almadite. The study was carried out in the Land Hydrology laboratory at Leningrad University by a group of scientists working with the Central Expedition of All-Union Geologic Institute, in the search for diamonds in Yakutia. Data for various sizes of minerals are tabulated (p. 135), illustrated by diagrams and discussed. The hydraulic size of the diamond does not correspond with its specific gravity (3.5), but is near that of heavy minerals with specific gravity 4–4.5. The significance of this finding for understanding the distribution of diamonds in alluvial deposits, is stressed. ***Copy seen:*** DLC.

READY, DANIEL, *see* Griggs, R. F., *and* D. Ready. Growth of liverworts from Katmai . . . *1934*. No. 51373.

54250. REDISCH, WALTER, *and others.* Chronic trench foot; a study of 100 cases. (Annals of internal medicine, May 1951. v. 34, no. 5, p. 1163–68, tables.) 11 refs. *Other authors:* O. Brandman *and* S. Rainone.

Report on the late, chronic phase of casualties from the 1944–1945 campaign in Europe, with emphasis on clinical picture and symptomatology, the latter including pain on walking or standing, posture, etc. Further support to the idea that the disorder is primarily a disturbance in regulation of the peripheral blood flow, is found. Abnormal sensitivity to cold is the outstanding incapacitating factor.
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54251. RED'KIN, M. Nad Kol'skoĭ tundroĭ. (Grazhdanskaia aviatsiia, Mar. 1957. god 14, no. 3, p. 11, illus.) Text in Russian. ***Title tr.:*** Over the Kola tundra.

Story of a group of students lost on a ski trip in Kola Peninsula tundra, then found and guided to safety by a helicopter. Flyers of the Northern Administration of the Civil Air Fleet are praised for their work in Murmansk Province, where 100,000 sq. km. of tundra stretches above the Arctic Circle.
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REDNIKOV, I. P., *see* Akademiia nauk SSSR. IAkutskiĭ filial. Za sovetskuiu vlast' . . . *1957*. No. 49170.

54252. REED, EDWARD B. *Diaptomus* (*Mixodiaptomus*) *theeli* Lilljeborg, Copepoda, Calanoida, from arctic Alaska. (Canadian field-naturalist, Oct.–Dec. 1958. v. 72, no. 4, p. 152–55, 7 illus.) 8 refs.

Describes: Diaptomus theeli, collected in a small pond at the confluence of the Colville and Itkillik Rivers on the arctic coastal plain, at 70°11′ N. with six other entomostracan crustaceans. Both female and male specimens were captured. Two other diaptomids recorded as occurring in Alaska and Eurasia, but not collected along the Colville, are *D. kurilensis* and *Acanthodiaptomus denticornis.*

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54253. REED, EDWARD B. Two new species of *Diaptomus* from arctic and subarctic Canada; Calanoida, Copepoda. (Canadian journal of zoology, Oct. 1958. v. 36, no. 5, p. 663–70, illus.) 2 refs.

Description of *Diaptomus wilsonae,* n. sp. from ponds of southwest Hudson Bay lowlands, and *Diaptomus victoriaensis* n. sp. from tundra ponds on Victoria Island. Both males and females of these planktonic crustaceans are described.

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54254. REED, JOHN CALVIN, 1905– . Exploration of Naval Petroleum Reserve No. 4 and adjacent areas Northern Alaska, 1944–53; part 1, history of the exploration. Washington, D.C., U.S. Govt. Print. Office, 1958. 192 p. illus., maps incl. 2 fold. and diagr. in pocket. (U.S. Geological Survey. Professional paper no. 301.) 6 refs.

First of five reports on exploration carried out by the Navy Dept. and the Geological Survey in the region 68°–71° N. 151°–162° W. Its purpose was to ascertain petroleum possibilities in this 70,000 sq. mi. area. Topographic, climatic, and other natural conditions are described and previous exploration reviewed. For each of the ten years in turn, the planning, operations, and results are reported. The operations included transportation, camp, road, airfield construction, surveys, drilling, etc. Work of the geophysical and geological field parties, and progress of air photography and mapping are stated. Operations of other agencies in the area are also reported year by year. Information is given throughout on vehicles and other equipment, their performance, maintenance, etc., on permafrost and environmental conditions, personnel, camp facilities, the Arctic Research Laboratory, on natives and their employment, on geologic and geographic features, especially streams, etc. This scattered information is made accessible through index appended; and various aspects of the operations and terrain are illustrated in some hundred photographs. In the useful summary which is added (p. 169–83), nine oil/gas fields are characterized, and the program as a whole is appraised as a pilot in organization and conduct of large-scale field operations under arctic conditions. ***Copy seen:*** DGS.

54255. REED, JOHN CALVIN, 1905– . The United States turns north. (Geographical review, July 1958. v. 48, no. 3, p. 321–35, 8 illus. incl. text map.)

Survey of problems in future development of the Arctic, mainly pertaining to living, transportation and communications. Notes unanswered questions about man, animals, plants, land and sea surface, the geological framework, the weather, and construction engineering, etc. on permafrost. Describes recent Canadian and American scientific, economic and military expansion toward the North, especially during the IGY. Private organizations, civilian and military agencies of the United States Government supporting arctic research are mentioned. IGY projects at Thule, Fort Churchill, Point Barrow, McCall Glacier in the eastern Brooks Range, and drifting stations A and B (Fletcher's Ice Island or T–3) are described. Some 50 U.S. stations conduct research in solar activity, cosmic rays, ionospheric physics, aurora and airglow, geomagnetism, meteorology, glaciology, oceanography, seismology and gravity. ***Copy seen:*** DGS.

REED, JOHN CALVIN, 1905– , *see also* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

54256. REED, JOHN CALVIN, 1930– . Geology of the Mount McKinley quadrangle, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1784.)

Abstracts paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957. Contains description based on recent reconnaissance geologic map of the area including the Alaska Range.

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54257. REED, JOHN CALVIN, 1930– . Vegetation studies for military purposes. (Military engineer, Nov.–Dec. 1957. v. 49, no. 332, p. 415–19, illus., tables, maps.)

Outlines objectives and requirements of tactical vegetation maps in military planning, and describes terrain studies by the 535th Engineer Detachment of the

Army Map Service in the Anchorage-Matanuska Valley area, Alaska (1955), and in California (1956). A tactical classification system of vegetation is presented and its adaptation to aerial photographs is illustrated and described. Aids and methods in map compilation are suggested; sampling and description of vegetation units are discussed. A section of the Alaskan map is shown together with its legend, which provides the data on vegetation type, forest density, tree species and heights, ground visibility, and effect on cross-country movement corresponding to the map unit.

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54258. REED, PETER I., *and* **K. E. GAVRILESCU.** The value of laboratory tests in hypothermia. (Journal of clinical pathology, May 1958. v. 11, no. 3, p. 220–23, tables.) 29 refs.

Report on investigation of 38 patients undergoing craniotomy under hypothermia. Significant changes were found in serum potassium, bicarbonate and protein, and in blood sugar and urea concentrations. Conditions are compared with those in hypothermic cardiac surgery; essential tests prior to hypothermia are discussed.

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54259. REED, RICHARD J. Arctic synoptic analysis. (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 48–59, maps, diagrs.) 3 refs.

Differences between arctic and middle-latitude analysis are of degree rather than of kind: in secondary problems, e.g., disagreement between meteorologists' analyses, existence of true fronts in the Arctic, and the so-called "arctic front." Discussion of these problems is supported by synoptic charts, an overall sketch map of cyclone behavior in the Arctic, and a cross-section of a cold front zone.

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54260. REED, RICHARD J. Arctic weather analysis. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958. p. 124–36, graphs.)

No special procedure or techniques are used in arctic weather analysis. Inadequacies of some of the present methods employed in synoptic meteorology and in the coverage of the present arctic weather network are discussed. Although station coverage is not adequate over the entire Arctic, test results suggest that numerical prediction can be carried out with reasonable success in areas where station density is comparable to that in the Canadian Archipelago. ***Copy seen:*** DLC.

54261. REED, RICHARD J. A baroclinic graphical prediction model. (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 69–76, diagrs.) 2 refs.

Explains the elements of graphical prediction, without mathematical detail. This method integrates the fundamental equations graphically instead of numerically. Model atmospheres are used. Baroclinic models are more complex than barotropic, but a 500 mb. (barotropic) forecast is a prerequisite to a surface or 1000 mb. (baroclinic) prognosis, considered here. Graphical prediction methods combine some advantages of both conventional techniques and the purely numerical (electronic) forecasts, based upon the dynamical equations, as described by Godson (q.v.), and may prove satisfactory until the numerical method shows superiority. ***Copy seen:*** CaMAI.

54262. REED, RICHARD J. Cold polar vortices. (*In:* Wilson, C. V. Contributions to the study of the arctic circulation, 1958. p. 60–68, maps, diagr., table.) 6 refs.

Informal discussion of cold polar vortices or cyclones, commonly present in the middle or upper troposphere, with emphasis on their climatology, structure, and mechanics; also comment on problem of forecasting movement of these systems. Impressions are stated of cold lows common throughout the Arctic during the cold season; vigorous polar lows occurring frequently during the summer, centered closer to the pole than in winter; at 500 mb., well-developed, cold season lows with central temperatures of −45° to −50° C. and a central height of 16,000 ft.; corresponding warm season figures: −30° C., and 17,000 ft.; polar, compared with middle latitude, lows have long life spans. A schematic diagram shows some structural features of these vortices. Their origin and maintenance are considered (from surface and 500-mb. - level charts). The Fjörtoft method of graphical forecasting (test results tabulated) is considered fairly promising.

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54263. REED, RICHARD J., *and* **W. G. TANK.** Miscellaneous studies of polar vortices. Seattle, May 1956. iii, 21 p. diagrs., maps, tables. (Washington.

State. University. Dept. of Meteorology and Climatology. Scientific report no. 1; Occasional report no. 4, Arctic meteorology-climatology.) 13 refs. The research was sponsored by the Geophysics Research Directorate of the Air Force Cambridge Research Center, Air Research and Development Command, under Contract no. 19(604)–1298.

Part 1 is a case study of factors contributing to the deepening of a polar low located over northern Canada Dec. 23–28, 1953. Rising motion was mainly responsible for the pronounced cooling which occurred during its most rapid intensification, the kinetic energy released was brought about in a manner somewhat different from that in mid-latitude cyclones. Pt. 2 contains measurements of vertical velocities over a large area of the North American Arctic and sub-Arctic during ten consecutive synoptic periods covering the time of the case study. The absolute values of these vertical velocities are mapped for each of the synoptic periods. An estimate of the large-scale vertical eddy flux of sensible heat at the 700 mb. level is made from temperature and vertical velocity measurements. The results suggest that the mean vertical eddy flux of heat is less at high than at middle latitudes. In pt. 3, a comparison is made of the temperature-dew point depression in closed lows, in high and low latitudes. No significant difference was found between lows in different geographical areas.

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54264. REED, RICHARD J. Synoptic studies in arctic meteorology. Seattle, Wash., July 1958. 64 p. text maps, graphs, tables. (Washington. State. University. Dept. of Meteorology and Climatology. Arctic meteorology-climatology, occasional report no. 9. Final report under contract AF 19(604)–1298).

Contains main results of eleven small studies carried on for four years by some 20 individuals under direction of R. J. Reed. They are of four types: a theoretical study of the arctic circulation; four statistical studies of the arctic circulation; three studies on the structure of arctic weather systems; three studies on prediction at high latitudes. Three appendices are added: The arctic jet stream; High winds at selected arctic stations; and Results of graphical-numerical predictions for the Arctic.

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REED, RICHARD J., *see also* IUGG. Symposium on polar meteorology. *1958.* No. 51947.

54265. REES, J. R. Accidental hypothermia. (Lancet, Mar. 15, 1958. no. 7020, p. 556–59, illus.) 24 refs.

A report of four cases with rectal temperatures of 80°–90° F. coupled with senility, myocardial infarction, paraplegia and diabetic coma. Pitfalls in diagnosis and ways of rewarming are discussed, as well as physiology and pathology.

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54266. REES, WILLIAM J. The status of the hydroid *Symplectanea bracteata* Fraser. (Nytt magasin for zoologi, 1957. v. 5, p. 17–19, illus.) 8 refs.

Contains a comparison of *Symplectanea bracteata* with *Monocoryne bracteata.* There is no valid reason why *Symplectanea* Fraser 1941, should be retained, for this species fits naturally into *Monocoryne* Broch, 1909. The known distribution of the two, *M. gigantea* from Hammerfest and Trondheim, and *M. bracteata* from Alaska, supports the view that they are circumpolar cold-water species.

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54267. REESIDE, JOHN BERNARD, 1889–1958, *and others.* Correlation of the Triassic formations of North America exclusive of Canada. (Geological Society of America. Bulletin, Nov. 1957. v. 68, no. 11, p. 1451–1514, 6 text maps, 4 tables, correlation chart, 2 fold. sheets.) 380 refs. cf. No. 30618.

Chart 8a of a series of correlation charts of North American sedimentary formations, prepared by the Committee on Stratigraphy of the National Research Council. The Triassic sequence in 111 areas, including 15 in Alaska and two in Greenland, is represented (plate 1) in numbered columns; and the index maps show (by column number) the general location of each area, including (fig. 4–5) Alaska, and Greenland. Correlation of continental Triassic sediments by vertebrate fossils is described in the text, and annotations are provided on the columns in the chart, including no. 95–109 on Alaska and no. 110–111 on Greenland; these show comparatively few formations and fossils; among the latter are corals and other marine fauna.

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54268. REEVES, HENRY C., *and* **A. P. HARRISON,** *Jr.* Effect of time and temperature upon survival of *Escherichia*

coli in sodium chloride. (Society for Experimental Biology and Medicine. Proceedings, June 1957. v. 95, no. 2, p. 278–82, illus.) 5 refs.

Suspensions of *E. coli* in 4.6 M NaCl stored at low temperatures showed at first a rapid decline in viable cells; but, as storage time extended, death rate became negligible, and the surviving cells maintained themselves for a long time. This resistance to cold is not heritable and is lost once the cells are removed from the saline. The tolerance to 4.6 M NaCl also appears to be acquired and does not exist preformed in a segment of the population. ***Copy seen:*** DLC.

54269. REEVES, MELVIN M., *and* **F. J. LEWIS.** Total body cooling in critically ill febrile patients. (Surgery, July 1958. v. 44, no. 1, p. 84–88, illus. tables.) 4 refs.

A study of 26 patients, half of them made hypothermic to 35°–36° C. Three survivors and eight clinical improvements occurred in the cooled group against no survivors and three improvements in the controls. No significant changes were noted in the hemoglobin, serum chlorides, potassium, sodium, etc. of the hypothermic patients nor in the mobilization capacity of their leucocytes. ***Copy seen:*** DLC.

54270. REGNELL, STEN. Fågelberget. (På skidor, 1958. p. 113–27, illus., map.) Text in Swedish. ***Title tr.:*** The bird cliff.

Contains impressions of bird-watching on Andøya and, particularly, on the bird cliff Bleiksøya (69°16′ N. 15°53′ E.) just off Andøya. Topography, vegetation and bird life generally in this region of north Norway are described. About 20 species are mentioned. ***Copy seen:*** NhD.

54271. REGNELL, STEN. Från det nordnorska fågelberget Bleiksøya. (Fauna och flora 1957, häfte 5, p. 199–202, map.) Text in Swedish. ***Title tr.:*** From the north Norwegian birdcliff Bleiksøya.

Ten species were observed breeding on this islet (69°16′ N. 15°53′ E.) in summer 1952. Of 65 pairs of kittiwake seen (*Rissa tridactyla*) one had orange-colored toes and shanks, normally black. Of about 100 pairs of common guillemot (*Uria aalge*) six to ten percent were bridled guillemots. ***Copy seen:*** DLC.

54272. REID, G. C. A magneto-ionic theory of the aurora. Dec. 1958. 16 p. 6 diagrs. (Alaska. University. Geophysical Institute. Geophysical Research Report No. 4.) 17 refs.

Presents qualitative description of the development of a typical auroral display as the result of an electrical discharge in the ionosphere; suggests that the potential difference existing between points in the interplanetary medium is the prime cause of the discharge. Discusses characteristics of the occasionally very intense aurora, dealing largely with optical phenomena; also notes the normal diurnal and seasonal variation of auroral occurrence. Presents a possible explanation of the origin of the electric field in terms of particles trapped in the earth's magnetic field.—From author's abstract.

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REID, L. CORSAN, *see* Postel, A. H., *and others*. The . . . hypothermia in experimental hemorrhagic shock. *1957*. No. 54105.

54273. REIMER, HORST. Fischereiforschungsschiff "Anton Dohrn." (Kosmos, Dec. 1955. Jahrg. 51, Heft 12, p. 552–54, illus.) Text in German. ***Title tr.:*** The fishery research vessel *Anton Dohrn*.

This 999-br. reg. t. vessel is fitted with a steam engine (850 ihp.) to minimize vibration. Improved maneuverability is obtained through an auxiliary propeller mounted on the rudder and driven by a 100 ihp. electromotor built into the rudder. Fishery equipment includes all types of nets and trawls, two motorboats, and (probably) herring-filleting machinery and a clippfish plant. Scientific equipment includes a bacteriological laboratory with deep-freeze plant, also biological, hydrographic, and oceanographic laboratories. The vessel has a complete hospital with operating room and X-ray equipment (the latter also used for fish vertebrae counts) and may be put to various uses outside the fishing season. ***Copy seen:*** DLC.

54274. REIN, KNUT. Echinokokksykdommens forekomst i Kautokeino. (Nordisk medicin, Mar. 1957. bd. 57, no. 10, p. 375–77, tables.) 8 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Echinococcosis incidence in Kautokeino.

Information is presented on the occurrence of this disease in the Scandinavian countries and Finland; incidence in the Kautokeino district in Norwegian Finnmark, with 17 cases described and dis-

cussed; local conditions as favoring spread of echinococcosis; earlier investigations in the area. ***Copy seen:*** DNLM.

54275. REĬNSON-PRAVDIN, A. N. Igra i igrushka Obskogo Severa; sot͡sial'nye korni igry. (Sovetskai͡a ėtnografii͡a, 1949, no. 3, p. 109–132, illus.) Approx. 40 refs. Text in Russian. ***Title tr.:*** Toys and games of the Ob' north; social roots of play.

Discusses the sociological origin of toys and games using ethnological material collected among the Ostyaks, Voguls and Nenets (Samoyeds). The affinity between the boys' playthings and the occupation of the men (hunting, herding or fishing games) is stressed. Influence of taboo and cult is traced in dolls, and the child's facility with dolls considered an indicator of adult skills at her marriage (usually at age 12–13). Aboriginal dolls are described. Russian influence on present-day toys and games is dealt with.

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54276. REĬNVAL'D, ĬURIĬ. Pobezhdai͡ushchiĭ tundru. (Vokrug sveta, June 1958, no. 6, p. 5–7, illus.) Text in Russian. ***Title tr.:*** Subduing the tundra.

Sketch of Noril'sk and its development: the Dudinka-Noril'sk railroad; difficulties of construction on frozen ground; open mining of polymetallic ores at Medvezhiy Ruchey (Bear Creek); Mt. Shmidtikha coal; work of several thousand Komsomol youth, who came to Noril'sk in 1956; the museum at the Noril'sk combine. A brief account of the ore and coal discoveries in 1919 and the foundation of Noril'sk is included.

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REISER, HILLARD N., *see* Gryc, G., *and others.* Geology of northeastern Alaska. *1958.* No. 51410.

54277. REITAN, PAUL H. The structure in the area of mineralization on Ulveryggen, Repparfjord, Finnmark. (Norway. Geologiske undersøkelse. Årbok 1957, *pub.* 1958. nr. 203, p. 76–79, map.) 4 refs. Summary in Norwegian.

Presents a large scale map and further information on the geology of the copper deposit in the Raipas formation at Ulveryggen (70° N.) northern Norway, treated in No. 55858. Mineralization occurs in a structurally disturbed area near a high-angle, probably reverse, fault separating arkosic sandstones from greenstones and greenschists.

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REJAL, HABIB, *see* Abramson, D. I., *and others.* Relationship . . . tissue temperature and oxygen uptake . . . resting. *1958.* No. 49107.

54278. RENGMARK, FOLKE, 1902– . Om väderlekens betydelse för tjällossningen. (Svenska vägföreningen. Tidskrift, Apr. 1955. årg. 42, häfte 3, p. 88–95, 2 tables, 7 graphs.) Text in Swedish. ***Title tr.:*** The influence of climate on spring thaw.

The bearing capacity of roads in damp places in several Swedish localities, including Gällivare, was studied in 1944–54, and its decrease during thawing correlated with pertinent weather data. The character of precipitation before and temperature during the thawing period were found to be primary factors: the precipitation raises the ground water to the subsurface, where it freezes. Further research is required to reduce road damage. ***Copy seen:*** DLC.

RENNERFELT, E., *see* Lekander, B., *and* E. Rennerfelt. Om blånads- och insektsskador . . . *1957.* No. 52740.

54279. RENNIE, DONALD WESLEY, 1925– , *and* T. ADAMS. Comparative thermoregulatory responses of Negroes and white persons to acute cold stress. (Journal of applied physiology, Sept. 1957. v. 11, no. 2, p. 201–204, illus.) 10 refs.

Report on experiments with eight Negro and eight white soldiers stationed in Alaska. During acute cold exposure in summer or winter, heat debt was the same in both groups; fingers of Negroes cooled significantly more and cold vasodilatation was rare; metabolism during cold exposure was significantly lower in the Negro group. No seasonal effect upon these responses was observed.

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RENNIE, DONALD WESLEY, 1925– , *see also* Rodahl, K., *and* D. W. Rennie. Comparative sweat rates . . . Eskimos and Caucasians . . . *1957.* No. 54353.

54280. RENSKÖTSELN OCH DEN NUTIDA NORRLÄNDSKA SKOGSHANTERINGEN. 56 p., tables. (Lappväsendet. Renforskningen. Meddelanden, 1955. 3.) Text in Swedish. ***Title tr.:*** Reindeer husbandry and present-day Norrland forestry.

Contains résumés of the more important lectures given at Jokkmokk, north Sweden, Sept. 1954, in a six-day course to

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acquaint forestry men and reindeer breeders with each other's activities and problems. Details on the two occupations, and their mutual influence, background and laws concerning reindeer husbandry etc., are given. The importance of close cooperation is stressed.
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REPPLINGER, E. F., *see* Schwartz, I. R., *and others.* Transplantation of bone marrow . . . preservation at −70° C. *1957.* No. 54638.

54281. RESEK, MARC, 1892– . Heating systems for arctic operation of military equipment. Cleveland, Perfection Stove Co., 1951. 18 l. illus., plates, diagrs.

Engineering and operational requirements of motor vehicle engine pre-heaters and cabin heaters are outlined for temperatures to −65° F. Various systems, such as electric and auxiliary independent heaters, slave kits, under-chassis and coolant systems, contaminated air heaters, and radiant and fresh-air heaters are described and their efficiency discussed. Other provisions for starting and cold weather operation of motorized equipment (special fuels, lubricants, antifreeze, etc.) are briefly outlined, also causes for starting failure and heater break-down. Advanced heater models and their installation are illustrated. ***Copy seen:*** DLC.

54282. RETALLICK, HAROLD J., 1916– . Geography of the region of Umiat, Alaska. Worcester, Mass., Clark University, 1950. 200 p. Typescript, with 41 illus., 12 diagrs. 20 text maps, 23 tables, 4 fold. maps. Over 100 refs. Ph. D. dissertation.

Study of the Umiat region (69°22′ N. 152°09′ W.) as representative of the upland of the arctic slope of Alaska. The physiographic development is outlined, with discussion of the relative terrace levels in the Colville River valley. Relationships between permafrost and vegetation, polygonboden types, solifluction are considered; plants are identified with account of their habitats, climax vegetation; animal life is described. Mapping and identification keys based on aerial photographs are illustrated.
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54283. REUSCH, HANS HENRIK, 1852–1922. Et nyt traek i Norges geografi. (Norske geografiske selskab. Årbok, 1893–1894, *pub.* 1894. v. 5, p. 112–14, illus.) Text in Norwegian. ***Title tr.:*** A new feature in Norway's geography.

Deals with the Norwegian strandflat, with emphasis on the long period of stationary sea level when the sea was ice free, hence a pre-glacial dating of the strandflat. ***Copy seen:*** DLC.

54284. REVELLE, ROGER RANDALL DOUGAN, 1909– . Sun, sea and air. (Oceanus, summer and autumn, 1957. v. 5, no. 3–4, p. 27–36, illus.)

Discusses factors influencing climatic change in present and past times: radiation, air temperature and circulation, etc. Problems in forecasting climatic change are mentioned, and research, including glacier and oceanographic studies, during the IGY, which are expected to contribute to elucidation of the problem. ***Copy seen:*** DLC.

54285. REVERDATTO, M. V. Sokhranenie kory vyvetrivaniîa i razvitie rel'efa pravoberezh'îa srednego techeniîa r. Leny. (Moskva. Universitet. Vestnik. Seriîa biologii, pochvovedeniîa, geologii, geografii, 1958, no. 2, p. 253–59, table, profile, map.) Text in Russian. ***Title tr.:*** Preservation of weathered earth and development of relief on the right bank of the middle course of the Lena River.

Presents field observations on weathering in a comparison of roles of weathering and erosion in the development of relief in the Lena basin between its right tributaries Tuolba and Namana. Three stages of relief, caused by variety of surface rocks and the effects of erosion and weathering, are mainly dealt with. Cambrian carbonaceous rocks predominate in this region; they consist of (1) low level of dolomites, limestones and marls, which lie almost horizontal and have a gentle configuration; these represent an erosion surface modeled by a dense net of rivers, developed in the late Quaternary; (2) the plains above, with an older relief surface, formed in the beginning of the Triassic period and not significantly affected by the later cycle of erosion; (3) the most ancient surface, persisting in small spots on the watersheds, is of Jurassic origin and consists of lime-containing conglomerates. In contrast with the two lower erosion surfaces, these spots are typified by weathering as the dominant factor; erosion plays only a secondary role. Insufficient denudation has preserved here the oldest, Jurassic,

relief. A geomorphic map, at scale 1:1,000,000 is included.

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54286. REY, LOUIS R. Aspects physico-chimiques de la congélation des tissus et de leur conservation par les basses températures. (Annales de la nutrition et de l'alimentation, 1957. v. 11, no. 2, p. 103–124, illus.) 49 refs. Text in French. ***Title tr.:*** Physico-chemical aspects of freezing of tissues and of their conservation at low temperatures.

A comprehensive study dealing with (1) physical phenomena of freezing: freezing of water, of saline and of colloidal solutions; (2) freezing of animal tissues: physical conditions and mechanism of slow and quick freezing and thawing, cellular mechanisms in freezing, protection of cells against freezing injury (dehydration, protective fluids); (3) tissue preservation at low temperatures: freezing and thawing, maintenance temperature, lyophilization; practical applications, tissue banks. ***Copy seen:*** DNLM.

54287. REY, LOUIS R. Dispositif pour l'examen microscopique aux basses températures. (Experientia, May 1957. v. 13, no. 5, p. 201–202, illus.) 8 refs. Text in French. ***Title tr.:*** Arrangement for microscopic examination at low temperatures.

Description of assembly consisting in the main of a microscope, a cooling unit and temperature regulating mechanisms. It permits improved microscopic study of tissues while cooling them down to −180° C. or during rewarming, both slowly or quickly. ***Copy seen:*** DLC.

54288. REY, LOUIS R. L'examen microscopique aux basses températures. (Nature, *Paris*, July 1958. no. 3279, p. 267–68, illus. tables.) Text in French. ***Title tr.:*** Microscopic examination at low temperatures.

After pointing out the value of direct observation of freezing in cells and tissues, author describes apparatus attached to a microscope which enables slow or rapid freezing or thawing of preparations. Temperatures as low as −180° C. can be obtained. Mode of operation is also described. ***Copy seen:*** DLC.

54289. REY, LOUIS R. Physiologie du coeur de l'embryon de poulet *in vitro* après congélation à très basse température. (Journal of embryology and experimental morphology, Mar. 1958. v. 6, pt. 1, p. 171–77, illus.) 5 refs. Text in French. Summary in English. ***Title tr.:*** *In vitro* physiology of chick embryo heart after freezing to very low temperature.

A study of survival of whole heart and of pieces of it (in tissue culture) following freezing to temperatures as low as −196° C. Glycerol was found to have a protective value, with an optimum at 30% concentration. Rapid thawing was also essential for survival.

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54290. REY, LOUIS R. Studies on the action of liquid nitrogen on cultures *in vitro* of fibroblasts. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 460–66, illus.) 7 refs.

Fragments of living tissue, usually from chick embryo heart, rapidly frozen, stored in liquid N, then thawed, showed no surviving elements when cultured *in vitro*. Similar tissue when impregnated in glycerine-saline prior to freezing remained viable, with a maximum survival for 25–30% glycerol. Problems of cold injury are discussed on the basis of these observations. ***Copy seen:*** DNLM.

REYNOLDS, DAVID H., *see* Woodhall, B., *and others*. The . . . effects of localized cerebral hypothermia. *1958*. No. 56110.

REYNOLDS, DAVID H., *see* Woodhall, B., *and* D. H. Reynolds. Localized cerebral hypothermia. *1958*. No. 56109.

54291. REZVOĬ, PETR DMITRIEVICH. K faune gubok morîa Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1932. vyp. 15, p. 127–31, illus., table.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** The fauna of sponges in the Laptev Sea.

Description of four forms collected near Svyatoy Nos in 1927, by A. M. Popov of the marine party of the Academy of Sciences, Yakut Expedition. Taxonomy, location, geographic distribution, substrate, etc. are noted.

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RHIAN, MORRIS A., *see* Mazur, P., *and others*. Survival of *Pasteurella tularensis* . . . cooling and warming . . . *1957*. No. 53196.

RHODE, LEE, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

54292. RÎABCHIKOV, EVGENIĬ IVANOVICH. Moîa znakomaîa s Taĭmyra. (Sovetskaîa zhenshchina, Dec. 1957, no.

12, p. 11–13, illus.) Text in Russian. ***Title tr.:*** My lady-friend from Taymyr.

Relates two encounters, in 1935 and now, with a Nenets woman, Evdokiia Sergeevna Laptukova, school teacher from Kur'ya, manager of a club reading-room, organizer of the first kolkhoz on Taymyr, first party member among Nenets women and first woman to work on the construction of Noril'sk. Present-day conditions on Taymyr are compared with those of 1935 and the social achievements of Noril'sk enumerated: subway, theater, metallurgical college, mines, plants, etc.

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54293. RIABCHIKOV, EVGENIĬ IVANOVICH. Smena polîarnykh vakht. (Ogonëk, Apr. 1957. god 35, no. 15, p. 7, illus.) Text in Russian. ***Title tr.:*** Relief of polar teams.

Notes current Soviet arctic and antarctic undertakings; relief of personnel of drifting station North Pole-6, by the relief team headed by D. Driatskiĭ; setting up of North Pole-7, headed by V. Vedernikov; the 6,800 km. drift of North Pole-4, its passing across the North Pole, etc. ***Copy seen:*** DLC.

54294. RIABCHIKOV, EVGENIĬ IVANOVICH. Za 69-I parallel'iû. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 14–15, illus.) Text in Russian. ***Title tr.:*** Beyond the 69th parallel.

Sketch of present-day Noril'sk by a journalist who witnessed its foundation in 1936: its eight-story technical school with 1,689 students, 20 primary schools with over 8,000 pupils, libraries with altogether 600,000 books; the nickel and copper producing plants, hot houses, workers, etc. Illus. include photos of the nickel plant. ***Copy seen:*** DLC.

54295. RIABCHIKOV, PETR IVANOVICH. Rasprostranenie drevotochtsev v morîakh SSSR. Moskva, Izd-vo Akademii nauk SSSR, 1957. 230 p. illus. tables, maps. Approx. 160 refs. Text in Russian. ***Title tr.:*** Distribution of wood borers in the seas of the U.S.S.R.

A zoogeography of the molluscan and crustacean borers, including the Barents Sea (p. 114–38), White Sea (p. 139–45) and the Seas of Okhotsk and Japan (p. 146–209). No wood borers are found in the other, high arctic seas of the U.S.S.R. Of the molluscs, *Bankia setacea*, inhabits parts of the Okhotsk Sea; three others, (*Teredo norvegica, T. megotara* and *Xylophaga dorsalis*) are brought into the Russian arctic seas by the Gulf Stream in driftwood, and cannot be claimed as part of the indigenous fauna. The crustacean *Limnoria lignorum* is widely distributed in the northern seas discussed, whilst *Neosphaeroma oregonensis* (Okhotsk Sea), though found in holes of other borers, is apparently not a borer itself. Protection of wooden vessels and structures against borers is also discussed (p. 210–13). ***Copy seen:*** DLC.

54296. RIABKOV, K. F. O normakh proektirovaniia zdaniĭ i sooruzheniĭ v puchinistykh gruntakh. (Stroitel'naia promyshlennost', Sept. 1957. god 35, no. 9, p. 19–22, diagr.) Text in Russian. ***Title tr.:*** Design standards for buildings and structures on swelling ground.

Studies of deformation in foundations and columns due to ground swelling are described in detail, with emphasis on ground composition (sand, sandy-loam, argillaceous soil, clay, etc.) and moisture absorption. Influence of thermal conditions upon the location of wall deformations (cracks) is analyzed. The depth of freezing is discussed in respect to the relative location of insulated and non-insulated ground. Arrangement of open drainage trenches and insulating ground cover (gravel, slag, peat, etc.) around the building are outlined as control measures for uniform and reduced freezing. Quality of material and workmanship is stressed as a factor in stable foundation construction. Separation of the foundation wall from the ground by tar paper, greasing or oiling, is recommended to prevent wall adfreezing and to permit sliding of the ground along the wall without lifting it. Standard regulations for safe construction should be developed, providing for evaluation of local conditions in respect to ground swelling, moisture content of the ground before freezing, and severity of winter. ***Copy seen:*** DLC.

54297. RIABOV, IU. Meteostantsiia na khrebte Suntar-Khaîta. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 24, illus.) Text in Russian. ***Title tr.:*** Meteorological station on the Suntar-Khayata Range.

Interview with N. Khûkin, deputy-chief of the Kolyma Administration of the Hydrometeorological Service: 11 stations in the Kolyma basin area are to make observations during the IGY., one of them (near Oymyakon) 2,040 m. above

sea level on the watershed between the Indigirka and rivers emptying into the Okhotsk Sea. Photo shows station under construction. ***Copy seen:*** DLC.

54298. RÎABOV, ÎU. Zolotaîa vetochka. (Ogonëk, July 1957. god 35, no. 28, p. 30, illus.) Text in Russian. ***Title tr.:*** The golden twig.

In 1956, many gold nuggets were found in the North, the largest weighed 2,126 gm. A special device for picking nuggets out of ore is constructed by the Energetic Laboratory of Dal'stroĭ (?Dal'nevostochnyĭ stroitel'nyĭ trest—Far Eastern Construction Trust), and 30 nuggets were recently found in the Kolyma gold fields. Photo shows a nugget in the form of a twig. ***Copy seen:*** DLC.

54299. RÎABOV, VIKTOR VASIL'EVICH. Okhota i okhotnich'e khozîaĭstvo v SSSR. (Okhotnich'i prostory, 1957. kniga 8, p. 356–74, tables.) Refs. Text in Russian. ***Title tr.:*** Hunting and the hunting industry in the U.S.S.R.

Over 120 commercial animals, including 43 valuable fur-bearers, and some 200 commercial birds occur in the U.S.S.R. and provide a firm basis for the hunting industry. The game resources, considerably depleted by rapacious hunting in pre-Revolutionary times, are recovering due to measures of protection and control adopted by the Soviet government. Soviet hunting societies, hunting farms, sanctuaries and preserves, organs of the hunting administration, scientific institutes and their functions are outlined. Game laws and regulations, measures for the recovery of game resources and acclimatization of valuable animals, for combating poachers and predatory animals are indicated. Progress in collective hunting methods and in dog breeding is discussed with critical comment on shortcomings in several fields of the hunting industry. Liquidation of the All-Union hunting society in 1933, lack of a hunting society in the R.S.F.S.R., and of an All-Union administration of the hunting industry are deplored. Failures are noted in certain acclimatization experiments and in the struggle against wolf predation. Although 40–50,000 wolves are killed annually in the U.S.S.R., their bands are estimated at 100–130,000 head, and their damage amounts to 430–480 million rubles a year, which is equivalent to the total income of the Soviet fur trade. The situation, needs and prospects of hunting in northern and arctic areas are mentioned incidentally throughout.

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RÎABTSEV, I. I., *see* Gamburg, D. ÎU., *and* I. I. Rîabtsev. Gazifikatsiîa frezernogo torfa. *1958.* No. 51073.

54300. RÎABUKHIN, M. V. Konstruktivnye osobennosti privodov k rolu na SRT i ikh promyslovye ispytaniîa v Severnoĭ Atlantike. (Rybnoe khozîaĭstvo, Aug. 1958. god 34, no. 8, p. 43–47, illus.) Text in Russian. ***Title tr.:*** Structural peculiarities of transmissions to rollers on trawlers and their efficiency tests in the northern Atlantic.

Various types of transmission gears (cable, chain and universal shaft) used in fishing trawlers for pulling in the nets are analyzed in respect to the non-synchronized movements of the main winches and net-pulling rollers. A chain transmission gear of new construction is described in detail, with illus. It enables the movement of separate units of the transmission system to be synchronized.

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RIBERI, ANGELO, *see* Kajikuri, H., *and others.* Effect of hypothermia . . . chlorpromazine on survival . . . shock. *1957.* No. 52126.

54301. RICCARDI, RICCARDO. Le regione artiche e i recenti progressi nella loro conoscenza. (Società geografica italiana. Bolletino. Jan.–Mar. 1958. ser. 8, v. 11, fasc. 1–3, p. 98–112, illus.) 30 refs. Text in Italian. Summary in English. ***Title tr.:*** Arctic regions and recent progress in their exploration.

Traces past and present expeditions to polar regions, with emphasis on the economic and air-navigational importance of the Arctic. Results of the French and British expeditions to Greenland, Soviet, American and Canadian exploration of the arctic seas, the drift stations and ice islands, meteorological findings and climatic changes, etc., are dealt with. Paper read at the Society's meeting on Mar. 1, 1958. ***Copy seen:*** DLC.

54302. RICE, DONALD A. Gravity control measurements in North America. Washington, D.C., U.S. Govt. Print. Off., 1958. 23 p. 2 text maps, 3 tables. (U.S. Coast and Geodetic Survey. Pub. 63–1.) 4 refs.

Contains notes on measurement techniques, and observational data from

pendulum measurements made at eleven key stations in the U.S., Canada, and Alaska, 1952–53. Program was coordinated with observations by the Dominion Observatory of Canada, and by the University of Wisconsin. Alaska observations were made in 1952 at four pendulum stations: Umiat, Point Barrow, Fairbanks, and Kodiak; and at six gravity meter bases: McGrath, Bethel, Nome, Kotzebue, Seward, and Dutch Harbor. Data are tabulated; results are summarized; errors discussed; local gravity differences were measured to various existing stations; station sites are described.

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54303. RICH, EDWIN ERNEST, 1904– , *Editor.* Moose Fort journals, 1783–85. Edited by E. E. Rich, assisted by A. M. Johnson. With an introduction by G. P. de T. Glazebrook. London, Hudson's Bay Record Society, 1954. xxx, 392 p. 3 fold. maps. (Hudson's Bay Record Society. Publications, 17.)

Presents day-to-day record of weather and activities at the Hudson's Bay Co. trading post near the mouth of Moose River at the foot of James Bay. It served as a seaport: trade goods from England and furs from the interior moving in and out in the short open season for sailing vessels. It was one of the Company's two main trading centers (each with subsidiaries) in the area and the journals record extensive traffic with the interior as well as with local Indians. Procurement of game, fish, firewood, post and boat building and repair, movements, health, etc. of Company personnel, transactions with Indians, communication with the Albany post, etc. comprise the daily record kept by John Thomas, chief officer at Moose Fort in this period. Appended are: correspondence between Moose and subsidiary posts; notes on Company posts (six) in the area and their main personnel; standards of trade: value of trade goods and of furs, etc., expressed in beaver skins. Introduction dealing with historical and economic aspects of Moose Fort is followed by list of its personnel. Reviewed by J. W. Anderson in *Beaver,* Spring 1955, Outfit 285, p. 40–41. ***Copy seen:*** DLC.

RICHARD, JULES, *see* de Guerne, J., *and* J. Richard. Sur la faune des eaux douces du Groenland. *1889.* No. 51415.

54304. RICHFORD, W. A. Impression of a trip through Hudson Straits. (Shipping register and shipbuilder, Jan. 1957. v. 40, no. 1, p. 18, 34.)

Comments, by a director of the Hudson Bay Route Association, on ice conditions, development at Churchill, and port traffic during summer 1956. Ice conditions were severe with heavy ice at the eastern end of the Strait as late as July 21. Present ice reporting methods for shipping needs are criticized and new procedures suggested. Extension of the port's dock facilities is recommended. The port closed its season on Oct. 7, setting a new record for grain movement at over 16 million bushels.

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RICKER, W. E., *see* Bishop, Y., *and others.* Index . . . publications . . . Fisheries Research Board of Canada, 1901–1954. *1957.* No. 49742.

54305. RIDGE, J. W. Freezing of the cornea. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 531.)

Author stresses the importance of pH of the preserving medium, for both resistance to cold and to the toxic effects of glycerol. The problem of bubble formation in whole, stored eye, is also discussed. ***Copy seen:*** DNLM.

RIEBEN, ANDRE, *see* Galletti, P. M., *and others.* Influence of blood temperature . . . pulmonary circulation. *1958.* No. 51061.

54306. RIECK, ALVIN FRANK, 1919– , *and others.* Temperature acclimation in amphibians. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 133.) *Other authors:* J. Belli *and* M. Blaskovics.

Account of experiments with newts and frogs kept at constant temperatures of 5° to 30° C. In both animals, cold-adjusted groups showed a higher O_2-uptake than warm-acclimated groups. Sex or state of feeding had no effect on results. Differences in tissue respiration are also reported. ***Copy seen:*** DLC.

54307. RIEDESEL, M. L., *and* G. E. FOLK, *Jr.* Serum magnesium changes in cold-exposed mammals. (Journal of mammalogy, Aug. 1957. v. 38, no. 3, p. 423–24, table.) 4 refs.

Summary of investigations on the little and big brown bat, ground squirrel, hamster and black bear. Hibernation or winter rest brought about an increase in serum magnesium which varied according to species. Cold exposure without

hibernation or winter rest did not elevate the serum magnesium. The latter showed no significant change in the little brown bat till core temperature dropped to 13° C. ***Copy seen:*** DI.

RIESEN, AUSTIN H., *see* Chow, K. L., *and others.* Degeneration of retinal ganglion cells . . . darkness. *1957.* No. 50244.

54308. RIGG, GEORGE BURTON, 1872– . Comparison of the development of some sphagnum bogs of the Atlantic Coast, the Interior, and the Pacific Coast. (American journal of botany, Jan. 1940. v. 27, no. 1, p. 1–14, 5 illus.) 43 refs.

Contains descriptions of specific examples from each of the three regions. The development of bogs is inferred from their present vegetation, their strata and the materials on which they rest. Raised sphagnum bogs and flat sphagnum bogs occur in Southeast Alaska and along the Alaska coast as far west as the Shumagin Islands. Northern species on the Pacific coast are found farther south in sphagnum bogs than in other habitats except on mountains. ***Copy seen:*** DLC.

54309. RIGG, GEORGE BURTON, 1872– . Growth of trees in sphagnum. (Botanical gazette, Apr. 1918. v. 65, no. 4, p. 359–62, 2 tables.)

Based on data from the Puget Sound region and Alaska, where some conifers are found in sphagnum. Lodge pole pine, Alaska cedar (*Chamaecyparis nootkatensis*), and Sitka spruce are the most common, and they grow poorly in sphagnum. Along the south coast of the Alaska Peninsula, deciduous trees and shrubs are often found in sphagnum (usually stunted and often prostrate) e.g., paper birch (*Betula papyrifera alaskana*), peatbog birch, late alder (*Alnus sinuata*), and net-veined willow (*Salix reticulata*). ***Copy seen:*** DLC.

54310. RIGG, GEORGE BURTON, 1872– . Notes on the flora of some Alaskan sphagnum bogs. (Plant world, June 1914. v. 17, no. 6, p. 167–82, 3 illus.) 13 refs.

Sphagnum bogs along the seashore from Cape Spencer to the Shumagin Islands were examined in summer 1913. All were comparatively thin deposits over rocks and many are occasional patches within tundras, e.g., at Yakutat, Dixon Harbor, Snug Harbor; others are bordered by coniferous forest (e.g., Cordova), while still others occur in forestless areas (e.g., Three Saints Bay, Mitrofania Bay, Unga Island, Sand Point). Eleven of the more typical plants are listed; *Empetrum nigrum* is the most characteristic both in bogs and elsewhere in xerophytic habitats. ***Copy seen:*** DLC.

54311. RIGG, GEORGE BURTON, 1872– . Some sphagnum bogs of the North Pacific coast of America. (Ecology, July 1925. v. 6, no. 3, p. 260–78, plate 4.) 27 refs.

Reports study of 78 bogs, from Coos Bay to Shumagin Island, eleven in Alaska. Besides *Sphagnum*, their most characteristic plants are *Oxycoccus oxycoccus* and *Drosera rotundifolia*. The bogs vary in depth from one to over 30 ft.; those in Alaska are shallow, and rest on rocks. Physiological conditions in bogs exercise a selective influence on their flora. ***Copy seen:*** DLC.

54312. RIGSBY, GEORGE P. Study of ice fabrics, Thule area, Greenland. Wilmette, Ill., Apr. 1955. 8 p. illus., diagrs. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954. v. 1, *pub.* 1957.) SIPRE report 26.

Crystal fabric studies were made on glacier ice taken from 11 locations on the Nuna Ramp, approx. 34 mi. northeast of Thule, and three locations on the Moltke Glacier, approx. 15 mi. east of Thule (map). Field work was carried out June 23–Aug. 25, 1954, by a two-man party. Fabric diagrams obtained are shown. Ice appears to be very sensitive to shearing forces. The strength of the pattern appears to be more or less proportional to the strength of the shearing forces, imposed on the ice. Strong shearing forces seem to produce small crystals, with strong preferred orientations, while high temperatures tend to produce larger crystals.—From author's abstract. ***Copy seen:*** CaMAI.

54313. RIKHTER, GAVRIIL DMITRIEVICH, 1889– . Ozera zapadno-sibirskoĭ nizmennosti. (Priroda, Sept. 1957. no. 9, p. 95–98, 3 illus., text map.) 6 refs. Text in Russian. ***Title tr.:*** Lakes of the West Siberian lowland.

Contains a scheme (text map in scale 1 : 1,000,000) of lake distribution in the large depression between the Ob' and Yenisey Rivers, and from 58° N. to the

Arctic Ocean. The greatest concentration of lakes is in the northern low section from the Arctic Circle to 70° N. also in the central (60°–63° N.) and southern (54°–56° N.) parts. Some regularities are shown in distribution and forms of lakes: in some regions (southeastern) they trend in a northeasterly direction, in others they are grouped in river valleys and lowlands or on the watersheds. The lake forms are variable: round, oblong, cleft, etc. Eight regional subdivisions are shown on the scheme and their characteristics noted in the text.

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RIKMAN, V., *see* Bardin, I. P., *and* V. Rikman. Perspektivy . . . metallurgii v vostochnykh raĭonakh . . . *1957.* No. 49540.

54314. RILEY, PHILIP ARTHUR, 1925– , *and others.* Antifibrillary drugs for deep hypothermia in the dog. (Surgery, Nov. 1957. v. 42, no. 5, p. 936–42, illus., tables.) 5 refs. *Other authors:* B. M. Mixon, *Jr., and* T. G. Barila.

Report on antifibrillary effect of a series of drugs upon hypothermic dogs. Arfonad given at 23° C. and Prostigmin combined with pentobarbital or thiopental reduced the incidence of ventricular fibrillation. Chlorpromazine had no effect. The effects of these drugs on incidence of survival after ventricular fibrillation was also noted.

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RILEY, PHILIP ARTHUR, 1925– , *see also* Villalobos, T. J., *and others.* A cause . . . thrombocytopenia and leucopenia . . . hypothermia. *1958.* No. 55815.

54315. RINDANI, T. H., *and* **R. C. MERCHANT.** Effect of acetylcholine on cooled heart. (Indian journal of medical research, July 1957. v. 45, no. 3, p. 363–68, illus.) 8 refs.

Account of investigation on the effects of vagal stimulation and acetylcholine on frog heart, perfused with Ringer-Locke solution. It was observed that cold-perfused preparations did not show the usual inhibition with vagal stimulation and acetylcholine administration.

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54316. RINGDAHL, OSCAR, 1885– . Dipterologiska notiser 16 och 17. (Opuscula entomologica, 1958. bd. 23, häfte 1–2, p. 90–94.) Text in Swedish. Summary in German. ***Title tr.:*** Notes on Diptera, 16–17.

Contains notes on Brachycera chiefly from Ångermanland and Värmland, but some species spreading to Swedish Lapland. ***Copy seen:*** DA.

54317. RINGDAHL, OSCAR, 1885– , Neue islandische Dipteren nebst Beschreibung einer neuen *Pegomyia*-Art. (Entomologiske meddelelser, 1957. bd. 28, hefte 3, p. 101–102.) Text in German. ***Title tr.:*** New Icelandic dipters with description of a new *Pegomyia* species.

Includes distribution of *Megaselia* (*Megaselia*) *giruda* in northern Lapland, and *Spilogona alpica* from Greenland and Fennoscandia. ***Copy seen:*** DA.

54318. RINGSET, NILS. Skogreising på Island. (Skogen, *Oslo,* 1951. årg. 16, hefte 7, p. 73–76.) Text in Norwegian. ***Title tr.:*** Reforestation in Iceland.

The continuity of coniferous forests in Iceland was broken long ago by exposure to strong ocean winds. No efforts were made for regeneration and the forests, also damaged by sheep grazing, died out. Erosion followed. During recent years interest in reforestation has developed, particularly among the Reykjavik population. Foreign species have been imported, such as Siberian larch, pine from Norway, spruce from Canada, poplar from Alaska, and forest nurseries have been established. Sheep grazing is still a problem and plantings must be fenced.

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54319. RINK, HINRICH JOHANNES, 1819–1893. Beretning om en inspektionsreise til Grønland i sommeren 1872. (Grønlandske Selskab. Skrifter, v. 8, 1955. p. 45–93, illus.) Text in Danish. ***Title tr.:*** Report on an inspection trip to Greenland in the summer of 1872.

Describes the journey in detail, and opinions on various aspects of life in Greenland. Rink arrived in Godthåb on May 26, visited about ten places in the northern districts and departed on July 27. He found conditions unsatisfactory and attributed this to disturbance of the traditional way of life and loss of self-respect among the Eskimos. He advocates more extensive use of native materials and resources in building, heating, foodstuffs and the employment of native personnel in administration and trade. The founding of new settlements is proposed, not more trading stations,

but a natural spreading of the population to utilize the sealing and hunting grounds. Money and range of imported goods are discussed: credit notes should be retained and coinage introduced only as small change. The medical service (poor) and other features of the settlements are also dealt with. Rink's own sketches are reproduced among the illus.

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54320. RISKA, S. Hösten ur ornitologisk synpunkt. (Finlands natur, 1957. Årsbok 16, p. 18–20, illus.) Text in Swedish. ***Title tr.:*** Autumn from the ornithological viewpoint.

Attention is directed to the value of fall observations. In Finland, birds' southward migrations begin as early as June for certain species, e.g., male eiders, and last until December. Scandinavian and arctic birds move in mixed or pure flocks depending on species. Little investigation has been made of faunal composition at various times of year, migration and circulation within the country, and adaptability and habits of non-migratory species. ***Copy seen:*** DLC

54321. RISTIMÄKI, TOINI. Kääpiöviljelmien miestyövoiman käyttö; maaseudun työvoiman tutkimuksia IV. Helsinki, 1955. 105 p. tables, graphs. (Acta forestalia fennica, 63, no. 4.) 54 refs. Text in Finnish. Summary in English. ***Title tr.:*** Use of manpower on dwarf farms; rural labor force studies IV.

Deals with labor on Finnish farms with less than 5 hectares of land under the plow. The large number of such, so-called dwarf, farms is due to agricultural policy in which abolition of tenant farming and agricultural colonization are factors. The nature and activity of this labor force in eastern and northern Finland differ from those in the south, due to differences in economic structure. Income, effectiveness of work, seasonal labor, unemployment, and relief work are related to farm size, intensity of farming, and regional conditions.

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54322. RISTIMÄKI, TOINI, *and others.* Maaseudun elinkeino- ja työttömyysalueet miestyövoiman ajankäytön perusteella; maaseudun työvoiman tutkimuksia VI. Helsinki, 1956. 70 p. graphs, table. (Acta forestalia fennica, 63, no. 6.) 21 refs. Text in Finnish. Summary in English. *Other authors:* S. Väänänen, *and* L. Heikinheimo. ***Title tr.:*** Distribution by industry and unemployment of the manpower in rural districts; rural labor force studies VI.

The input of labor in Finland is represented by the work unit, in percent of the total activity of the resident male population. Input is analyzed in five categories: agriculture, forestry, urban occupations, construction, and unemployment and the data are tabulated (p. 63–70) regionally, the labor "districts" comprising adjoining communes where labor division is similar. The most important of the 255 districts are in southern Finland. Twelve are in Lapland, a region of less intense farming, less continuous forestry activities, and construction which is largely relief work.

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54323. RISTIMÄKI, TOINI. Nuorukaisten ja täysi-ikäisten miesten arkiajan käyttö; maaseudun työvoiman tutkimuksia III. Helsinki, 1955. 21 p. tables. (Acta forestalia fennica, 63, no. 3.) 6 refs. Text in Finnish. Summary in English. ***Title tr.:*** Annual round of activity of youths and adult men; rural labor force studies III.

Approx. 75% of the Finnish rural male population aged 15–64 belong to farm-owning families, and the ratio of landed to landless is higher in the North. Work of youths (15–19 years of age) is 47% on the family farm, that of men (20–64 yrs.) 51%. In Lapland, relatively more youths than men work on the family farm. Input of paid labor, activity in forestry, agriculture, construction industry, etc., are compared for the two age groups. Data are given on seasonal changes, workless days, etc., youths without permanent occupation (36%), time devoted to study (12% total activity), etc.

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54324. RITCEY, R. W., *and* **R. Y. EDWARDS.** Trapping and tagging moose on winter range. (Journal of wildlife management, July 1956. v. 20, no. 3, p. 324–25.) 3 refs.

A preliminary description of techniques used in trapping moose on their migratory route. Different sizes of traps (corrals) are described as well as implements for tagging, behavior of trapped and released animals, etc. ***Copy seen:*** DI.

54325. RITCHIE, J. C. A plant collection from northwestern Manitoba. (Canadian field-naturalist, Oct.–Dec.

1956. v. 70, no. 4, p. 171–81, text map.) 10 refs.

Outlines the topography and ecology of a locality (approx. 60° N. 101° W.) including McBride, Tod, Reindeer, Nueltin, and Baralzon Lakes; lists, with field notes, some two hundred flowering plants, 40 mosses and liverworts, and 22 lichens. ***Copy seen:*** DA.

54326. RITCHIE, J. C. The vegetation of northern Manitoba, 2; a prisere on the Hudson Bay Lowlands. (Ecology, July 1957. v. 38, no. 3, p. 429–35, illus., tables.) 11 refs.

A study confined largely to the lowlands along the estuary of the Churchill River (58°47′ N. 94°11′ W.). The lowlands consist of extensive glacio-fluvial deposits, highly calcareous. Continuous encroachment of vegetation on contemporary river flats is evident, and in a distinct sequence. Major features of the prisere (primary succession) are presented, ecological relationships of white and black spruce, the tree line dominants of the area, are discussed. This sequence, not universal in the region, runs as follows: meadow phase, shrub phase, invading forest (*Picea glauca* and *Larix laricina*), closed forest (*P. glauca*), black spruce open forest (with mound hollow topography). ***Copy seen:*** DA.

54327. RIŪMIN, A. K. Novye dannye o Chadobeŝskoĭ neoliticheskoĭ stoĝnke na r. Angare. (Sovetskaĝa arkheologiĝa, 1951. t. 15, p. 273–80, illus.) 4 refs. Text in Russian. ***Title tr.:*** New data on the Chadobets neolithic site on the Angara River.

Deals with author's summer 1948 investigations of this site, first described by N. I. Vitkovskiĭ (q.v.). The geologic and geomorphologic structure of the adjacent lower Angara valley is traced, and the inventory, dated by A. P. Okladnikov into the Serovo period, described: axes, arrowheads, scrapers, and richly ornamented (predominently holecomb) potsherds. ***Copy seen:*** DLC.

54328. RIŪMKIN, ĨAKOV. Severnaĝa nov'. (Smena, May 1957. god 34, no. 9, p. 16–17, illus.) Text in Russian. ***Title tr.:*** Virgin land of the North.

Note on rise of the town of Magadan and development of Magadan Province, with photographs. ***Copy seen:*** DLC.

54329. *RIVISTA GEOGRAFICA ITALIANA.* Morfologia e profondità del Bacino Artico. (Rivista geografica italiana, Mar. 1956. an. 63, fasc. 1, p. 83–84.) Text in Italian. ***Title tr.:*** Morphology and depth of the Arctic Basin.

Notes Soviet discovery in 1948–49 of the 1800 km. submarine Lomonosov Ridge, dividing the Arctic Basin into two parts: the western towards Greenland, Barents and Kara Seas with a deep exceeding 5,220 m., the eastern facing Beaufort and Chukchi Seas with a max. depth of 4,689 m. in Beaufort Sea; influence of the Ridge on the Basin's water circulation. ***Copy seen:*** DLC.

54330. RIZHKOV, D. V Briŭssel'. (Sovetskiĭ Soĩz, 1958, no. 3(97) p. 8–13, illus.) Text in Russian. ***Title tr.:*** To Brussels.

Includes a photo of a model, on exhibit at the Brussels World's Fair, of one of the sixteen 200,000 kw. turbogenerators to be installed at the Bratsk hydroelectric station on the Angara River. The station is expected to produce 22 billion kw. hrs. annually. ***Copy seen:*** DLC.

ROACH, W. T., *see* Fritz, S. The "polar whiteout." *1957.* No. 51000.

54331. *ROADS AND STREETS.* Boring through frozen ground. (Roads and streets, June 1957. v. 100, no. 6, p. 62.)

A commercially-developed earth auger capable of digging a six-ft. diam. hole, 20 ft.-deep at a rate of 0.5 ft./min. in ordinary unfrozen ground is undergoing tests by the U.S. Army Engineers for possible use in excavating frozen ground in the Arctic. A truck-mounted model bored holes of 18, 24, and 30-in. diameter four ft. deep into frozen samples prepared in the laboratory. Some difficulties were encountered in spoil discharge which may require high-speed jets of compressed air. ***Copy seen:*** DLC.

54332. ROBAK, HÅKON. Fremmede nåletreslag i Nord-Norge; inntrykk fra en inspeksjonsreise. (Tidsskrift for skogbruk, Jan. 1955. årg. 63, hefte 1, p. 4–16.) Text in Norwegian. ***Title tr.:*** Foreign varieties of conifers in northern Norway; impressions from an inspection tour.

Writer covered West Finnmark and North Troms to Målselv, and the coastal area from the Vesterålen islands southward, to determine if it is worthwhile to grow foreign conifers and study the present tree supply as source of seed. The

foreign conifers, in the main, were unsuited to the local climate, but further experiments were recommended with *Picea engelmanni* and species of larch. *Abies sibirica* Ledeb was found suitable, but less so than Norwegian species of balsam. Sitka spruce seemed to thrive and should replace Norwegian species in certain coastal areas. ***Copy seen:*** DA.

54333. ROBERTS, BRIAN BIRLEY, *and* **T. E. ARMSTRONG.** The Arctic Institute, Leningrad. (Polar record, Jan. 1957. v. 8, no. 55, p. 306–316, 2 illus.)

Writers visited the Institute, May 29–June 8, 1956, and describe its organization, facilities and functions. Under Chief Administration of the Northern Sea Route, it has headquarters and museum in Leningrad, a department and laboratory in Moscow, and five observatories; Leningrad staff numbers 500. Its main task is work on methods of forecasting weather and ice in the Northern Sea Route area. Its various departments, their activities and personnel are presented: meteorology and weather forecasting (with notes on new portable automatic meteorological station for use on sea ice, first used 1956); oceanography, ice forecasting, (described in some detail) and river mouths; geophysics; geography; hydrochemical laboratory; low temperature laboratory; library (and Institute publications); archives; equipment store and workshops; Museum of the Arctic; Moscow section of the Institute and the laboratory in Moscow.

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ROBERTS, BRIAN BIRLEY, *see also* Armstrong, T. E., *and* B. B. Roberts. Illustrated ice glossary . . . *1958*. No. 49386.

ROBERTS, BRIAN BIRLEY, *see also* Glen, J. W., *and* B. B. Roberts. Classification of snow, ice, frozen ground . . . Universal Decimal Classification. *1954*. No. 51224.

ROBERTS, D. F., *see* Geoghegan, B., *and others*. A possible climatic effect on nail growth. *1958*. No. 51125.

54334. ROBERTS, ELLIOTT BURGESS, 1899– . United States Coast and Geodetic Survey, 1807–1957. (Smithsonian Institution. Annual report, 1957, *pub*. 1958. p. 221–32, illus.) Refs. Smithsonian Institution publication 4314, reprinted from U.S. Naval Institute, Proceedings, Feb. 1957.

Reviews work of the Survey, which included the verification of Peary's North Pole observations, charting the Alaskan coast (begun in 1882), etc.

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ROBERTS, GILBERT J., *see* Collins, D. A., *and* G. J. Roberts. Mount Logan, east peak. *1958*. No. 50304.

54335. ROBERTS, JOHN B., *and* **E. HARDENBERGH.** Effects of hypothermia on cold injury in mice. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 133.)

Report on investigation into the effect of pretreatment by hypothermia upon tissue resistance to freezing injury in mice. It was found that hypothermia did not increase freezing resistance, but conversely increased tissue damage from frostbite. ***Copy seen:*** DNLM.

ROBERTSON, G. W., *see* Holmes, R. M., *and* G. W. Robertson. Note . . . field growth chamber for winter injury studies. *1958*. No. 51785.

54336. ROBERTSON, ROBERT GORDON, 1917– . The future of the North. (Arctic circular, 1957. v. 10, no. 1, p. 2–7.) Ref.

Recent and prospective changes in northern Canada are reviewed in their human and economic aspects. Until about 30 yrs. ago Eskimos had been touched by white civilization only through the fur trade, whaling and missionaries. Since then, medicine, pensions, family allowances, etc., allow a population increase but the advance of civilization reduces the game supply, and creates need of cash income. Education, technical training, and social adjustment are required for Eskimos' employment and development: 1,270 positions are estimated to open for them during the next ten yrs. in government departments, DEW Line, transport, mining, and the Hudson's Bay Company. Increased development of the North is required to absorb a growing population but in adjustment to new economic conditions, Eskimos' and Indians' cultural heritage and independence must be preserved.

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54337. ROBERTSON, ROBERT GORDON, 1917– . The future of the North. (Western miner and oil review, Mar. 1958. v. 31, no. 3, p. 42–45, illus.)

Discusses development possibilities of northern Canada; increasing economic

growth is predicted, due to the growth in world population and increasing demand for metallic minerals and energy. Transportation problems are discussed; road- and railroad projects are sketched. Most important factor in developing the western part of the Northwest Territories is the proposed railroad to Great Slave Lake. Great Circle air routes Vancouver/Los Angeles-Europe crossing via Frobisher (62°30′ N. 66° W.) indicate a boom for that settlement. Native manpower should be utilized, as the North Rankin Nickel mine on the west shore of Hudson Bay has done in employing 70 Eskimos. ***Copy seen:*** DGS.

54338. ROBERTSON, ROBERT GORDON, 1917– . Huge mineral potential assured in Northwest Territories. (Western miner and oil review, Oct. 1958. v. 31, no. 10, p. 120+, illus.)

Outlines mining and prospecting activities and the state of transportation facilities. Gold and uranium account for 90% of the mineral production. Large lead-zinc deposits have been discovered at Pine Point (61°01′ N. 114°15′ W.), iron on Belcher Islands and Baffin Island. Gas and oil exploration has grown. A railroad to be built to Great Slave Lake is expected to speed mineral development of the Mackenzie valley.

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54339. ROBERTSON, ROBERT GORDON, 1917– . The mining industry in Yukon. (Western miner and oil review, Oct. 1958. v. 31, no. 10, p. 98–102, illus.)

Outlines mining and prospecting activities and the state of transportation facilities. The main mining center is the Mayo district (silver, lead, zinc, cadmium). Depressed prices have reduced prospecting activities for base metals; exploration for oil and gas is growing, spurred by recently announced federal plans for a major resource-development roads-construction program.

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54340. ROBERTSON, ROBERT GORDON, 1917– . Northwest Territories and the Arctic. (Western miner and oil review, Apr. 1958. v. 31, no. 4, p. 100–101, illus., table.)

Summarizes exploration and development activities in 1957. Preliminary data on gold, silver, copper, nickel, pitchblende, crude petroleum, and natural gas production are tabulated and compared with the 1956 statistics. A total of 5,600 mineral claims were recorded in the Arctic Mining District, far surpassing the older, more southerly Mackenzie (330) and Yellowknife (1919) Mining Districts. ***Copy seen:*** DGS.

54341. ROBERTSON, ROBERT GORDON, 1917– . Roads projected for development of the Northwest Territories. (Roads and engineering construction, Apr. 1956. v. 94, no. 4, p. 114–15, illus., map.)

Discusses the NWT administration brief to the Royal Commission on Canada's Economic Prospects, emphasizing the economic importance of extending the railway from Grimshaw, Alberta to Great Slave Lake (Pine Point), and building new development roads to link mining centers and resources areas with main highways, or with a Hudson Bay port (Eskimo Point). Roads specified (cf. map) link the Mackenzie Highway with points around Great Slave Lake and north to Port Radium on Great Bear; join Fort Simpson to the Alaska Highway (at Fort Nelson); Fort McPherson-Dawson; Dismal Lakes-Coppermine; etc. Developmental prospects of each area are discussed in relation to transportation. ***Copy seen:*** DLC.

ROBIN, GORDON de Q., *see* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

54342. ROBINSON, CHARLES BUDD. The Characeae of North America. (New York Botanical Garden. Bulletin, June 25, 1906. v. 4, no. 13, p. 244–308.) 164 refs.

Contains discussion of this algal family, a synopsis of the genera, a key and descriptions of 50 species (12 new), of which one *Chara contraria,* occurs in Alaska. ***Copy seen:*** DA.

54343. ROBINSON, ELMER, *and others.* Ice fog as a problem of air pollution in the Arctic. (Arctic, 1957. v. 10, no. 2, p. 89–104, illus.) 11 refs. *Other authors:* W. C. Thuman *and* E. J. Wiggins.

Extensive field programs were undertaken in Alaska during the winters of 1952–1954 to determine the causes of ice-fog formation. Ice fog forms at temperatures near −30° C. and below in populated areas and is particularly troublesome at military installations. It poses no threat to health but seriously restricts visibility. The fog is a direct result of supersaturation of the cold air with water

vapor from man-made sources. The only methods of curtailing its formation appear to be restricting vapor emission into the air or confining emission to selected fall stacks. Microphotographs of ice fog particles collected at various temperatures are included. ***Copy seen:*** DLC.

54344. ROBINSON, FLORENCE MARIE, 1921– . Oil and gas fields of Naval Petroleum Reserve No. 4 and adjacent areas, Northern Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1909.) Abstracts paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957.

Describes Umiat, Simpson Seeps, and Fish Creek oil fields and Barrow and Gubik gas fields. Structural information (except for Fish Creek) and data on the area are given: wells drilled, estimated reserves, etc. ***Copy seen:*** DGS.

54345. ROBINSON, FLORENCE MARIE, 1921– , *and* H. R. BERGQUIST. Test well Grandstand area Alaska, with micropaleontologic study of Grandstand Test Well 1, Northern Alaska. Washington, D.C., U.S. Govt. Print. Off., 1958. p. 317–39, illus., 2 text maps, 3 diagrs., (fold. graphic log) 9 tables. (U.S. Geological Survey. Professional paper 305–E. Exploration of Naval Petroleum Reserve no. 4 and adjacent areas, Northern Alaska, 1944–53. Part 5, Subsurface geology and engineering data.) Refs.

Includes stratigraphic, paleontologic, logistic, and engineering data, summarized in a graphic log; obtained in drilling of test by Arctic Contractors, May–Aug., 1952. Test was located at 68°58′ N. 151°55′ W., on the Grandstand anticline, about 30 mi. SSE of Umiat, in the northern foothills of the Brooks Range, the southernmost test drilled. "It was found that the objective sandstone (Cretaceous) present on the outcrop at Tuktu Bluff to the south grades to siltstone and clay at this location on the Grandstand anticline, and that the thousand feet of shallower sandstone penetrated has very low porosity and permeability. No oil or gas was found." Bergquist's micropaleontologic study identified 26 species of Foraminifera and two of Radiolaria, none very abundant. ***Copy seen:*** DGS.

54346. ROBINSON, FLORENCE MARIE, 1921– , *and* H. R. BERGQUIST. Test wells, Gubik area Alaska, with micropaleontologic study of the Gubik test wells, northern Alaska. Washington, D.C., U.S. Govt. Print. Off., 1958. p. iii, 207–264, illus., maps, diagrs., tables. (U.S. Geological Survey. Professional paper 305–C. Exploration of Naval Petroleum Reserve no. 4 and adjacent areas, northern Alaska, 1944–53. Part 5, subsurface geology and engineering data.) 12 refs.

Contains geologic and engineering information on two test wells drilled on the Gubik anticline, near 69°26′ N. 151°28′ W., the data taken largely from Arctic Contractors' reports. Structure and purpose of the tests are noted. Stratigraphy is described in detail, with lithologic notes on cores and cuttings, analyses of core samples and oil and gas, significance of oil and gas shows and tests, and an account of logistics and drilling operations. The micropaleontologic study contributed by Bergquist (p. 259–61) identifies and locates several species of Foraminifera and Radiolaria. ***Copy seen:*** DGS.

ROBINSON, JOHN LEWIS, 1918– , *see* International Geographical Congress, 1952. Proceedings. *1957.* No. 51939.

ROBINSON, JUDITH A., *see* Innes, I. R., *and others.* The effects of lowering . . . temperature . . . isolated . . . ileum. *1957.* No. 51931.

ROBINSON, MARGARET A., *see* Jones, N. C. H., *and others.* Factors . . . viability erythrocytes stored . . . frozen. *1957.* No. 52100.

54347. ROBINSON, MARGARET KING, 1906– . Sea temperature in the Gulf of Alaska and in the Northeast Pacific Ocean, 1941–1952. Berkeley and Los Angeles, Univ. of California Press, 1957. vii, 98 p. 61 illus., fold chart, 17 tables. (California. University. Scripps Institution of Oceanography. Bulletin, v. 7, no. 1.) 45 refs. *Publ. also as:* Contrib. from the Scripps Institution of Oceanography, no. 917).

"The results of the analysis of 16,103 individual bathythermograph temperature observations and 129 serial reversing thermometer observations in the Gulf of Alaska and Northeast Pacific Ocean are presented in monthly charts of average temperature for 100-ft. levels between the surface and 400 ft. In addition there are charts of average annual temperature cycles, average vertical temperature sec-

tions, typical individual bathythermograph temperature curves, and typical T–S curves in the area. The major features in the temperature distribution are: a cold core of water of temperature less than 40° F. in the western half of the Gulf of Alaska; a warm tongue along the coast of British Columbia changing position with depth and time; and the large temperature gradient found along the coast of the United States. A statistical analysis of temperature variation at three locations within the area is presented."—Author's abstract.

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ROBINSON, PAUL F., *see* Wilber, C. G., *and* P. F. Robinson. Effect of restraint on body temperature . . . *1958*. No. 56036.

ROBINSON, R. R., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

54348. ROBITAILLE, BENOÎT. L'agglomération esquimaude de Resolute, île Cornwallis, Territoires du Nord-Ouest. (Cahiers de géographie de Québec, Apr. 1957. nouv. sér., no. 2, p. 206–207.) Ref. Text in French. ***Title tr.:*** The Eskimo group at Resolute, Cornwallis Island, Northwest Territories.

During the Eastern Arctic Patrol 1953, four Eskimo families were moved from Port Harrison (Northern Quebec) and Pond Inlet (Baffin) to Resolute, and in 1955 six more families from the same settlements. The group, now 57 in number has excellent game nearby, and for recreation the traditional Eskimo games, dances, as well as occasional films. Their contacts with the air base are rare and closely supervised by Royal Canadian Mounted Police, though the Eskimos occasionally work as guides or laborers. Part of this group may be moved, a three-day sledge journey, to the east coast of Cornwallis where the fishing is good. ***Copy seen:*** CaMAI.

54349. ROBITAILLE, BENOÎT. Fondation d'un poste de la Gendarmerie royale du Canada au fiord Grise, île d'Ellesmere, en 1956. (Cahiers de géographie de Québec, Apr. 1957. nouv. sér., no. 2, p. 205–206, illus.) Text in French. ***Title tr.:*** Establishment of a Royal Canadian Police post at Grise Fiord, Ellesmere Island, in 1956.

The R.C.M.P. post at Craig Harbour was closed in summer 1956 during the Eastern Arctic Patrol; a new post was set up by the *C. D. Howe* at Grise Fiord (76°30′N. 83°20′W.) on the south coast of Ellesmere about 50 mi. west of Craig. The new site has an abundance of game, a well-drained raised beach for buildings and a good water supply nearby; it is protected against north and west winds, and provides landing place for supply boats. This post will have charge of some of the most northerly Eskimos in Canada. ***Copy seen:*** CaMAI.

54350. ROBITAILLE, R. Notes sur les formes périglaciaires de la région de Mould Bay, Archipel Nord-Canadien. (Canadian geographer, 1957. no. 10, p. 71.) Text in French. ***Title tr.:*** Notes on periglacial forms of the Mould Bay region, northern Canadian Archipelago. Abstract of paper presented at the Seventh Annual Meeting of the Canadian Association of Geographers, Ottawa, June 5–8, 1957.

The tabular surface in the Mould Bay region (76°14′ N. 119° 20′ W.) of Prince Patrick Island has average elevation of approx. 600 ft. Surface is cut near the coast by short deep valleys. Region belongs to the present periglacial domain. Periglacial equiplanation seems to be the principal levelling agent for the elevated surface. ***Copy seen:*** DGS.

54351. ROBLEY, ROBERT. La diffusion multiple dans l'atmosphère déduite des observations crépusculaires. (Annales de géophysique, *Paris*, 1950. t. 6, no. 3, p. 191–211, illus., diagrs., tables.) 13 refs. Text in French. ***Title tr.:*** Multiple diffusion in the atmosphere, obtained from crepuscular observations.

Includes (p. 200–211) spectrophotometric measurements made July–Sept. 1949, in connection with the Expédition française in Greenland, at Disko, 69°40′ N. 50°09′ W., 500 m. elevation. A spectrograph with F/0.7 lens was used, the instrument and methods of exposure are described, noting unusual length (1 hr.); results are discussed. Tables summarize measurements of polarization of light (P) and for different wave lengths, the measurements of multiple diffusion. Comparison is made with those from Pic du Midi, France, in 1947.

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54352. RODAHL, KÅRE, 1917– . Basal metabolism of the Eskimo. (Journal of nutrition, Nov. 1952. v. 48, no. 3, p. 359–68, tables.) 12 refs.

Report on a study of 73 Eskimos from four localities in Alaska, representing different climatic conditions, living habits and diets. Their basal metabolism was significantly higher than that of whites; but when 9% is accounted to apprehension (all were examined for the first time) and 15% to the high-protein diet, their metabolism is almost identical with that of white controls. ***Copy seen:*** DLC.

54353. RODAHL, KÅRE, 1917– , *and* D. W. RENNIE. Comparative sweat rates of Eskimos and Caucasians under controlled conditions. Ladd Air Force Base, Alaska, Mar. 1957. 20 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Project no. 8–7951; report no. 7.) 16 refs.

Account of investigation on sweat- and metabolic-rates with correlations to body temperatures, heat balance, etc. at various ambient temperatures. Greater heat production was found in the Eskimo group both at rest and during exercise. Sweat activity was also greater in the Eskimo and proportionate to their heat production. All this suggests an increased metabolism in the Eskimo.

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54354. RODAHL, KÅRE, 1917– . Human acclimatization to cold. Ladd Air Force Base, October 1957. 50 p. illus., tables, maps. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–21.) 65 refs.

A comprehensive review of earlier studies on human cold-acclimatization, as compared to cold acclimatization in animal experiments. The effects of cold-exposure upon the Eskimo, his activity, food intake, metabolic response, thyroid activity, changes in blood and tissues, heat loss, etc., are summarized. The physiology of general and local acclimatization and its various aspects are discussed and new research avenues suggested.

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54355. RODAHL, KÅRE, 1917– , *and* G. BANG. Thyroid activity in men exposed to cold. Ladd Air Force Base, Alaska. Oct. 1957. 84 p. illus., tables, map. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–36.) 18 refs.

A study of the role of the thyroid in man living in the Arctic and during simulated emergency survival in the cold. I^{131} was used to determine thyroid uptake, urinary and salivary elimination and total plasma and protein-bound iodine, in addition to clinical examination, estimation of dietary iodine intake, etc. Coastal and inland Eskimos, Athapascan Indians and Caucasians were included in the study. No real difference was found in I^{131} uptake, elimination among these groups. "The thyroid does not play any significant role in human acclimatization to the arctic environment" under usual conditions. ***Copy seen:*** DNLM.

RODAHL, KÅRE, 1917– , *see also* Bang, G., *and others*. The effect . . . excess of vitamin A . . . rats. *1957*. No. 49513.

54356. RODEWALD, MARTIN. Die Packeisgrenze zwischen Labrador und Grönland, mitte März, 1957. (Wetterlotse, *Hamburg*, Feb. 1957. no. 114–115, p. 87–88, text map.) Text in German. ***Title tr.:*** The boundary of the pack ice between Labrador and Greenland, mid-March, 1957.

Brief account of a 10½-hr. flight from Thule to Argentia, Mar. 15–16, 1957, 2,000 mi., at 8,000 ft. elevation. From 67° N. 54°30′ W. an "undercast" cut off visual contact; determination of the boundary was made by radar. Thus, a fast plane using radar can "observe" the pack ice for 1,000 mi., without seeing it.

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54357. RODHE, BERTIL. Sea ice observing and reporting technique in the Baltic. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 57–68, 4 text maps, diagr., 2 tables.) Ref.

Reviews the evolution of the ice reporting service for Baltic shipping, methods of observation, and distribution of reports. Cooperation among the Baltic nations since 1930's has resulted in the Baltic Ice Code; this is described, noting its uses and limitations. ***Copy seen:*** DN–HO.

54358. RODIN, E. D. Puti osvoeniia malykh rek zapadnoĭ IAkutii. (Rechnoĭ transport, June 1958. god 17, no. 6, p. 6–8, plate, tables, sketch maps.) Text in Russian. ***Title tr.:*** Development of transportation on small rivers of Western Yakutia.

Methods of coordinated transportation on small and large rivers and highways are discussed, with illus. and maps, in relation to the development of diamond deposits at Mirnyy, Daldyn', Nyurba; and of gold and mica deposits in the Lena and Aldan basins. Lengths and areas of various river basins are tabulated. ***Copy seen:*** DLC.

RODIONOVA, L. M., *see* Gerasimovskiĭ, V. I., *and others.* O sootnoshenii niobiîa i tantala . . . *1957.* No. 51152.

54359. RODNÎANSKAÎA, É. E. Rastitel'nost' poĭmy reki Obi v predelakh Berezovskogo raĭona; kratkaîa kharakteristika. (Nauchnye doklady vysshel shkoly. Geologo-geograficheskie nauki, 1958. no. 4, p. 90–98.) 7 refs. Text in Russian. ***Title tr.:*** The vegetation of the Ob River flood-lands in the Berezovo District; a short characteristic.

Discusses earlier studies in this field. The flood zones (four) of the area studied (approx. 64° N. 65° E.) are classified according to the period they are flooded, the ecological character and the more common plants. The elevation and geographic distribution of the zones are considered and their vegetation described. The vegetation and soils of the lowest flood plains depend more on the river regime than on zonal distribution. ***Copy seen:*** DLC.

RODNYĬ, N. I., *see* Makedonov, A. V., *and* N. I. Rodnyĭ. Sostav nizhnepermskikh osadochnykh formaĭsiĭ . . . *1957.* No. 53065.

54360. RØEN, ULRIK. Studies on freshwater Entomostraca in Greenland, 1; *Artemiopsis stefanssoni* Johansen, in Greenland. København, C. A. Reitzel, 1958. 9 p. illus., tables, map. (Meddelelser om Grønland, bd. 159, nr. 2.) 8 refs.

Contains information on earlier finds, erroneous determinations and synonyms, geographic distribution, morphometry, etc. of this crustacean hitherto known from northern Canada. The study is based on specimens found in plankton samples from ponds near Jakobshavn in 1956, and on earlier (some unreported, others wrongly determined) specimens also taken along the west coast. *Artemiopsis stefanssoni* should replace *Artemia salina* in Greenland fauna.

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54361. RØEN, ULRIK. Tre års arbejde på Arktisk Station. (Grønland, Feb. 1958, nr. 2, p. 69–75, illus.) Text in Danish. ***Title tr.:*** Three years' work at the Arctic Station.

Reviews his limnological research while director of the Arctic Station at Godhavn, West Greenland, run since 1953 by Copenhagen University. Details are given on Lake Taserssuaq just north of Atâ (approx. 69°45′ N. 51° W.) on Arveprinsens Eilande where animal and plant life was very scarce, and on a small pond near Godhavn which has a rich fauna, in particular the arctic pond branchiopod (*Branchinecta paludosa*) and a water-flea (*Daphnia pulex*). Temperature conditions and salt content are also mentioned.

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RØISE, HAGBART, *see* Føyn, B., *and* J. Huus. Norges dyreliv. *1947–50.* No. 50939.

54362. RÖMER, EUGENJUSZI, 1871- . Seeleute als Forschungsreisende. (Seewart, nautische Zeitschrift für die Deutsche Seeschiffahrt, June 1957. Bd. 18, Heft 3, p. 89–94, handwritten reproduction) 6 refs. Text in German. ***Title tr.:*** Sailors as explorers.

Reviews the life of William Scoresby (1760–1829) and his son, William, Jr., and their achievements in whaling, exploration, and scientific studies.

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54363. RØNNING, OLAF I. Fra floraen i Nord-Norge. Tromsø. 16 p., illus. (Ottar, Feb. 1957. nr. 12 (1957, nr. 1).) Text in Norwegian. ***Title tr.:*** Aspects of the flora in north Norway.

Deals with curious features in plant life: some mountain plants appear only in one or both of two localities, one in south Norway, the other from just south of Saltdal (approx. 67°10′ N. 15°10′ E.) to Troms and West Finnmark. These plants, relicts of a pre-glaciation flora, are listed, four species in both areas and nine only in the north, over 40 in all; three (*Carex scirpoides, Braya purpurascens* and *Scirpus pumilus*) are known in Europe only from north Norway. Lowland species are also mentioned. Nine tree species are described, with information on habitats, distribution, northern limits and introduction. ***Copy seen:*** DLC.

54364. RØNNING, OLAF I. Planteliv på Jan Mayen. (Naturen, 1958. årg. 82, nr. 1, p. 43–51, illus.) Text in Norwegian. ***Title tr.:*** Plant life on Jan Mayen.

The surface of Jan Mayen (413 km.^{2}) is composed of a series of partly glacier-covered, extinct, volcanic summits, tundra plains, and dark lava sand strands. It is characterized by stone polygons, solifluction terraces, and stream action. Other ecological factors affecting plant life are discussed in relation to the surface. Nineteen plants are identified and their occurrences related to local earth and moisture conditions. Driftwood is abundant. ***Copy seen:*** DLC.

54365. RØNNING, OLAF I. Reinrosen. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4), p. 22–23.) Text in Norwegian. ***Title tr.:*** *Dryas octopetala.*

Describes this plant and its habitat; it is common in north Norway and fossil leaves have even been found.

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54366. RØNNING, OLAF I. Rødsildre. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4), p. 11–12, illus.) Text in Norwegian. ***Title tr.:*** Purple saxifrage.

Describes: Saxifraga oppositifolia as the earliest spring plant in north Norway, where 14 species of *Saxifraga* are known.

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ROGACHEVA, Ė. V., *see* Syroechkovskiĭ, E. E., *and* Ė. V. Rogacheva.

ROGACHEVA, Ė. V., *see* Syroechkovskiĭ, E. E., *and* Ė. V. Rogacheva.

54367. ROGAL', I. G. O "kholodnom" metode vyrashchivaniîa molodnîaka sel'skokhozîaĭstvennykh zhivotnykh i ego fiziologicheskom obosnovanii. (Zhurnal obshcheĭ biologii, July–Aug. 1955. t. 16, no. 4, p. 275–84.) 30 refs. Text in Russian. ***Title tr.:*** A "cold" method of raising young farm-animals and its physiological basis.

Author submits to a critical analysis a number of earlier, inadequate studies of the problem by Soviet investigators. The account of his own work (1949–1952) deals with raising calves at temperatures which in the winter ranged from −10.6° to 1.4° C. average. Among the changes noted in comparison with controls, were reduced temperature loss and gas exchange, increased food intake and growth during the cold season, with reduced gas metabolism and growth in the summer.

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54368. ROGER-HENRICHSEN, GUDMUND, 1907– . Vejen går om Grønland. København, C. Erichsen, 1955. 239 p. Text in Danish. ***Title tr.:*** By way of Greenland.

Popular account of a visit to Greenland in quest of what it meant to Knud Rasmussen. From a short sojourn in the Godthåb region, author describes (p. 105–176) the living conditions and recent developments, particularly with respect to native Greenlanders who have relinquished much of their primitive way of life and have not yet established a balanced position in the new order. Questions of world unity and future possibilities for the Greenland population are considered.

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54369. ROGERS, A. F. The physiological programme for the Trans-Antarctic Expedition, 1955–58. (Advancement of Science, June 1957. v. 13, no. 53, p. 419–20.)

An outline of physiological research to be conducted on the 15 members of the expedition. The main study will be on energy balance, including clothing and sleep records and meteorological factors. Investigations on acclimatization are also outlined.

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54370. ROGERS, GEORGE WILLIAM, 1917– . Alaska, from frontier to forty-ninth state. (Business horizons, winter 1958–59, v. 1, no. 5, p. 93–98.) 7 refs.

Describes the physical geography, population growth and characteristics, the economy. Statehood, and potential development are discussed; including possibilities of marketing products in Japan and England via Great Circle routes.

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54371. ROGERS, GEORGE WILLIAM, 1917– . Analysis of the Alaska economy and its future outlook. Juneau, Oct. 1958. 46 p. tables, maps. (Alaska. Employment Security Commission. Financing Alaska's employment security program, pt. 2.) Refs.

As a basis for replanning an unemployment insurance program, past trends (particularly 1950–1957) are analyzed, and economic developments are outlined for 1958–1965 from three viewpoints: most favorable, intermediate and least favorable. Inter-relations between population, military personnel, and primary and secondary employment, and between population and tertiary employment are examined. The state is divided into three social-economic regions: (southeast, southcentral-interior, north-west) and their economies and employment patterns are analyzed in turn. Projected sets of figures on employment covered by the insurance program of 1958–1965 for each region and the state as a whole, and on wages and unemployment for the state are presented to correspond with the three views of the future. The south-central-interior region is most representative of the "New Alaska" which is characterized by pulp mills, oil, develop-

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ment of iron and coal deposits (possibly for shipment to Japan), nuclear power projects, trans-polar flight bases, and Statehood. ***Copy seen:*** CaMAI.

ROGINSKIĬ, ÎAKOV ÎAKOVLEVICH, 1895– , *see* Levin, M. G., *and* ÎA. ÎA. Roginskiĭ. Sovetskaîa antropologiîa . . . *1957.* No. 52796.

54372. ROIVAINEN, SEPPO. On the distribution of *Ceuthorrhynchus* species, Col., Curculionidae, occurring as pests of cruciferous plants in Finland; I, *Ceuthorrhynchus assimilis* (Payk.). *C. quadridens* (Panz) and *C. rapae* (Gyll.). (Suomen hyönteistieteellinen aikakauskirja, 1957. v. 23, no. 2, p. 111–14, 3 text maps, table.) 4 refs.

Includes data on *Ceuthorrhynchus rapae,* extending to Kemi Lapland.

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ROJO LUCIO, ALFONSO, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

ROJO LUCIO, ALFONSO, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

ROKSTAD, G., *see* Kristensen, M. O., *and* G. Rokstad. Forsøk med nylon i fiske- og fangstredskaper. *1950.* No. 52505.

ROKSTAD, G., *see* Kristensen, M. O., *and* G. Rokstad. Forsøksfiske med "pareja" slepenot. *1950.* No. 52508.

54373. ROLLINS, REED CLARK, 1911– . Some new or noteworthy North American crucifers. (Stanford University. DudleyHerbarium. Contributions 1940–1947, *pub.* Feb. 26, 1941. v. 3, pt. 5, p. 174–84, plate 46.) 12 refs.

Contains descriptions of seven new species and one variety. *Cochlearia sessilifolia* n. sp. collected near Olga Bay, Kodiak Island, Alaska (type: E. H. & H. B. Looff 1587, July 21, 1940), is included.

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ROLLINS, REED CLARK, 1911– , *see also* Drury, W. H., *and* R. C. Rollins. The North American . . . Smelowskia . . . *1952.* No. 50640.

ROLLITT, GRAHAM, *see* Hamilton, R. A., *and* G. Rollitt. Climatological tables . . . *1957.* No. 51529.

ROLLITT, GRAHAM, *see* Hamilton, R. A., *and* G. Rollitt. Meteorological observations . . . *1957.* No. 51531.

ROLLITT, GRAHAM, *see* Simpson, C. J. W., *and others.* North ice . . . *1957.* No. 54901.

54374. ROLSTED, M. Et skog- og trelastfirma i Namdalen, Van Severen gjennom 100 år—1849–1949. (Skogbrukeren, 1951. årg. 26, nr. 9, p. 101–104, illus.) Text in Norwegian. ***Title tr.:*** A forestry and lumber company in Namdalen, Van Severen Co., through a hundred years, 1848–1949.

History and present activities of this company, established at Namsos in 1849, are outlined. It owns large areas of well cultivated spruce forests in Namdalen (64°–65° N. 12°–13° E.). Modern lumber and pulp mills were built following the destruction of Namsos during World War II. ***Copy seen:*** DA.

ROMANOV, ALEKSEĬ ANDREEVICH, *see* Polîanichko, ÎA. I., *and others.* ÎUbileĭnaîa . . . sessiîa Karel'skogo . . . *1958.* No. 54055.

54375. ROMANOV, IVAN MIKHAĬLOVICH. N. G. Chernyshevskiĭ v vilûĭskom zatochenii. ÎAkutsk, ÎAkutskoe knizhnoe izdatel'stvo, 1957. 240 p. illus. 130 refs. Text in Russian. ***Title tr.:*** N. G. Chernyshevskiĭ's imprisonment in Vilyuysk.

Biographical analysis of the 12 years (1872–1883) spent by this philosopher, and freedom fighter in the Vilyuysk prison after eight years' hard labor in the Trans-Baykal region. The hardships of prison life, contacts with the local population and administration, attempts to continue his writings on social reforms, etc. are discussed. The town of Vilyuysk and the social and economic conditions of its Yakut and Russian inhabitants in the 1870's are dealt with. An index of proper names is appended.

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54376. ROMANOV, VASILIĬ EVGEN'EVICH. S mol'bertom u polîarnogo kruga. (Vokrug sveta, June 1957, no. 6, p. 17–18, illus.) Text in Russian. ***Title tr.:*** With an easel at the Arctic Circle.

Drawings of landscape and reindeer-breeders in Chukotka are reproduced with brief comment; reindeer slaughter is depicted. ***Copy seen:*** DLC.

54377. ROMANOV-IL'INSKIĬ, S. Tolariĭnyĭ promysel pesťsa na ĬAmale. (Okhota i okhotnich'e khozi͡aĭstvo, Dec. 1958. god 4, no. 12, p. 11.) Text in Russian. ***Title tr.:*** "Tolara" arctic fox hunting on Yamal.

Describes collective fox hunting in the Yamal-Nentsy National District in which entire communities, including women and children participate. In the "tolara" as it is called locally (Samoyed? term), a preliminary reconnaissance is made for a locality with plenty of foxes; the area is encircled by the participants, and the animals driven into the open, where they are killed. Catch of a single tolara may amount to 150–200 animals in years of abundance. The poor trapping equipment of Yamal hunters is noted.

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ROMANOVA, V. I., *see* Balakhmatova, V. T., *and others*. Kharakternye foraminifery . . . *1958*. No. 49495.

ROMANOVICH, B. S., *see* Demokidov, K. K., *and others*. Geologicheskoe stroenie . . . *1957*. No. 50494.

ROMANOVICH, B. S., *see* Loskutov, A. V., *and* B. S. Romanovich. Rezul'taty polevykh issledovaniĭ . . . *1957*. No. 52920.

54378. ROMANOVICH, I. F. Vozmozhnyĭ genezis okolozhil'nykh izmeneniĭ kvarťsevykh zhil o. Novai͡a Zemli͡a. (Izvestii͡a vysshikh uchebnykh zavedeniĭ. Geologii͡a i razvedka, 1958, no. 3, p. 79–84, illus., table.) 5 refs. Text in Russian. ***Title tr.:*** Possible genesis of modifications surrounding quartz veins on Novaya Zemlya.

Reports results of field and laboratory investigations carried out by the Institute of Geology of the Arctic, the Arctic Institute, and the Moscow Institute of Geology and Prospecting: the crystalline quartz veins (chiefly in sandstone) originated in metasomatic processes of crystallization of local material in tectonic fissures of enclosing rocks.

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ROMANOVSKIĬ, ALEKSEĬ PAVLOVICH, *see* Bakeev, M., *and* A. P. Romanovskiĭ. Iz opyta raboty . . . po russkomu i͡azyku. *1957*. No. 49486.

ROMASHEVA, M. K., *see* Zavarina, M. V., *and* M. K. Romasheva. Moshchnost' oblakov . . . *1957*. No. 56169.

54379. ROMICK, GERALD J., *and* **W. MURCRAY.** Atmospheric ozone at College, Alaska. College, Apr. 1957. 46 p. illus., diagrs. (Alaska. University. Geophysical Institute. Final report AF 19(604)–1817, AFCRC–TR–57–294. ASTIA Document no. 117–250.)

The Umkehr method of determining the vertical distribution of ozone is employed with data collected with a Dobson spectrophotometer at College during 1952–1954. The equipment, theory, procedure, results, and data are described in detail. The analysis shows a highly fluctuating distribution with possibly a larger percentage of the total ozone in the higher atmospheric layers than is normally measured at other stations. Infrared techniques for ozone monitoring are also given which are more favorable for the winter months than the regular UV measurements. Preliminary results suggest a possible correlation between the aurora and ozone.

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ROMICK, GERALD J., *see* Clark, K. C., *and* G. J. Romick. An optics field site for auroral studies. *1958*. No. 50280.

RONALD, K., *see* Montreuil, P. L. J., *and* K. Ronald. A preliminary note on nematode . . . seals. *1957*. No. 53369.

RONGARTEN, E. V., *see* Khitarov, N. I., *and others*. Khimicheskiĭ sostav . . . *1958*. No. 52264.

54380. RONGE, KNUT REINHOLD, 1904– . Sveriges export av trävaror. (Svenska skogsvårdsföreningen. Tidskrift, 1957. årg. 55, nr. 3, p. 229–44, map, graphs.) Text in Swedish. ***Title tr.:*** Sweden's export of wood products.

Sweden's development of wood products exports and its present and future position among wood exporters are discussed. The world economic situation, living standards, and changes in exports by Canada, Finland, Austria, and Russia, indicate that Sweden's future position depends on quality of exports and rationalization of processing methods. Russia's immense forests, domestic requirements, transport difficulties and present price policies are reviewed. The Northern Sea Route, by which most of its wood products are shipped, is a limiting factor in their marketing.

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54381. RONKINA, Z. Z., *and* **V. N. SAKS.** Vozmozhnye istochniki snosa pri

formirovanii iurskikh i melovykh otlozhenii Ust'-Eniseĭskoĭ vpadiny. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik statei po geologii Arktiki, vyp. 6, p. 147–73, diagrs., maps.) 3 refs. Text in Russian. ***Title tr.:*** Possible origin of dispersal material during the formation of Jurassic and Cretaceous deposits in the Ust'-Yenisey depression.

Presents results of an investigation of the sources, agents, and directions of dispersal materials and their properties, factors in the formation of Jurassic and Cretaceous deposits. These deposits are of great extent and reach a thickness of 4–5 km. in the central part of the Ust'-Yenisey depression (approx. 66°–70° N. 82°–88° E.). Development of this depression is studied. Mineralogic composition of the dispersal materials is outlined and compared with that of adjacent areas. In lower Jurassic times, the Ust'-Yenisey depression probably had a connection with the open or continental sea through the Khatanga flexure.

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RONKINA, Z. Z., *see also* Saks, V. N., *and* Z. Z. Ronkina. Iurskie i melovye otlozheniia . . . *1957*. No. 54519.

RONKINA, Z. Z., *see also* Saks, V. N., *and* Z. Z. Ronkina. O vozmozhnykh razmyvakh . . . *1958*. No. 54521.

54382. RONNENBERG, PHILIP. Problemer i bekaempelsen af kønssydomme i Grønland. (Atuagagdliutit: Grønlandsposten, Dec. 6, 1956. Ukiut 96-iat, nr. 24, p. 2, 12.) Text in Danish and Eskimo. ***Title tr.:*** Problems in the fight against venereal diseases in Greenland.

Advocates a stricter moral code as the only way to stop the increase in gonorrhea and prevent introduction of syphilis in Greenland. ***Copy seen:*** DLC.

ROOS, CHARLES, *see* U.S. National Library of Medicine. A bibliography . . . Korean War . . . *1957*. No. 55639.

ROOS, THOMAS B., *see* Kulka, J. P., *and others*. Physiopathology of cold injury; cutaneous circulation . . . feet . . . *1958*. No. 52559.

54383. ROOTH, ANNA BIRGITTA. The creation myths of the North American Indians. (Anthropos, 1957. v. 52, fasc. 3–4, p. 497–508, maps.) Preliminary report, presented to the Wenner-Gren Foundation for Anthropological Research in 1956.

Describes the eight basic North American Indian myth-types (300 versions) dealing with the beginning or creation of the world. Their distribution on this continent, including northwest Canada, and their relationship to Eurasian myths, including those of the Chukchis, Yukaghirs and Finno-Ugrians, are discussed. A two-fold, northern and southern, cultural contact between Asia and America is suggested. ***Copy seen:*** DLC.

ROSANOFF, STANLEY, *see* Staunton, J., *and* S. Rosanoff. Water . . . North outposts. *1958*. No. 55118.

54384. ROSCOE, S. M. Cambrian Lake (east half) New Quebec. Ottawa, Queen's Printer, 1957. 13 p. table, fold. map. (Canada. Geological Survey. Paper 57–56.) 5 refs.

Geologic report and map, scale 1:253,440, based on field work of June 15–Sept. 7, 1953, on air-photo-interpretation and on maps compiled by geologists of three mining companies. Topography of the area, approx. 56°–57° N. 68°–69° W., midway between Schefferville and Fort Chimo, is outlined. Discussion of the general geology is accompanied by a table of formations, which are mostly of the Proterozoic Kaniapiskau Group, consisting of five major and four minor, map units; thicknesses in four different parts of the area are shown and correlations inferred. Stratigraphy is discussed in some detail. Two companies have explored for iron unsuccessfully; small deposits of pyrrhotite, chalcopyrite, galena, sphalerite, bornite-chalcopyrite, and a discovery of copper mineralization are noted near the northern end of the area, which adjoins Lac Herodier, east half (No. 44848).

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54385. ROSE, JOHN CHARLES, 1924– , *and others*. Cardiovascular function in hypothermic anesthetized man. (Circulation, Apr. 1957, v. 15, no. 4, p. 512–17, illus., tables.) 19 refs. *Other authors:* T. F. McDermott, L. Lilienfield, F. A. Porfido *and* R. T. Kelley.

Account of cardiac output, arterial pressure and other hemodynamic changes in ten patients before and during induced hypothermia of 32.5° to 30.5° C. The subjects were undergoing noncardiovascular surgery. Their cardiac and vasomotor responses varied considerably as was to be

expected for experimentally uncontrolled operating room conditions.

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ROSE, JOSEPH NELSON, 1862–1928, *see* Britton, N. L., *and* J. N. Rose. New . . . Crassulaceae. *1903.* No. 49925.

ROSENBAUM, S., *see* Lewis, H. E., *and others.* Changes in body weight . . . *1956.* No. 52799.

ROSENBERG, ALBURT M., *see* Wood, T. H., *and* A. M. Rosenberg. Freezing in yeast cells. *1957.* No. 56107.

ROSENBERG, F. J., *see* Le Blanc, J. A., *and* F. J. Rosenberg. Effect of dibenamine and pyribenzamine on hypothermia . . . *1958.* No. 52718.

ROSENBERG, F. J., *see* Le Blanc, J. A., *and* F. J. Rosenberg. Hypothermic effect . . . acclimatization . . . *1957.* No. 52720.

ROSENBERG, F. J., *see* Le Blanc, J. A., *and* F. J. Rosenberg. Local and systemic adaptation . . . cold . . . *1957.* No. 52721.

ROSENBERG, F. J., *see* Le Blanc, J. A., *and* F. J. Rosenberg. Mast cell changes . . . cold. *1957.* No. 52722.

54386. ROSENDAHL, CARL OTTO, 1875– . *and others.* A monograph on the genus *Heuchera.* Minneapolis, Univ. of Minnesota Press, 1936. 6, 180 p. 5 illus. (Minnesota studies in plant science, v. 2.) *Other authors:* F. K. Butters *and* O. Lakela.

Taxonomic and geographic position of this genus of the saxifrage family and description with evaluation of systematic characters are given, followed by synoptical taxonomic treatment, with keys, descriptions of nearly a hundred forms (25 new), with synonyms, data on habitat and distribution, lists of specimens. *H. glabra* native to Alaska (Baranof and Shumagin Islands) is included. ***Copy seen:*** DA.

54387. ROSENDAHL, GUNNAR P. Orientering vedrørende anlaegsarbejderne i 1957. (Atuagagdliutit: Grønlandsposten, July 18, 1957. Ukiut 97-iat, nr. 15, p. 4–7, 20–23, 27, illus.) Text in Danish. ***Title tr.:*** A guide to construction work in 1957.

Lists building in progress or planned for 1957 in Greenland, in some cases with funds allocated: schools, hospitals, church (Angmagssalik), homes for children, and for the aged, housing, shops, radio station (Godthåb), community center (Godthåb), roads, ports, factories, workshops, fire stations, power plants, etc. Priority principles are discussed.

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54388. ROSENDAHL, GUNNAR P. Reorganisering af Grønlands tekniske Organisation. (Atuagagdliutit: Grønlandsposten, May 22, 1958, Ukiut 98-iat, nr. 10, p. 6, 9, 19–20, diagr.) Text in Danish. ***Title tr.:*** Reorganization of the Greenland Technical Organization.

The Danish part of the reorganization went into effect Apr. 1, 1957, and the Greenland part in Apr. 1958. Details are given on the work of the GTO (public construction and engineering activities) and on the duties of its various departments and officials. ***Copy seen:*** DLC.

54389. ROSENDAHL, GUNNAR P. Vandforsyningsanlaeg i Godthåb. (Ingeniøren 1955. årg. 64, nr. 13, p. 293–97, 7 illus.) Text in Danish. ***Title tr.:*** Water works in Godthåb.

Describes construction of the water works at this West Greenland settlement. Since no access to natural water sources was available, an artificial lake was built to make use of the surface water. The plant, which has a capacity of 100 $m.^3$/hr. is partly furnished with artificially heated water-pipes. No separate connections have been laid to private homes, but several pumping stations have been built, where water can be obtained.

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54390. ROSENDAHL, P. H. Slaedehunde. (Atuagagdliutit: Grønlandsposten, Feb. 13–Apr. 24, 1958. Ukiut 98-iat, nr. 3, p. 22–23; nr. 4, p. 18; nr. 5, p. 14–15; nr. 6, p. 17; nr. 7, p. 16; nr. 8, p. 14–15.) Text in Danish. ***Title tr.:*** Sledge dogs.

Describes the nature and training of Greenland sledge dogs, based on the literature and on author's experience. This species has a strong strain of wolf; and calls for seemingly harsh treatment. Precautionary measures in handling the dogs are mentioned. On the whole the Greenlanders are considered to treat their dogs well. ***Copy seen:*** DLC.

54391. ROSENDAHL, PHILIP, 1893– . Grønlands vigtigste saelart vender tilbage. (Grønland, Sept. 1958. nr. 9, p. 357–60,

diagrs.) Text in Danish. ***Title tr.:*** Greenland's most important seal species returns.

The ringed seal increased in numbers in West Greenland waters during approx. 1875–1910, decreased subsequently, but seems to be on the increase again, as a result of the fall in sea-water temperature. Some statistics are given.

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54392. ROSENDAHL, PHILIP, 1893– . Jagt- og fredningsregler i Grønland. (Atuagagdliutit: Grønlandsposten, May 22–June 5, 1958. Ukiut 98-iat, nr. 10, p. 15–16, 18; nr. 11, p. 16–18, 20.) Text in Danish and Eskimo. ***Title tr.:*** Hunting and protection regulations in Greenland.

Reviews the regulations by district and animal species. Only Danish citizens permanently resident in Greenland are permitted to engage in professional hunting. ***Copy seen:*** DLC.

54393. ROSENDAHL, PHILIP, 1893– . Jakob Danielsen kalâlek amîssok; titartagkat imilersarîssanigdlo amigkat. Godthåb, 1957. 87 p. + 32 p. in pocket. illus., 8 col. plates, maps. Text in Eskimo and in Danish (32 p.). ***Title tr.:*** Jakob Danielsen, a Greenlandic painter; drawings and watercolors. Eskimo language edition of No. 14832.

Contains nearly 250 reproductions (eight in color) of watercolors and pencil sketches with explanatory text. Several series depict events in the hunt of various animals; land- and seascapes, settlements, travel experiences are included; they derive largely from the Disko area, his home. In his portrayal of native equipment and techniques, the natural setting, especially weather phenomena, the artist presents a pictorial record of Eskimo life in the recent past. A biographic sketch of Danielsen 1888–1938 is included. The National Museum at Copenhagen maintains the collection of his work. ***Copy seen:*** DLC.

54394. ROSENDAHL, PHILIP, 1893– . Kårene i fangstdistrikterne. (Grønland, Feb. and Mar. 1958, nr. 2, p. 58–68; nr. 3, p. 99–110, illus., tables.) Text in Danish. ***Title tr.:*** Conditions in the hunting districts.

Discusses surveys of hunting in the Upernavik and Umanak districts and in the North and East Greenland inspectorates made by the Ministry for Greenland and based on hunting lists kept by the Greenlanders. Information is included on average catch per family by animal species calculated in weight of meat, and on average income from sale of products to the Trading Company. Living conditions are higher in a scattered than in a more dense population; probably also the income of the Trading Company (by export of skins). A concentration of hunters worsens hunting conditions, influences the dietary habits of the families unfavorably, and increases the need for state subsidies. Causes are discussed (p. 99–110) for the low living standard of the hunters in some areas despite the comparatively large catches: low prices for the skins, lack of meat as this is shared with the dogs, inferior housing, transport difficulties and lack of adequate schooling facilities. ***Copy seen:*** DLC.

54395. ROSENDAHL, PHILIP, 1893– . Rationel regulering af sælfangsten er en nødvendighed. (Grønland, Oct. 1958. nr. 10, p. 393–96, diagrs.) Text in Danish. ***Title tr.:*** Rational control of sealing is a necessity.

Advocates certain controls in the hunting of ringed seal in the northern districts of West Greenland, where this species shows signs of returning due to climatic changes. ***Copy seen:*** DLC.

54396. ROSENFELD, G. A., *and* K. M. HUSSEY. A consideration of the problem of oriented lakes. (Iowa Academy of Science. Proceedings, 1958. v. 65, p. 279–87, illus., text map.) 9 refs.

Some observed phenomena are not explained by theories which have been advanced on orientation. Of its two best-known examples in North America, the Carolina bays and the oriented lakes of northern Alaska, the latter is chiefly discussed. The origin of these lakes (cf. No. 2681) in local thawing and subsequent collapse of ground in areas of permafrost is noted. Both existing hypotheses suggest wind as the cause of orientation, one postulating a former prevailing wind in the direction of the long axis, the other, a wind normal to the long axis. The present prevailing wind is approximately at right angles to the long axis; evidence from the field and from air photographs indicates that the lakes are still being oriented. Geologic structure should be considered in seeking an answer to this problem.

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54397. ROSENKRANTZ, ALFRED, 1898– . Nekrolog: O. B. Bøggild, 16. maj 1872–13. november 1956. (Grønland, Jan. 1957. nr. 1, p. 40, port.) Text in Danish. ***Title tr.:*** Obituary: O. B. Bøggild, May 16, 1872–November 13, 1956.

Contains biographical notes on O. B. Bøggild, professor of mineralogy at Copenhagen University 1912–1942 and an authority on minerals in Greenland.

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54398. ROSENQVIST, C. BERTIL. Radar i vintersjöfart. (Svensk sjöfarts tidning, 1954. årg. 50, nr. 14, p. 525+, illus.) Text in Swedish. ***Title tr.:*** Radar in winter navigation.

Contains some hints on the use of radar for ice navigation. For the sole purpose of navigation, the 3 cm. wavelength will yield more information about the ice than will the 10 cm. length.

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54399. ROSING, JENS. Drivjagt på vildren. (Atuagagdliutit: Grønlandsposten, Aug. 14–29, 1958. Ukiut 98-iat, nr. 17, p. 12–13+; nr. 18, p. 13+, illus.) Text in Danish and Eskimo. ***Title tr.:*** A caribou drive.

Reconstruction of a battue as formerly carried out in Greenland. Two cairn systems used in caribou hunting on the Qôrqut peninsula near Godthåb are described. They were examined by the author during his years as leader of the reindeer-herding experiments in the region. ***Copy seen:*** DLC.

54400. ROSING, JENS. Nordbominder fra Angmagssalik. (Grønland, Nov. 1958. nr. 11, p. 438–39.) Text in Danish. ***Title tr.:*** Norse memories from Angmagssalik.

Relates some legends of Norsemen at Kûngmiut and Kap Dan, trading stations near Angmagssalik, East Greenland, as told to the author's father in 1936 by the daughter-in-law of a Greenlandic magician. ***Copy seen:*** DLC.

54401. ROSING, JENS. Den østgrønlandske "maskekultur". (Grønland, July 1957, nr. 7, p. 241–51, illus.) Text in Danish. ***Title tr.:*** The East Greenland "mask culture."

Describes old comic dances; masks were used till the late 19th century but now the face is usually "laced-up" with straps. The mask originally represented people whom the magician (angakoq) met on his travels; it was made from driftwood in East Greenland.

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54402. ROSING, JENS. Rensdyrbremser og rensdyrlus. (Atuagagdliutit: Grønlandsposten, Mar. 13, 1958. Ukiut 98-iat, nr. 5, p. 19, 24.) Text in Danish. ***Title tr.:*** Reindeer fly and reindeer lice.

Discusses the occurrence of these parasites in Greenland. The fly is less common than in Scandinavia and seems to be decreasing in number. The louse, previously unknown, seems to affect Greenland caribou to a small extent.

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54403. ROSING, JENS. Søndre Strømfjordens saga. (Grønland, Sept. 1958, nr. 9, p. 321–31, illus.) Text in Danish. ***Title tr.:*** The Søndre Strømfjord saga.

Describes a boat trip by author and companions along this West Greenland fiord (66°04′ N. 53°18′ W.) with comments on hunting, local history, legends, etc. ***Copy seen:*** DLC.

54404. ROSING, JENS. Tanker ved et "viftested". (Grønland, Oct. 1958, nr. 10, p. 385–92, illus., maps.) Text in Danish. ***Title tr.:*** Thoughts at a "beater's stand."

Describes two cairn systems in the Qôrqut peninsula near Godthåb formerly used in hunting caribou. Details are given on the different kinds of cairns, the surrounding terrain and techniques used, and an imaginary hunt is described. The first cairn system is at 700 m. elevation and the cairns (33) vary in height from 43 to 96 cm.; the second at 1,000 m. has 60 cairns 35–90 cm. high.

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54405. ROSOMOFF, HUBERT L. Evoked electrical activity of the brain during hypothermia; the visual system. Bethesda, Md. Aug. 1957. 10 p. illus. (U.S. Navy. Naval Medical Research Institute NM71 05 00 .03 .01) 15 refs.

Report on photic stimulation of the retina, optic tract, lateral geniculate body, and visual cortex of the hypothermic cat. A progressive fall in the responsiveness of the visual system was observed. The condition returned to normal upon rewarming.

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54406. ROSS, CHRISTINE. Maiden voyage to the Antarctic. (Canadian shipping, Jan. 1957. v. 28, no. 4, p. 29–30, illus.)

Contains brief description of *Magga Dan*, Danish-designed and built, ice-strengthened ship, charted for the British Commonwealth Trans-Antarctic Expedition. Design features which make the vessel well adapted for navigating through ice include special protection for rudder when in reverse, steel fins to guard the propeller, and a special control bridge mounted at the head of the foremast. The bow is angled sharply to permit the ship to ride up on the ice thus utilizing its own weight in breaking the ice. The variable-pitched propeller is made of stainless steel. The ship is reinforced with steel ribs each foot of the length and has heavy plating at the stem, sides, and bottom. Navigation equipment is of latest type. ***Copy seen:*** DLC

54407. ROSS, JOHN EARL RATZ, 1892– . Geodetic surveys in Canada. (Royal Astronomical Society of Canada. Journal, Dec. 1957. v. 51, no. 6, p. 341–50, illus., map, table.)

Reports geodetic activities in the North. Triangulation and astro-fixation are still in use, but that of shoran trilateration has been intensified. The trilateration net of 1956 included 106 stations attached to 18 geodetic triangulation stations; 441 lines were measured. With the 1957 operation completed, there are 501 measured lines and 119 shoran stations over some 2.5 million sq. mi. The shoran fixation method, though inferior to first-order triangulation, is superior to astro-fixation. An average line measurement accuracy of one in 56,000 is indicated after the calibration error is applied. Due to systematic error not being eliminated in full degree, the error in position in the extreme northern limit of the net is assessed to be a possible 150′ with the probability of an occasional 300′ for external, remote stations.

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54408. ROSS, K. F. Mount Logan East Ridge. (Sierra Club bulletin, Nov. 1958. v. 43, no. 9, p. 68–70.)

Recounts first ascent of east summit of Mt. Logan via the east ridge, by five-man party on July 19, 1957. Difficulties of ascent and of the 100-mile trip over the Hubbard, Seward, and Malaspina glaciers are described.

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ROSS, W. A., *see* Wenger, J. N., *and others*. Scatter propagation. *1958*. No. 55991.

54409. ROSS, W. GILLIES. Knob Lake on Canada's new frontier. (Canadian geographical journal, June 1957. v. 54, no. 6, p. 238–45, 9 illus., text map, diagr.)

Describes the building of the Quebec North Shore and Labrador Railway, the Schefferville townsite, and the town's present facilities, and population: in summer 1956, 2,830. Montagnais and Naskapi Indians attracted to work in the Iron Ore Co. of Canada mines, now live near town. Schefferville is on the Mid-Canada Defence Line, and its climatic advantages give it strategic importance for military and civilian aviation.

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54410. ROSSBACH, GEORGE B. The genus *Erysimum* (Cruciferae) in North America north of Mexico, a key to the species and varieties. (Madroño, Oct. 1958. v. 14, no. 8, p. 261–67.)

Includes: Erysimum incospicuum (Alaska), *E. angustatum* (Dawson, Yukon), *E. pallasii* (widespread in arctic North America and Asia), and *E. pallasii* v. *bracteosum* (Teller, Alaska).

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54411. ROSSELAND, SVEIN, 1894– . Carl Fredrik Mülertz Størmer; minnetale holdt i Oslo Geofysiske Forening, tirsdag 8. oktober 1957. (Naturen, 1958. årg. 82, nr. 2, p. 67–81, illus.) Text in Norwegian. ***Title tr.:*** Carl Fredrik Mülertz Størmer. Memorial address delivered at the Oslo Geophysical Association, Tuesday, October 8, 1957.

Outline of the scientific activities of Carl Størmer, 1874–1957, whose main field was pure mathematics; his early interest in earth magnetism; his contributions to auroral research, expeditions in 1910, 1913, to Bossekop, northern Norway, taking photographs of these lights; and his recent and classic work, *The polar aurora*. ***Copy seen:*** DGS.

ROSSIPAL, EMMERICH, *see* Svenska turistföreningen. Kebnekajsefjällen . . . *1952*. No. 55256.

54412. ROSSITER, ROGER JAMES, 1913– , *and* D. NICHOLLS. Phosphorus metabolism of the adrenal gland of rats exposed to a cold environment. (Revue canadienne de biologie, June 1957. v. 16, no. 2, p. 249–68, illus., tables.) 57 refs.

A review of literature dealing with incorporation of inorganic P^{32} into the

adrenal gland of rats exposed to cold, hypophysectomy and ACTH, adrenaline and histamine, pitressin, cold exposure and changes in P during it, the effect of cold on adrenal phospholipid and ribonucleotides, acclimatization.

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54413. ROSSMAN, DARWIN LUCIAN, 1915– . Ilmenite-bearing beach sands near Lituya Bay, Alaska. Washington, D.C., 1957. 10 p. fold. map, 2 tables. Mimeographed. (U.S. Geological Survey. Reports, open file series, no. 420.) 4 refs.

Describes beach sands studied in 1952 in connection with field mapping of the Fairweather Range. Area covered, on foot or with a wheel plane, extends from Dry Bay to Dixon Entrance; samples were taken at about 5-mi. intervals from a point 7 mi. northwest of Lituya Bay to the northwest side of Dry Bay. Concentrations (5–40%) of gold, platinum and ilmenite occur on these beaches. Location, description, and magnetite and ilmenite content of 11 samples are summarized, as are results of chemical and spectrographic analysis of four samples of ilmenite. Main heavy minerals, and light minerals found in the beach deposits are noted; probable origin of heavy minerals in the igneous and metamorphic rocks to the northeast is suggested. Further investigation of these deposits, possibly for their combined content of ilmenite, gold, and platinum, seems warranted. ***Copy seen:*** DGS.

54414. ROSSMAN, DARWIN LUCIAN, 1915– , *and others*. Reconnaissance total intensity aeromagnetic map of the southern part of Prince of Wales Island, Alaska. Washington, D.C., 1956. Map sheet with text. (U.S. Geological Survey. Geophysical investigations. Map GP 135.) 12 refs. *Other authors:* J. R. Henderson, *Jr.*, *and* M. S. Walton, *Jr.*

Map (scale 1:126,720, contour interval 100 gammas) covers a 700 sq. mi. area, 54°40′–55°42′ N. 131°55′–133° W., just north of Dixon Entrance. Based on aeromagnetic survey, Sept. 20–21, 1945, recordings were made of variations in the earth's total intensity magnetic field by a modified AN/ASQ–3A airborne magnetometer. Purpose of survey was to locate magnetic iron and associated copper deposits; results include delineation of intrusive igneous rocks of area, with contact-metamorphic ore bodies along their margins. Most promising areas for exploration are noted. Extent of intrusive rocks is shown on inset map.

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ROSTOVTSEV, N. N., *see* Aleskerova, Z. T., *and others*. Stratigrafiia . . . *1957*. No. 49247.

ROTNES, PER L., *see* Kreyberg, L., *and* P. L. Rotnes. La stase expérimentale . . . *1931*. No. 52498.

ROUKHIIAĬNEN, M. I., *see* Kamshilov, M. M., *and others*. Plankton . . . *1958*. No. 52150.

54415. ROUSSEAU, JACQUES, 1905– , Astam mitchoun; essai sur la gastronomie amérindienne. (Cahiers des Dix, 1957. no. 22, p. 193–211.) 17 refs. Text in French. ***Title tr.:*** Quick, come and eat; an essay on Amerindian gastronomy.

Describes the food (meat, fish, vegetable), its preparation, including some recipes, division of game animals according to sex, age and status of family members, delicacies, survival diets (tree bark and lichens) in times of famine, etc., among the Hurons, Iroquois, Naskapi and Montagnais Indians and Labrador Eskimos. The use of caribou (and other) stomach content as unique vegetable source in winter is noted.

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54416. ROUSSEAU, JACQUES, 1905– . L'indien de la forêt boréale, élément de la formation écologique. (Royal Society of Canada. Studia varia, 1957, p. 37–51.) Text in French. ***Title tr.:*** The boreal forest Indian, element of ecologic formation.

Discusses the relationship between environment and culture by comparing the economy and way of life of the Montaignais (sub-arctic forest) with those of the Algonkians (birch forest) and Eskimos (arctic zone); their means of communication, housing, fishing and hunting techniques, position of women, religious beliefs and festivals, etc. are described and the economic changes of the post-contact period dealt with. The destruction of nature (environment) by man, both primitive and modern, is noted and the importance of forests in present-day Quebec economy (lumber and paper industry) touched upon.

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54417. ROUSSEAU, JACQUES, 1905– . Nouvelles entités botaniques de l'enclave

dolomitique du lac Mistassini, province de Québec. (Bruxelles. Jardin botanique de l'État. Bulletin, Sept. 30, 1957. t. 27, no. 3, p. 369–80, 30 illus.) 2 refs. Text in French. ***Title tr.:*** New botanical entities of the dolomitic enclave of Lake Mistassini in the province of Quebec.

Contains Latin diagnoses, critical notes and data on habitat and distribution of two new species, two new varieties, and four new forms of flowering plants collected by the author and E. Rouleau during five trips to this region, in 1944–48. A table of comparative taxonomic characteristics of *Eriocaulon rollandii* n. sp., *E. septangulare* and *E. parkeri* is added.

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ROUSSEAU, JACQUES, 1905–, *see also* Marie-Victorin, *and* J. Rousseau. Les *Artemisia* . . . *Dracunculus*. *1944* No. 53131.

ROUX, C., *see* Giroud, A., *and others.* Malformations urinaires . . . *1957.* No. 51202.

ROWLAND, E. F., *see* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958.* No. 50694.

54418. ROWLEY, GRAHAM W., 1912– . The Eskimos. (Arctic circular, 1958. v. 11, no. 2, p. 15–24, maps.)

Describes this northern people: language, physical type, culture, tribal groups, archeology and history. The maximum Eskimo population is estimated to have been under 100,000, and the present population as approx. 50,000. This figure is broken down by country, and, roughly, by area or tribal division for Canada. Maps show areas inhabited and formerly inhabited by Eskimos; and distribution of the Inupik, Yupik and Aleut language branches, and tribal divisions.

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54419. ROWSON, L. E. A. Cold shock. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 509.)

Remarks on freezing bull spermatozoa, speed of cooling, and damage by electrolytes. ***Copy seen:*** DNLM.

ROY, CHALMER JOHN, 1907– , *see* Carlson, P. R., *and others.* Geology and mechanical stabilization of Cenozoic sediments . . . *1958.* No. 50134.

ROY, CHALMER JOHN, 1907– , *see* Lindholm, G. F., *and others.* Geologic and engineering properties of silts . . . *1957.* No. 52840.

ROY, CHALMER JOHN, 1907– , *see* O'Sullivan, J. B., *and others.* Geology . . . soil materials . . . *1958.* No. 53805.

54420. ROYAL SOCIETY OF LONDON. A discussion on viability of mammalian cells and tissues after freezing; under the leadership of A. S. Parkes. Discussion held 31 January 1957. (*Its:* Proceedings, Dec. 1957. ser. B, v. 147, no. 929, p. 423–553, illus., tables.)

Contains 21 papers delivered at the symposium, arranged in order from molecules through cells, to mammals. Chairman's introductory remarks (p. 423–26) outline the main developments in the field since Robert Boyle's experiments in 1665, including his own work. The central problems of the discussion, its genesis and limits are pointed out. The participants' papers, as listed below, are abstracted under their names in this Bibliography. The chairman's concluding remarks (p. 552–53) review the material and opinions presented: protective action of glycerol; cell differences in cold tolerance; freezing of whole mammals; suspended animation, etc.

LOVELOCK, J. E. Denaturation of lipid-protein complexes as a cause of damage by freezing.

LUYET, B. J. On the growth of the ice phase in aqueous colloids.

MERYMAN, H. T. Physical limitations of the rapid freezing methods.

REY, L. R. Studies on the action of liquid nitrogen on cultures *in vitro* of fibroblasts.

TAYLOR, A. C. The effect of rate of cooling on survival of frozen tissues.

JONES, N. C. H., *and others.* Factors affecting the viability of erythrocytes stored in the frozen state.

POLGE, C. Low-temperature storage of mammalian spermatozoa.

WALTON, A. Cold shock of spermatozoa.

ROWSON, L. E. A. Cold shock.

PASCOE, J. E. Survival of the rat's superior cervical ganglion after cooling to −70° C.

PARKES, A. S. Viability of ovarian tissue after freezing.

GIBSON, T. Viability of cartilage after freezing.

BILLINGHAM, R. E. Bubbles in thawed cornea.

RIDGE, J. W. Freezing of the cornea.

HEARD, B. E. Formation of intracellular ice.

SMITH, A. U. Problems in the resusci-

tation of mammals from body temperatures below 0° C.

LOVELOCK, J. E. Diathermy apparatus for the rapid rewarming of whole animals from 0° C. and below.

KREYBERG, L. Local freezing.

HORNSEY, S. The effect of hypothermia on the radiosensitivity of mice to whole-body X-irradiation.

BILLINGHAM, R. E. Spread of bacteria during hypothermia.

WAY, M. J. Glycerol-containing insects. ***Copy seen:*** DNLM.

ROYALL, ROBERT EDWARD, 1891– , *see* Huntley, T. A., *and* R. E. Royall. Construction . . . Alaska Highway. *1946.* No. 51856.

54421. ROZANOV, NIKOLAĬ SERGEEVICH, *Editor.* Dobycha i primenenie torfa v sel'skom khozîaĭstve. Moskva, Gos. izd-vo sel'skokhoz. lit-ry, 1956. 214 p. illus., diagrs., tables, maps incl. 1 fold. Refs. Text in Russian. ***Title tr.:*** Extraction and utilization of peat in agriculture.

Collection of seven papers, as listed below (titles tr.) of which the first, basic paper has specific reference to northern areas, and is described in this bibliography under its senior author's name.

OLENIN, A. S., *and others.* Peat fund of the U.S.S.R. and its utilization in agriculture.

Provorkin, A. S. Reconnaissance of the peat deposits.

Sokolov, S. A., and I. V. Sedov. Drainage and preparatory work.

Teregulov, I. Kh. Digging of peat.

Kocher, S. G. Carting out the peat.

Teregulov, I. Kh. Calculation of peat and accounting of collective farms with Motor Tractor Stations.

Popov, G. P. Supplements.

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ROZANOV, NIKOLAĬ SERGEEVICH, *see also* Olenin, A. S., *and others.* Torfîanoĭ fond SSSR . . . *1956.* No. 53748.

54422. ROZEN, G. ÎA. Sadovodstvo v Finlîandii. (Sad i ogorod, May 1957. god 95, no. 5, p. 60–61.) Text in Russian. ***Title tr.:*** Fruit culture in Finland.

Notes growing of apple trees up to 65° N. and red currant up to the Arctic Circle. ***Copy seen:*** DLC.

54423. ROZENBERG, L. A. O zonal'nom raspredelenii bakteriĭ v vode dal'nevostochnykh moreĭ i severo-zapadnoĭ chasti Tikhogo okeana. (Akademiîa nauk SSSR. Doklady, 1958. t. 122, no. 3 p. 378–80, table, map.) 4 refs. Text in Russian. ***Title tr.:*** Zonal distribution of bacteria in waters of the Far Eastern seas and the northwest Pacific.

Account of R/V *Vitîaz'* investigations made at 122 stations of the area in a layer of the upper 100 m. The Bering Sea proved to be the poorest in bacteria; the Sea of Okhotsk showed a somewhat higher bacterial count. In general the number of bacteria increased towards south. ***Copy seen:*** DLC.

54424. ROZENBERG, L. A., *and* **N. A. MEFEDOVA.** Vzaimosvîaz' bakteriĭ s khimicheskim rezhimom i zooorganizmami v gruntakh severo-zapadnoĭ chasti Tikhogo okeana. (Mikrobiologiîa, Jan.–Feb. 1956. t. 25, vyp. 1, p. 61–65, illus. table.) 12 refs. Text in Russian. Summary in English, appendix, p. 5. ***Title tr.:*** Interrelation of the bacteria with chemical conditions and zoo-organisms in the bottom of the northwest Pacific Ocean.

Report of study made from the research vessel *Vitîaz'* in conjunction with biological and chemical investigations, down to a depth of 6150 m. Bottoms rich in zoobenthos were found to be also rich in bacteria; this is apparently due to the higher concentration of biogenic elements contained in them. The number of bacteria, their biomass and the concentration of biogenic elements decreased with the increase of distance from land. ***Copy seen:*** DLC.

54425. ROZHDESTVENSKIĬ, IGNATIĬ DMITRIEVICH. Serdtse Taĭmyrskoĭ tundry; putevye zametki. (Neva, July 1957, no. 7, p. 168–73, illus.) Text in Russian. ***Title tr.:*** The heart of the Taymyr tundra; travel notes.

Describes difficulties of farming at the Noril'sk sovkhoz (69°20′ N. 88°06′ E.), northernmost in the U.S.S.R.: breaking virgin ground (moss-covered shrubby tundra), ploughing the top soil including the upper permafrost layer, fertilizing with humus, potassium phosphate and superphosphates (60–80 t./hectare), drainage, etc. Constant cultivation has lowered the permafrost level to 50–60 cm. depth. New land changes from pasture to field in two–three years. Cold-resistant cereal and vegetable strains are cultivated, barley, cabbage (yield up to 30 t./hectare), turnips, even corn (maize) and tomatoes (2½ kg./sq. m.) also hot-house vegetables and flowers. The sovkhoz

dairy farm has 900 cows with average annual yield to 3,400 liters milk. Poor pasture necessitates use of supplementary fodder concentrates. The town of Noril'sk and the train trip from Dudinka across the Taymyr tundra are sketched.

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54426. ROZHDESTVENSKIĬ, ROBERT IVANOVICH. Na rodnom îakutskom îazyke; zametki o îakutskoĭ literature. (Oktîabr', Oct. 1958. god 35, no. 10, p. 185–91.) Refs. Text in Russian. ***Title tr.:*** In the Yakut mother tongue; remarks on Yakut literature.

Sketch of the activities and literary work of several outstanding Yakut poets and writers: Éllîaĭ, I. Gogolev, P. Oĭunskiĭ, Semen Danilov, Sofron Danilov, G. Makarov, N. ÎAkutskiĭ, N. Gabyshev, N. Mordinov. ***Copy seen:*** DLC.

ROZHIN, ANATOLIĬ IVANOVICH, *see* Tereshchenko, N. M. Materialy . . . po îazyku nenîsev. *1956*. No. 55383.

54427. ROZHKOV, I. S. Nauka v sovetskoĭ ÎAkutii. (Akademiîa nauk SSSR. Vestnik, Nov. 1957. god 27, no. 11, p. 103–109.) Text in Russian. ***Title tr.:*** Science in Soviet Yakutia.

Survey to mark 40 years of the Soviet regime, 325 years since incorporation of Yakutia into Russia, and 35 years of the Autonomous Yakut Republic. Progress of acculturation among the Yakuts and of the exploration and economic development of Yakutia, its 565 schools, 15 specialized high schools and 200 libraries in 1956–57 are noted; achievements of the Yakut Branch of the Academy of Sciences are cited with its Economics and Geography Section, Geology Section, its Institutes of Biology, and of Language, Literature and History and its Cosmic Ray Laboratory. ***Copy seen:*** DLC.

54428. ROZINA, N. Granil'shchiki almazov. (Ural, Sept. 1958, no. 9, p. 189.) Text in Russian. ***Title tr.:*** Diamond cutters.

Notes beginning of diamond-cutting (in 1958?) by a team trained in a gem-cutting plant in Sverdlovsk. The diamonds were from the "Mirnaya" pipe in the Vilyuy basin, in Yakutia.

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ROZOV, N. N., *see* Ivanova, E. N., *and others*. Pochvenno-geograficheskoe raĭonirovanie. *1958*. No. 52014.

54429. ROZOV, N. S. Materialy po kraniologii chulymîsev i sel'kupov. (Akademiîa nauk SSSR. Institut ėtnografii. Trudy, 1956. nov. ser. t. 33. Antropologicheskiĭ sbornik 1, p. 340–73, tables.) 21 refs. Text in Russian. ***Title tr.:*** Materials on the craniology of Chulymtsy and Sel'kups.

Discusses the anthropological differences of the upper and lower Chulym River Tatars and the lower Chulym Samoyeds. Crania excavated during various areal expeditions (1946–1950) are compared and their measurements tabulated (p. 347–73). The continued, parallel presence of these two autochthonous ethnic groups (confirmed by archeological observations) in the Chulym region marks it as an ancient melting pot of Europoids (from southwest Siberia) and Mongoloids (from the east). The more pronounced Mongoloid traits of the Tatars is ascribed to their early mixture with central Asiatic (Turkic) tribes. The Europoid features of the excavated Sel'kup (Samoyed) crania preclude the assumption of a Russian racial admixture responsible for their present Europoid traits.

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54430. RÓŻYCKI, STEFAN ZBIGNIEW. Strefowość rzeźby i zjawiska peryglacjalne na Ziemi Torella, Spitsbergen. (Biuletyn peryglacjalny, 1957. wydział 3, no. 5, p. 51–87, 187–224, illus., table, diagrs., map.) 47 refs. Text in Polish and French. ***Title tr.:*** Relief zones and periglacial phenomena in Torell Land, Spitsbergen.

"The distribution of various relief zones is discussed on the basis of studies during the Polish Spitsbergen Expedition of 1934, and the formations characterizing each zone are described. Phenomena in the littoral zone include regularly shaped depressions and gravel ridges formed by sea ice, fissures and polygons in clay deposits on slightly frozen gravel, nivation forms on steep slopes, sandy glaciers (patches of ice 3–4 m. thick), and blocks of dead ice. The zone situated above the coast (periglacial zone) exhibits three types of tundra: a humid tundra with well-developed solifluction phenomena and stone polygons, a dry tundra characterized by tundra polygons and striated soils, and detritic tundra in which nivation cirques and various forms of water erosion occur. The subnival zone features corrasion cirques, intense wind action,

and cryoconite sedimentation. Debris fields, stone agglomerations, corrasion ravines, avalanche gullies, and intense frost splitting occur in the nival zone."—SIPRE. ***Copy seen:*** DLC.

54431. *RUBBER DEVELOPMENTS.* Rubber at the South Pole. (Rubber developments, summer 1958. v. 11, no. 2, p. 58–60, illus.)

The British Trans-Antarctic Expedition used two types of rubber tracked vehicle (the Weasel and the Muskeg) and an adapted form of the Ferguson tractor with special cold-resistant rubber tires. Each track assembly of the Muskeg tractor comprises four pneumatic-tired twin wheels running within the track, which is made up of three narrow, endless, rubber-and-rayon belts reinforced with steel cables. The belts, slightly separated, are linked together transversely by a series of steel cross plates spaced at such intervals that the teeth of the driving sprocket project through the belts and engage with the cross plates. The drive sprockets, including the driving teeth, are made of fabric-reinforced rubber. The expedition also carried several kinds of rubber-soled shoe and a Numax inflatable hut, which yielded favorable results.

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54432. RUBINOV, P. Opyt primeneniia parorazogreva avtomobilei. (Avtomobil'nyĭ transport, Feb. 1958. god 36, no. 2, p. 13, illus.) Text in Russian. ***Title tr.:*** Experience in the use of steam preheating for motor vehicles.

A preheating system for motor vehicles parked in the open is described. The system consists of underground steam pipe lines, running from boilers, with separate branches to individual parking spaces. A similar pipe system carries hot water from a special water heater for various services (heating of office building, repair shop, car washing, etc.). This installation serviced satisfactorily a hundred vehicles at a time for many years.

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54433. RUBINSHTEĬN EVGENIIA SAMOĬLOVNA, 1891– . "Obrashchenie" sutochnogo khoda temperatury vo vremia polârnoĭ nochi i nochnye povyshenia temperatury zimoĭ v umerennykh shirotakh. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia. May-June 1958, no. 3, p. 65–68, tables.) Text in Russian. ***Title tr.:*** "Inversion" of the 24-hr. temperature course during arctic night and night temperature rise in winter in temperate latitudes.

Presents data on the phenomenon, already observed by Dove, Mohn, Nansen, and others, that in arctic regions, during the dark period the 24-hr. temperature maximum occurs during night hours. The 1 A.M., 7 A.M., 1 P.M., and 7 P.M. mid-monthly temperatures for November, December, January and February at twelve Soviet arctic stations are cited. Winter night temperature rise in latitudes without arctic night is also considered and data for Leningrad, Kola Peninsula and Yakutsk stations are evaluated: the night temperature rise occurs more accidentally and not during all winter months. Advection of warm air, condensation, cloudiness, adiabatic processes are considered as causes. Further, including IGY, studies may resolve the question.

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54434. RUBIO, ROBERTO, *and* **Å. SENNING.** Variaciones de la presión en vena porta, cava y sistémica durante la hipotermia; efecto del Arfonad; trabajo experimental. (Boletín de la sociedad de cirurgía del Uruguay, 1957. t. 28, no. 2–3, p. 167–75, illus.) 18 refs. Text in Spanish. Summary in English. ***Title tr.:*** Variations in venous portal, caval and systemic pressure during hypothermia; effect of Arfonad; experimental study.

Account of experiments with dogs, indicating that during cooling all three pressures fell, rising again upon rewarming. Hypothermic dogs which had heart stoppage showed post mortem enlarged livers. This is accounted for by the caval occlusion, cardiac arrest, etc. The effects of Arfonad are also discussed.

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RUBTSOV, D. M., *see* Makarova, L. A., *and others.* Pochvennoe raĭonirovanie. *1958.* No. 53063.

RUBTSOV, D. M., *see* Polyntseva, O. A., *and others.* Opisanie pochv. *1958.* No. 54069.

54435. RUDAKOVA, V. A. Materialy po pitaniiu atlanticheskoĭ-skandinavskoĭ sel'di. (Murmansk. Polârnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziâĭstva i okeanografii. Trudy, 1956. vyp. 9, p. 124–45, illus. tables, maps.) 14 refs. Text in Russian. ***Title tr.:*** Materials on the feeding of Atlantic-Scandinavian herring.

Account of investigations carried out during 1951–1955, on fishes of 30–33 cm.

size group, with some of the 26–29 cm. group. Only fishes caught commercially were utilized, by examining the stomach contents. Species composition of the food, seasonal changes in it, distribution of herring and its effect on food composition, food in relation to plankton composition, weight and fatness as related to nutrition, are the main topics discussed. ***Copy seen:*** DI.

RUDBERG, ERIK, *see* Brander, S., *and* E. Rudberg. Långlöpornas land . . . *1957.* No. 49884.

54436. RUDBERG, STEN. Ödemarkerna och den perifera bebyggelsen i inre Nordsverige; en diskussion av vissa orsakssamband bakom fördelningen bygd-obygd. Uppsala, 1957. 192 p. illus., maps (10 in pocket), tables, diagr. (Geographica, nr. 33.) 187 refs. Text in Swedish. Summary in English. ***Title tr.:*** Unsettled and frontier settlement areas in inner northern Sweden; a discussion of certain causal connections underlying the division into cultivated and uncultivated areas.

Large uninhabited areas are characteristic of this part of Sweden, due to natural conditions, location above the timber line, poor soil, etc., and to historical development. Colonization has varied from place to place: some localities have villages from medieval times, others have not been colonized until this century. During most of the period studied, form of land use has varied, but within the area, agriculture has remained steady. The farmers have had barley fields and potato patches but lived mainly on the yields of stock-raising, supplemented by hunting, fishing and forestry. Colonization is reviewed; and distribution of settlements is mapped at 50-year intervals from 1750 to 1950. Natural conditions: relief, earth cover, vegetation, climate are analyzed for this area and discussed as factors in its settlement. The present division into settled and unsettled areas has been determined not only by natural conditions. Other factors are involved: if individual villages and farms are legally entitled to use large unsettled areas this constitutes an obstacle to the establishment of new settlements and if the government can assert its right to the uninhabited areas the possibilities of colonization will depend on the government's interest in it. The present boundary is also often a boundary of retrogression, i.e., areas which now appear as uninhabited have earlier had permanent settlement, or have been used in the seasonal movement of herds to the mountains. ***Copy seen:*** DLC.

54437. RUDBERG, STEN. Some observations concerning mass movement on slopes in Sweden. (Geologiska föreningen i Stockholm. Förhandlingar, Jan.–Feb. 1958. bd. 80, häfte 1, p. 114–25, illus., tables.) 19 refs.

Introductory investigations in Sweden of mass movement by creep and solifluction on till-covered slopes and orientation of stones at the surface and in depth are discussed. Marking and recording of stones makes it possible to measure their movement from year to year. Orientation appears to be determined by (1) conditions immediately after ice retreat when the ground was water saturated and not covered by vegetation, and (2) by recent and current mass movements. Studies of differential movement in solifluction terraces near Abisko, Tärna, and in other Swedish localities are also reported. ***Copy seen:*** DGS.

54438. RUDE, GILBERT T. Our last frontier; the Coast and Geodetic Survey's work in Alaska. (Geographical review, July 1957. v. 47, no. 3, p. 349–64, 5 illus., 3 text maps.) 4 refs.

The U.S. Coast and Geodetic Survey began operations in Alaska in 1867 with one small schooner, and made the first modern surveys in 1882 with the *Hassler.* History and present status of geodetic and hydrographic surveys in the Aleutians, Bering Sea, Aretic Coast, southeastern and southwestern Alaska are reviewed. Reconnaissance for a tunnel to connect the Alaska Railroad with tidewater at the head of Passage Canal, Prince William Sound was started in 1913; the tunnel was completed in World War II. A hill of loose rocks observed in 1913–1914 at the head of Passage Canal had disappeared by 1942; an explanation of the disappearance is offered. ***Copy seen:*** DGS.

54439. RUDEN, TOLLEF. Skogene i Nordvest-Amerika. (Norsk skogindustri, 1952. årg. 6, nr. 11, p. 347–72, illus., maps, graphs.) Text in Norwegian. Summary in English. ***Title tr.:*** The forests in northwest America.

Results of a study of North American forests in 1951 are presented. Its main purpose was to investigate possibilities of obtaining seeds from valuable tree species, suitable for the Norwegian

climate. Forests in British Columbia, Alberta and Alaska and climatic conditions were studied. The value of the various species to Norwegian forestry is discussed with the northern part of Norway in mind. ***Copy seen:*** DLC.

54440. RUDENKO, SERGEĬ IVANOVICH, 1885– . Kul'tura naseleniîa gornogo Altaîa v skifskoe vremîa. Moskva, Izd-vo Akademii nauk SSSR, 1953. 402 p. illus., 120 plates, map, diagrs. (Akademiîa nauk SSSR. Institut istorii material'noĭ kul'tury.) 92 refs. Text in Russian. ***Title tr.:*** The culture of the population of Altay Mts. in Seythian times.

A profusely illustrated account of the 1929–1949 excavations of burial mounds in the Pazyryk Valley (50°40′ N. 88° E.). The perfect state of preservation of the mummies and artifacts (including textiles), dated into the 5th–4th century B.C., is ascribed to the lens-shaped permafrost blocks (diagrs. p. 32–35) which formed around the subterranean burial chambers. The reason for the formation of this ice in an otherwise permafrost-free region and the time of its appearance are discussed (p. 11–24). ***Copy seen:*** DLC.

RUDENKO, SERGEĬ IVANOVICH, 1885– , *see also* Levin, M. G. Anthropological types . . . north-eastern Paleoasiatics . . . *1958*. No. 52783.

RUDENKO, SERGEĬ IVANOVICH, 1885– , *see also* Okladnikov, A. P. Ancient cultures . . . *1958*. No. 53725.

54441. RUDIM, VL. V sektore Q–57, (Ogonëk, Dec. 1958. god 36, no. 52, p. 25–28, illus.) Text in Russian. ***Title tr.:*** Section Q–57.

Soviet geologists have a new geological map of the U.S.S.R. (at scale 1:1,000,000) in preparation on 176 sheets. The Seymchan Geological Administration, responsible for collecting material in a 600,000 sq. km. area sent an expedition headed by A. P. Shpetnyĭ, to explore the Omolon River basin, sheet Q–57 of the projected map. Its seven-man "water" party under S. A. Kobycheva, investigated the right bank of the Omolon from Shcherbakovo to its confluence with Kolyma River. The party's work, motor boat journey downstream (losing of part of its equipment in the rapids), surveying methods, etc. are described. ***Copy seen:*** DLC.

RUDOLPH, GUILFORD GEORGE, *see* Gollan, F., *and others*. Electrolyte transfer . . . hypothermia . . . anoxia in dogs. *1957*. No. 51252.

RUFFIÉ, J., *see* Bouisset, L., *and others*. Survie des trypanosomes . . . *1958*. No. 49863.

54442. RUGE, FRIEDRICH. Der Seekrieg 1939–1945. Stuttgart, K. F. Koehler, 1954. ix, 320 p., maps, diagrs. Text in German. ***Title tr.:*** The war at sea, 1939–1945. English translation by M. G. Sanders: *Der Seekrieg, the German Navy's story, 1939–1945* (440 p., plates, maps, diagrs.) was pub. with illus. added by the U.S. Naval Institute, Annapolis, Md. in 1957.

Includes (p. 208–221) discussion of surface operations against allied convoys to Murmansk and Arkhangel'sk and establishment of weather stations on Vestspitsbergen and East Greenland.

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54443. RUHE, CARL HENRY WILLIAM, 1915– . Effect of hypothermia on the brain. Randolph AFB, Texas, July 1957. 14 p. illus., tables. (U.S. Air Force. School of Aviation Medicine. Report no. 57–104.) 3 refs.

Rabbits were cooled to pre-lethal levels and rewarmed in water of 40°–45° C. with or without additional warming of the head by diathermy. There was considerably greater survival when diathermia was used, as it prevented a fall in brain temperature otherwise observed at the onset of immersion rewarming. Animals recovered by either method showed no harmful effects upon habits, conditioned reflexes or growth. ***Copy seen:*** DNLM.

54444. RUHE, CARL HENRY WILLIAM, 1915– . Influence of intravenous infusions on death from immersion hypothermia. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 137.)

Intravenous infusions of saline or Locke's solution did not extend the survival time of rabbits cooled to death in ice water. Rectal temperature was identical with that of non-infused controls; oral temperature was lower.

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RUIVO, MARIO, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957*. No. 51934.

RUIVO, MARIO, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958*. No. 51935.

54445. RUKHIN, L. B. Nizhnepaleozoĭskie korally i stromatoporoidei verkhneĭ chasti basseĭna r. Kolymy. Leningrad-Moskva, Gos. ob"ed. nauchno-tekhnich. izd-vo, 1938. 118 p. 28 plates. (Dal'stroĭ, Gostrest. Trudy, Materialy po izucheniĭu Kolymsko-Indigirskogo kraĭa, ser. 2, geologiĭa i geomorfologiĭa, vyp. 10.) 102 refs. Text in Russian. Summary in English. ***Title tr.:*** The Lower Paleozoic corals and stromatoporoids of the upper part of Kolyma River basin.

Contains systematic study of approx. 140 specimens of Upper Silurian, Devonian and Lower Carboniferous fauna, collected in 1933–35 by the Dal'stroĭ Upper Kolyma Expedition in a 75,000 sq. km. area, 63°40′–65°40′ N. 147°–154° E. Diagnosis and description are given of the specimens, half of which represent new species; geographic locations and stratigraphic distribution are noted.

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54446. RUKHIN, L. B. Problema proiskhozhdeniĭa materikovykh oledeneniĭ. (Vsesoĭuznoe geograficheskoe obshchestvo. Izvestiĭa, Jan.–Feb. 1958. t. 90, vyp. 1, p. 25–38, 3 maps.) 27 refs. Text in Russian. ***Title tr.:*** The problem of the origin of continental glaciation.

Deals with origin and causes of Quaternary and Upper Paleozoic continental glaciation. Scandinavian, Greenland and Labrador centers of glaciation are reviewed. Changes of climate, course of the Gulf Stream and paleogeography of arctic regions are discussed. The possible changes of the axes of the earth's rotation and wandering of the North Pole are considered. Traces and regions of upper Paleozoic continental glaciation are briefly discussed. Main reasons for the North American and North Eurasian continental glaciation were: isolation of the Arctic Basin from the Atlantic by the Wyville Thomson Ridge and (probably) the Nansen Rise, shifting of the Gulf Stream.

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54447. RULA, A. A., *and others.* Trafficability of snow, Greenland studies, 1954. Vicksburg, Miss., Aug. 1955. 160 p. illus., graphs, map, tables. (U.S. Army Engineer Waterways Experiment Station. Technical memorandum no. 3–414, report no. 2. *In* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954, v. 1, pub. 1957.) *Other authors:* E. S. Rush *and* S. J. Knight.

First report prepared by the Waterways Experiment Station, pertaining to the trafficability of natural snow surfaces; test techniques and procedures of this 1954 program were similar to those used on natural soils (cf. No. 24375). Tests were conducted at three sites: Thule Take-off (TUTO), Nuna Take-off (NUTO), and Sierra (cf. map) during June 25–Aug. 17. Snow conditions were: a melt zone at TUTO, a dry zone at Sierra, and a transition zone at NUTO. Terms are defined; description of test sites, snow classification system, snow conditions, traffic tests, test data, and miscellaneous studies are given. Vehicle performance is described for trucks, weasel, Tucker Snow-Cat, Otter, tractors, sled. Towing tests and towed tests are reported. Data are discussed and analyzed; conclusions and recommendations are offered. Equipment and selected snow conditions are illustrated; summaries and supplementary data are appended.

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RULEV, N. A., *see* Fomin, V. M., *and others.* O razvitii . . . termal'nye vody . . . *1958.* No. 50943.

54448. RUNE, OLOF. De serpentinicola elementen i Fennoskandiens flora. (Svensk botanisk tidskrift, 1957. bd. 51, häfte 1, p. 43–105, 2 plates, text map.) 53 refs. Text in Swedish. Summary in English. ***Title tr.:*** The serpentinicolous elements in the flora of Fennoscandia.

Author's study of the flora, especially of small, recently discovered serpentine areas of southern Swedish Lapland, is summarized. The serpentinicolous taxa among vascular plants include at least ten species and varieties native to Lapland. *Rumex acetosa* ssp. *pratensis* var. *serpentinicola* and *Minuartia biflora* var. *serpentinicola*, both from Åsele and Lycksele Lappmark are described as new. The bicentric distribution in Scandinavia is commonly believed to be due to glacial survival in ice-free refugia in western and northern Norway during the last glaciation.

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54449. RUONG, ISRAEL, 1903– . Om renskötsel och vildrensjakt på Grönland. (Samefolkets egen tidning, Sept. 1957. årg. 39, nr. 3, p. 3, illus.) Text in Swedish. ***Title tr.:*** Reindeer husbandry and caribou hunting in Greenland.

Impressions from a summer 1957 visit to Itivnera in the interior of Godthåb Fjord where the experiment in reindeer husbandry is being carried out. The reindeer, estimated at about 900 before

calving and after calving probably 1,300, represent the development from 250 with which the experiment started in 1952. A few details are added on caribou hunting in the adjacent district.

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54450. RUONG, ISRAEL, 1903– . Types of settlement and types of husbandry among the Lapps in northern Sweden. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 105–132, illus., tables, maps incl. fold.) 8 refs.

Discusses the historical, geographical and economic aspects of Lappish nomadism and the degree of settlement permanency among the reindeer herders of Jukkasjärvi and Gällivare parishes. The opening of railroad and highway communications in the North Lappish mountain region, coupled with the change from reindeer breeding to meat production, and the development of commercial fishing during the 1934–1955 period, mark a transition to a more settled economy and a curtailment of nomadic herding. Various types of Lappish dwellings and storage structures are sketched: tent, turf hut, cottage, shed, depot, etc. The Lappish settlements are described and mapped, and data are tabulated on number of households, percentage of nomads, etc., and characteristics of the permanent settlements in Gällivare parish. ***Copy seen:*** DSI.

54451. RUSANOV, ÎA. S. Vliîanie usloviĭ pogody na dobychlivost' belich'ego promysla. (Raţsionalizaţsiîa okhnotnich'ego promysla, 1958. vyp. 7, p. 64–66, tables.) Text in Russian. ***Title tr.:*** Effect of weather conditions on catch of squirrel.

Presents results of observation in the Evenki National District and in Buryat-Mongol A.S.S.R. of the influence of atmospheric pressure, wind, precipitation and temperature on the number of traces, visibility and catch of squirrel.

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54452. RUSANOV, ÎA. S. Zatraty truda pri ruzhelnoĭ dobyche sobolîa v ugod'îakh razlichnogo tipa. (Raţsionalizaţsiîa okhotnich'ego promysla, 1958. vyp. 7, p. 37–42, illus., tables.) Text in Russian. ***Title tr.:*** Amount of labor required for shooting sable in various hunting grounds.

Presents results of a time study carried out in the Evenki National District and in Buryat-Mongol A.S.S.R. A hunter needed, on average, 4 hrs. 48 min. from sighting the sable to the kill on ground covered with stones and old tree roots, and in the forest with mossy ground only 10 min.; total time, including search for the animal, amounted to 11 hrs. 40 min. on stony ground and 7 hrs. 26 min. on mossy ground. ***Copy seen:*** DLC.

54453. RUSEŢSKIĬ, ALEKSEĬ. Razgovor s solnţsem. (Sovetskiĭ soîuz, 1957. no. 7(89), p. 20–25, illus., map, graph.) Text in Russian. ***Title tr.:*** Talking to the sun.

Pictorial account of Soviet work in magnetism, cosmic radiation, etc. for the IGY; trip of the non-magnetic schooner *Zarîa* to the magnetic north pole region 1956; IGY stations in the U.S.S.R.

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RUSH, E. S., *see* Rula, A. A., *and others.* Trafficability of snow. *1957.* No. 54447.

RUSS, CLEM, *see* Fedor, E. J., *and others.* Rewarming . . . prolonged hypothermia. *1957.* No. 50853.

RUSS, CLEM, *see* Fisher, B., *and others.* Effect of hypothermia . . . oxygen consumption and cardiac output . . . dog. *1957.* No. 50900.

54454. RUSSELL, FRANKLIN. How they're winning the war against muskeg. (Imperial oil review, Dec. 1958. v. 42, no. 6, p. 12–17, illus.).

Discusses problems caused by 500,000 sq. mi. of muskeg land in northern Canada, specifically in transportation and construction projects such as the Alaska Highway, the Canadian National Railways line to Churchill, Manitoba, and the Bell Telephone Company's construction of the mid-Canada radar line. Studies of muskeg are carried on at the Peat Institute in Moscow, and, in Canada, by Dr. Norman Radforth, and the Muskeg Subcommittee on the Committee on Soil and Snow Mechanics, organized by the National Research Council. Industrial research to develop vehicles capable of traveling over muskeg is noted and various models are described. Uses of muskeg for fuel, chemicals, etc., are being investigated; the rich soil of drained bogland is noted. ***Copy seen:*** DGS.

54455. RUSSELL, GEORGE A. Structural studies of the Snow Lake-Herb Lake area, Herb Lake Mining Division, Manitoba. Winnipeg, Queen's Printer, 1957. 33 p. fold map, 2 vertical sections. (Manitoba, Province, Dept. of

511326—60——63

Mines and Natural Resources. Mines Branch. Pub. 55–3.) 25 refs.

Detailed study of the complex structural geology of this area (approx. 54°50′ N. 99°50′ W.) about 90 miles northeast of The Pas, Man. Location, access and topography are stated. Four major Precambrian rock groups are described, summarized in table, and correlated: the basement group consists of two formations; intermediate group, several volcanic and sedimentary formations; younger sedimentary group: seven; five intrusive rocks: diorite, gabbro, amphibolite, peridotite, and granite, are determined as younger than these groups. Only the presence of feeder dykes of porphyritic basalt near Snow Lake suggests an unconformity between the layered rocks of the area. *Map* (1 in.:½ mi.) shows distribution of the formations. Two sets of vertical sections, arranged by a system of coordinates on the map, are included. Numerous faults have broken the rocks into a mosaic of blocks; at least two periods of folding have occurred. A nickel deposit on an island in Herb Lake, limited copper-zinc zones of mineralization, and deposits containing lithium, beryllium, and gold are cited.

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54456. RUTILEVSKIĬ, GEORGIĬ LEONIDOVICH, *and* **S. M. USPENSKIĬ.** K biologii lemmingovidnoĭ polevki, *Alticola lemminus* Miller. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 4, p. 101–102, table.) Text in Russian. ***Title tr.:*** Biology of the lemming vole, *Alticolo lemminus* Miller.

Notes from observations on two colonies found near Tiksi Bay (71°40′ N. 128°50′ E.) including habitat, morphometry, habits, food, etc. ***Copy seen:*** DLC.

54457. RUTILEVSKIĬ, GEORGIĬ LEONIDOVICH. Narval v raĭone dreĭfuûshcheĭ stantsii "Severnyĭ Polûs-5." (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 3, p. 113–19, tables, map.) Text in Russian. ***Title tr.:*** The narwhal in the area of drifting station North Pole-5.

Notes observations (by the *Fram*, *Malygin*, *Sedov* and drifting stations) of narwhals in the Arctic Basin since 1895; the specimen seen in 1956 at 84°42′ N. 72°22′ E. was a female and had young at the end of July, indicating reproduction at these latitudes (ca. 80°–85° N.). Table and map show location, date, etc. of 20 specimens observed over the years.

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54458. RUTILEVSKIĬ, GEORGIĬ LEONIDOVICH. Ptitsy ostrova Bol'shogo Lâkhovskogo. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 4, p. 79–90, tables.) 7 refs. Text in Russian. ***Title tr.:*** Birds of Bol'shoy Lyakhovskiy Island.

Account based mainly on observations made during 1939. Sixty-two forms are considered and data on finds, size and weight, ecology and habits, egg disposition, migration, etc. presented. Nesting and migratory conditions are compared with those recorded in 1886 (by A. A. Bunge, No. 2493) and taxonomic aspects of the avifauna are noted.

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54459. RUTILEVSKIĬ, GEORGIĬ LEONIDOVICH. Rasprostranenie chirka-kloktuna *Anas formosa* Georgi na Novosibirskikh ostrovakh. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 119–21, illus.) 4 refs. Text in Russian. ***Title tr.:*** Distribution of the Formosan teal, *Anas formosa* Georgi, on the New Siberian Islands.

Contains information on earlier studies and observations regarding the occasional presence of this bird in the area; description of a nest and nesting female found on July 17, 1956 on Stolbovoy Island, size and color of eggs, their number (7) and weight. ***Copy seen:*** DLC.

RUUD, GUDRUN, *see* Føyn, B., *and* J. Huus. Norges dyreliv. *1947–50.* No. 50939.

54460. RUUD, KÅRE. Lofotfiskets lønnsomhet 1954. (Fiskets gang, Sept. 23, 1954. årg. 40, nr. 38, p. 457–59+, tables.) Text in Norwegian. ***Title tr.:*** The Lofoten fishery earnings, 1954.

Data on net, line, and seine catches (in all 45,367 tons, lowest since 1922), expenses and profits, participation, equipment, etc., are presented and compared with previous years' results.

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54461. RUUD, KÅRE. Vintersildfiskets lønnsomhet 1954. (Fiskets gang, Oct. 28, 1954. årg. 40, nr. 43, p. 519–23, 3 tables.) Text in Norwegian. ***Title tr.:*** The winter herring fishery earnings, 1954.

Tabulates catches, costs, and profits of this Norwegian coastal fishery in 1954 according to equipment and size of vessel, also average crew shares of the profits 1946–1954. ***Copy seen:*** DLC.

54462. RUZHITSKIĬ, V. O. Almazy drevnego Timana. (Vokrug sveta, Feb. 1958, no. 2, p. 1–4, illus., map.) Text in Russian. ***Title tr.:*** Diamonds of ancient Timan.

Recalls the find of a diamond in the Timan Ridge, on the bank of Mezenskaya Pizhma River by a peasant Iona Popov in tsarist times, and his vain attempts to interest the government in his discovery. Several diamonds have been found recently in the same area by two geologists, S. A. Godovan and M. I. Plotnikova. An expedition to search for diamonds in the Pechora River basin is planned for summer 1958 by the Komi Branch of the Academy of Sciences. Discovery of diamonds in the Ural and Yakutia are noted. ***Copy seen:*** DLC.

54463. RUZHITSKIĬ, V. O. Almazy nedr Evropeĭskoĭ chasti SSSR. (Priroda, Dec. 1957, no. 12, p. 88–91, text map.) 5 refs. Text in Russian. ***Title tr.:*** Diamonds of the European U.S.S.R.

Contains a review of old literature dealing with finds of diamonds in that region, and recent (1952–56) discoveries of diamond deposits on the rivers Menzenskaya Pizhma, Tsil'ma and Pechorskaya Pizhma in the Arkhangel'sk province. Individual diamonds were also found in the southern Russian platform, in the basins of Dnepr, southern Bug and Dnestr rivers. It is suggested that the Kola Peninsula might have diamond deposits and kimberlite pipes. ***Copy seen:*** DLC.

54464. RUZOV, LEONID VLADIMIROVICH. Na sushe i na more v Arktike. Moskva, Izd-vo "Morskoĭ transport," 1957. 243 p. illus., ports., 4 maps. Text in Russian. ***Title tr.:*** On land and sea in the Arctic.

Deals with the activities of the Soviet polar stations on the shores and islands of the Kara and Laptev Seas during the period 1932–1938, especially that on Cape Chelyuskin, headed by the writer in 1933–34 and 1935–36. Exploration in the Taymyr Peninsula area is reviewed from S. I. Chelīuskin's in the 18th century. Establishment of the station on the northern tip of Cape Chelyuskin in 1932, life and work there with the first relief team, 1933–34 and development of the station under I. D. Papanin in 1934–35 are described. During the author's second stay (1935–36), exploration of Taymyr Peninsula was carried on, also (winter 1936) extensive investigation of Shokal'skogo and B. Vil'kitskogo Straits by a hydrological party under B. I. Danilov (map p. 185), wildlife observations, hunting and trapping, etc. Relations with the stations at Cape Olovyanyy and Domashniy Island in Severnaya Zemlya, and at the Taymyra River mouth, Komsomol'skaya Pravda Islands, etc. are noted, also operations on the Northern Sea Route, ships en route and in convoy by the ice-breakers *Rusanov, Krasin, Chelīuskin, Sedov, Sibiriakov,* and *Lenin;* air reconnaissance and rescue flights. Use of sledge dogs and general purpose snow tractors are discussed. Hardships of work during the polar night are mentioned, also the gradual improvement in equipment, housing, food and health conditions, and development of methods of observation and exploration. O. Īū. Shmidt, I. D. Papanin, É. T. Krenkel', G. A. Ushakov and other arctic explorers are introduced as the author encountered them. His unsuccessful attempt to establish a station on Sannikov Strait in 1937 is recounted. The forced wintering of five steamships and the ice-breaker *Lenin* in the Laptev Sea, the winter 1937–38 drift of the ice-bound *Lenin* (map, p. 218) and work of an improvised hydrological team headed by N. M. Storozhev are some of the many events and activities covered in this informative chronicle.

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RYBINA, A. A., *see* Kuznetsova, L. N., *and others.* Vliianie okhlazhdeniia . . . obmen piridinovykh i tiaminovykh . . . *1956.* No. 52596.

54465. RYBNER, JØRGEN, 1902– , *and* E. UNGSTRUP. Nordlysområdets indflydelse på radioforbindelser fra Danmark. (Ingeniøren, Sept. 1956. årg. 65, nr. 39, p. 770–77, 11 graphs.) 8 refs. Text in Danish. Summary in English. ***Title tr.:*** The auroral zone's influence on radio communications from Denmark.

Ships sailing between Denmark and the west coast of Greenland often experience difficulties in maintaining regular radio communications with short-wave stations in Denmark from the waters east of Cape Farvel. Measurements show that the field strength of the atmospherics is nearly constant along the 60° latitude toward Greenland; the poor receiving conditions must be ascribed to the low field strength of signals from Denmark. A comparison between the measurements and the theory developed by the Central

Radio Propagation Laboratory in U.S.A. seems to confirm the existence of a ring-shaped absorption area around the geomagnetic North Pole and roughly coinciding with the auroral zone. Radio waves passing through the D-layer in this area on their way upwards or downwards from a reflection at the E- or F-layer are subjected to heavy absorption.

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54466. RYBNIKOV, V. S. Materialy k izucheniiû rybnykh zapasov basseĭna reki Vilûiû. (Akademiiâ nauk SSSR. ÎAkutskiĭ filial, *Yakutsk*. Trudy, seriiâ ėkonomicheskaiâ, 1957, vyp. 1, Materialy po ėkonomike sel'skogo khoziâĭstva ÎAkutii, p. 162–67, tables.) 10 refs. Text in Russian. ***Title tr.:*** Materials for investigation of the fish resources in the Vilyuy River basin.

The present status of this fishing industry is outlined and ways to develop it are presented. There are some 20–25 commercial species (named) in the lakes and streams of the Vilyuy basin. Their exploitation is described and (percentage) data tabulated for Nyurba, Suntar, Verkhne-Vilyuysk and Vilyuysk administrative districts. Damage of improper fishing is outlined, and recommendations are made for conservation and management of the fish resources, viz: extensive ichthyological and economic investigations, reorganization of the industry, appointment of district inspectors to enforce conservation measures.

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54467. *RYBNOE KHOZIÂĬSTVO.* Sotrudnichestvo mezhdu sovetskimi i norvezhskimi uchenymi po voprosam rybolovstva. (Rybnoe khoziâĭstvo, Oct. 1958. god 34, no. 10, p. 83–85.) Text in Russian. ***Title tr.:*** Collaboration between Soviet and Norwegian scientists in fishery problems.

Account of mutual visits, discussions and lectures concerning problems of common interest in the Barents Sea fisheries. Herring fisheries, biology and fluctuations of cod, decline of catches in bottom fishes since 1956, improvement of gear, etc. are discussed. ***Copy seen:*** DLC.

54468. *RYBNOE KHOZIÂĬSTVO.* Vesti s promysla. (Rybnoe khoziâĭstvo, Mar. 1958. god 34, no. 3, p. 83–86.) Text in Russian. ***Title tr.:*** News of the industry.

Includes information from the "Northern Basin" on the efforts to fulfill and exceed the quotas of the Five Year Plan. Records in fish catches, organizational difficulties, etc. are reported from the "Siberian Basin." Data are given on catches in freshwaters and from the "Far Eastern Basin"; also news on socialist competition in Kamchatka, yields, quotas, fish stocks. ***Copy seen:*** DLC.

54469. *RYBNOE KHOZIÂĬSTVO.* Vylov ryby, kitov, morskogo zveriâ i moreproduktov za 1957 god. (Rybnoe khoziâĭstvo, Mar. 1958. god 34, no. 3, p. 94.) Text in Russian. ***Title tr.:*** Catches of fish, whales, sea-mammals and -products in 1957.

A statistical summary issued by the Central Statistical Office (TS. S.U.) and covering the R.S.F.S.R. and the national republics. The catches of the former area are given according to regions, Arkhangel'sk, Murmansk, etc.

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54470. RYDBERG, PER AXEL, 1860–1931. Cespitose willows of arctic America and the Rocky Mountains. (New York Botanical Garden. Bulletin, Apr. 13, 1899. v. 1, no. 4, p. 257–78.)

Contains keys and an annotated list of 33 species with descriptive and critical notes, data on distribution and lists of specimens. Willows native to Alaska, the Aleutians, northern Canada, Baffin Island, Greenland, and Komandorskiye Islands are included. ***Copy seen:*** DA.

54471. RYDBERG, PER AXEL, 1860–1931. List of plants collected on the Peary Arctic Expedition of 1905–06 and 1908–09 with a general description of the flora of northern Greenland and Ellesmere Land, I–II. (Torreya, Dec. 1911, v. 11, no. 12, p. 249–59; Jan. 1912, v. 12, no. 1, p. 1–11.)

The earlier and smaller collection was made by Dr. L. J. Wolf, the other by Dr. J. W. Goodsell; together they represent 60 species of flowering plants and ferns from three stations (76°–78° N.) in northern Greenland, at Cape Sheridan, on Ellesmere and at Battle Harbour, Labrador. The geography and botany of regions is sketched and (in pt. II) a systematic annotated list of plants is presented. One species, *Conioselinum pumilum*, is described as new to science.

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54472. RYDBERG, PER AXEL, 1860–1931. List of plants collected on the Stefansson-Anderson Arctic Expedition,

1908–12. (Torreya, Apr. 1914. v. 14, no. 4, p. 65–66.)

Lists 32 plants collected by R. M. Anderson in northwest Canada: at the mouth of the Bear River in the Coppermine basin, on southwestern Victoria Island, at Cape Bathurst and King Point on the north coast; two plants were also obtained in Alberta.

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54473. RYDBERG, PER AXEL, 1860–1931. Notes on Fabaceae, X: *Atelophragma* Rydberg. (Torrey Botanical Club. Bulletin, Feb. 1928. v. 55, no. 2, p. 119–32.)

Contains keys and a systematic annotated list of 22 species, four described as new; at least seven are native to Alaska, Yukon Territory, Labrador, Mackenzie District, Greenland. ***Copy seen:*** DLC.

54474. RYDEN, NILS. Norwegische Agromyziden, 2. (Astarte, 1957. no. 15, p. 1–4.) Text in German. ***Title tr.:*** Norwegian agromyzids, 2.

Contains critical notes on 27 of these minute flies collected by T. Soot-Ryen, two from Troms: *Napomyza lateralis* and *Phytomyza cineracea*. One new species, a variety and a form are described.

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54475. RYDER, RONALD A. Avian-pinniped feeding associations. (Condor, Jan.–Feb. 1957. v. 59, no. 1, p. 68–69.)

Contains data on the feeding of marine birds in association with pinnipeds in the Bering Sea and Arctic Ocean, arranged by mammalian species, (1) *Obdobenus divergens*, Pacific walrus: ivory gulls (*Pagophila alba*) and glaucous gulls (*Larus hyperboreus*) were seen feeding among walruses near St. Lawrence Island, Feb. 1953; (2) *Phoca hispida*, ringed seal: kittiwakes (*Rissa tridactyla*), glaucous and ivory gulls and some other birds seen in Prince of Wales Strait between Banks and Victoria Islands; (3) *Eumetopias jubata*, Steller's sea-lion: slender-billed shearwaters (*Puffinus tenuirostris*) were encountered in Bering Sea, July 1953, with sea-lions; (4) *Callorhinus ursinus*, northern fur seal: a flock of fork-tailed petrels (*Oceanodroma furcata*) and fulmars were seen feeding, in Sept. 1953, near Akun Island in the Aleutian chain. Perhaps these associations are mainly cases of two animal forms feeding on a common source of food.

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RYDZINSKIĬ, A. S. *see* Akademiîa nauk SSSR. Ĭakutskiĭ filial. Za sovetskuû vlast' . . . *1957*. No. 49170.

54476. RYGDYLON, ÈRDEMTO RINCHINOVICH, 1906–1957, *and* **P. P. KHOROSHIKH.** Pogrebeniîa v mestnosti Idan; vostochnaîa Sibir'. (Sovetskaîa arkheologiîa, 1958, no. 3, p. 184–85, illus.) Text in Russian. ***Title tr.:*** Burials in the Idan area; eastern Siberia.

Describes two eneolithic (late neolithic) burials discovered in summer 1956 on the left bank terrace of the Angara River, 39 km. north of Irkutsk. The nephrite, bone and bronze artifacts include a nine cm. long bone figurine of a Lake Baykal seal (nerpa), the second found in this area; the first, worked in stone, was unearthed in 1948 by the junior author in a neolithic burial in Irkutsk. Some local manufacture of Sayan nephrite artifacts is suggested by the discovery of nephrite-working tools (saws), pieces of nephrite with saw marks, etc. in adjacent neolithic sites. ***Copy seen:*** DLC.

54477. RYNNING-TØNNESEN, SVERRE, 1894– . Norges telekommunikasjoner. (Tekniske meddelelser fra Telegrafstyret, 1949. nr. 11–12, p. 83–104, illus., maps, diagr.) Text in Norwegian. ***Title tr.:*** Norway's telecommunications.

Contains a survey of the development of telecommunications for civil use in Norway, with a special view to the long-distance cable-network and equipment. Norway's special communication problems because of its topography are stressed. ***Copy seen:*** DLC.

54478. RYTKHÉU, ĬURIĬ SERGEEVICH, 1930– . Khudozhnik iz taĭgi. (Neva, July 1957, no. 7, p. 220–21, illus., port.) Text in Russian. ***Title tr.:*** The painter from the taiga.

Biography of the young Ul'chi (Tungus) painter, Aleksandr Dîtala, with reproductions of three of his paintings.

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54479. RYTKHÉU, ĬURIĬ SERGEEVICH, 1930– . Morzh razdora. (Neva, Apr. 1957, no. 4, p. 3–13, illus., port.) Text in Russian. ***Title tr.:*** The walrus of contention.

Short story written in Chukchi and translated into Russian by the first Chukchi writer, born in Uèlen, Chukotka. It deals with a walrus-hunt competition between two kolkhoz Chukchi youth-brigades, their joint harpooning of a wal-

rus, and ensuing quarrel over the sharing of the take. Kolkhoz life and customs, hunting practices, etc. are described.

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54480. RYTKHÉU, ÎURIÏ SERGEEVICH, 1930– . Snezhnyĭ plîazh. (Sovetskaîa zhenshchina, Aug. 1958, no. 8, p. 18–19, illus.) Text in Russian. ***Title tr.:*** Snowy beach.

Describes spring skiing on the southern slope of Kamenushka, one of the many hills surrounding Magadan.

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RYTKHÉU, ÎURIÏ SERGEEVICH, 1930– , *see also* Ivanova, E. Za vysokuîû ideĭnost' . . . *1955*. No. 52015.

RYTKHÉU, ÎURIÏ SERGEEVICH, 1930– , *see also* Voskoboĭnikov, M. G. Chukotka . . . *1957*. No. 55891.

54481. RYŻEWSKI, JAN, *and* **S. ZIEMLAŃSKI.** Odruchy z interoceptorów narządów wewnętrznych i naczyń obwodowych w hipotermii i hibernacji. (Acta physiologica polonica, 1957. v. 8, no. 2, p. 201–216, illus.) 21 refs. Text in Polish. Summary in English. ***Title tr.:*** Reflexes from interoceptors of internal organs and from peripheral vessels, during hypothermia and hibernation.

Studies on isolated spleens, intestinal loops and extremities of cats connected with the organism only by nerves. As temperature of the organism decreased, reflexes from interoceptors of the vessels in the isolated organs diminished and usually disappeared at 24°–22° C. Rewarming caused reappearance of reflexes 3°–5° above the temperature of their disappearance. Cold perfusion fluid (1° C.) had no adverse effect upon the interoceptors when acting briefly, but abolished their responses at 22°–15° C. when acting for a long period.

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54482. RYZHENKO, DM. Budni taezhnoĭ stroĭki. (Druzhba narodov, Jan. 1957, no. 1, p. 136–48.) Text in Russian. ***Title tr.:*** Every-day life at a taiga construction site.

Describes the construction of Bratsk hydroelectric station, day-to-day life, sports and amusements of the personnel. Their hardships due to poor organization are mentioned and the administration criticized: lack of housing and nurseries, inadequate food in mess-halls, scarcity of foodstuffs, etc. ***Copy seen:*** DLC.

54483. RZHEPISHEVSKIĬ, I. K. Nekotorye diagnosticheskie priznaki naupliusov trekh vidov balîanusov Barentsova moriîa. (Akademiîa nauk SSSR. Doklady, 1958. t. 120, no. 5, p. 1159–61, illus.) 5 refs. Text in Russian. ***Title tr.:*** Some diagnostic features in naupliĭ of three species of Barents Sea *Balanus*.

Description of the larval forms of the barnacles *Balanus balanoides* L., *B. crenatus* Brug., and *B. balanus* L. with identification key. These forms are first to appear in the spring plankton of the Murman coastal waters.

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54484. RZHEPISHEVSKIĬ, I. K. Raspredelenie i dinamika chislennosti lichinok balîanusov v pribrezhnoĭ zone vostochnogo Murmana. (Akademiîa nauk SSSR. Kol'skiĭ filial. Murmanskaîa biologicheskaîa stantsiîa. Trudy, 1958. t. 4, p. 68–78, illus., tables, maps.) 25 refs. Text in Russian. ***Title tr.:*** Distribution and numerical dynamics of barnacle larvae in the coastal zone of the eastern Murman.

A study of planktonic forms along a 30-mile zone, between Kil'din Island and Cape Svyatoy Nos. Here their distribution was found to depend on the disposition and density of the parent stock, the depth of the water and abundance of phytoplankton. Mass hatching takes place at the end of March—beginning of April during mass development of the phytoplankton; single specimens are found all the year round in the sea. Development begins later in the west but proceeds more quickly than in the east. ***Copy seen:*** DLC.

54485. SAALAS, UUNIO, 1882– . Reinhold Ferdinand Sahlberg; tutkimusmatkailija, luonnontieteilija, lääkäri ja tilanomistaja 1811–1874. Helsinki, 1958. 255 p. 85 illus. (Acta entomologica fennica, no. 14) 10+148 refs. Text in Finnish. Summary in German, 214–46. ***Title tr.:*** Reinhold Ferdinand Sahlberg; explorer, naturalist, physician and landowner 1811–1874.

Full-dress biography of this Finnish traveler and natural history collector, includes a chapter (p. 34–64, 218–22) on his trip around the world in 1839–1843. During the earlier part of it (Helsingfors-Brazil-around Cape Horn-Chile), he collected subtropical material; he remained for a year (1840–41) at Sitka working as a physician for the Russian-American Company, in spare time he collected on

Baranof and the adjacent islands, and shipped home 19 mammals, 170 bird species and 1212 insects. In 1841 he moved along to Okhotsk, where he collected in the coastal region for two months, and later to Yakutsk and Irkutsk; in 1842 he worked in Dauria in the Lake Baykal region and on the Mongolian border and the next year returned to Finland with a large collection of botanical and zoological specimens.

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SABAWALA, P. B., *see* Gunter, R., *and others.* Physiologic changes . . . anoxia with anesthesia and hypothermia. *1958.* No. 51421.

SABLE, EDWARD G., *see* Tailleur, I. L., *and others.* Unusual upper Paleozoic rock sequence . . . *1958.* No. 55316.

54486. SABLINA, T., *and* **V. FEDOTOV.** Vesnoĭ u Belogo moriâ. (Okhota i okhtnich'e khoziâĭstvo, July 1957, no. 7, p. 48–51, illus.) Text in Russian. ***Title tr.:*** Spring on the White Sea.

Wildlife observations during a boat trip along the Karelian coasts of White Sea: reindeer herd, elk, lynx, swans, ducks, fish-hawks, gulls, seals, etc.; with drawings by Fedotov.

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54487. SABOURIN, R. J. E., *comp.* Carte glaciaire de Québec: glacial map of Quebec. Québec, 1957. (Laval. Université. Faculté des Sciences. Géologie et minéralogie. Contribution no. 128.) 4 refs. Legend in French and English.

Map 37 x 45 in. (scale 1:2,027,520) or 1 in.=32 mi., prepared for prospectors, though inadequate for professional geologists, because of scale and absence of observations. Shows boundaries, within Quebec, of the Canadian Shield, St. Lawrence Lowlands, Appalachian region. Evidences of glaciation are depicted, including striae, drumlins, eskers, boulder trains, glacial-marine sediments, varved sediments. Absence of observations is notable in northwestern Quebec and in the interior of Labrador.

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54488. SABROSKY, CURTIS WILLIAM, 1910– . New species and notes on North American acalyptrate Diptera. (Entomological news, July 1958. v. 69, no. 7, p. 169–76.)

Contains keys to the species and miscellaneous notes and desciptions of eight of these small flies in various families, two described as new species. Two others are found in the North: *Piophila* (*Alopiophila*) *arctica* (Point Barrow, Northwest Territories, Hudson Bay and Southampton Island), and *P.* (*A.*) *fulviceps* from Point Barrow. ***Copy seen:*** DSI.

SABUROVA, L. M., *see* Maslova, G. S., *and* L. M. Saburova. Étnograficheskoe izuchenie russkogo naseleniâ . . . Sibiri . . . *1958.* No. 53171.

54489. SACHTLEBEN, HANS. Die parasitischen Hymenopteren des Fichtenborkenkäfers *Ips topographus* L. (Beiträge zur Entomologie, July 1952. Bd. 2, No. 2–3, p. 137–89.) 92 refs. Text in German. ***Title tr.:*** Parasitic Hymenoptera of the pine beetle *Ips topographus* L.

Contains a table for determination and descriptions of 14 hymenopters living parasitically on *Ips topographus*, a dangerous pest of forest trees; data are given on their taxonomy, ecology and geographic distribution, with stress on their economic importance in biological control of forest pests. *Eurytoma arctica* occurring in Lycksele Lappmark is included.

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54490. SADLAEV, K. A., *and* **L. V. MIN'KOVICH.** Problema perebroski stoka severnykh rek v basseĭn Volgi. (Rybnoe khoziâĭstvo, Feb. 1958. god 34, no. 2, p. 10–12.) Text in Russian. ***Title tr.:*** The problem of diverting the flow of northern rivers into the Volga basin.

Discusses earlier schemes and one of the present plans to dam the Pechora and Vychegda and to divert their water (via the Kama) into the Volga. In addition to increased hydroelectric power on the Volga, the plan would also restore the Caspian and its fisheries to its earlier condition. The significance of the scheme for the fisheries of the northern rivers involved, is also appraised.

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SADOVSKIĬ, G. I., *see* Gorodeĭskiĭ, P. I., *and others.* Razvitie sistem razrabotki . . . *1958.* No. 51295.

SAEBØ, NILS, *see* Baalsrud, K., *and* N. Saebø. Sammensetning av håkjerring. *1951.* No. 49458.

54491. SAEBØE, BJARNE. I verdens nordlegaste skog. (Skogbrukeren, Dec. 1, 1954. årg. 29, nr. 23, p. 392–93.) Text in Norwegian. ***Title tr.:*** In the world's northernmost forest.

"Forests" in the Lebesby district on the Nordkyn peninsula southeast of Nordkapp consist chiefly of the birch found near the timber line. There are six spruce trees, which never develop seed. Rowan grows straight trunks and does better than birch. The flora is alpine with a mixture of coastal plants.

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54492. SAEMANN, J. C., *and* G. W. WASHA. Variation of mortar and concrete properties with temperature. (American Concrete Institute. Journal, Nov. 1957. v. 29, no. 5, p. 385–95, illus., tables, graphs.)

Effects of temperature upon strength, stiffness, and toughness of mortars and concretes are given. Two mortars and two concretes varying in cement content, and one lightweight concrete were used. Mortar cubes, briquets, cylinders, beams, and concrete cylinders, after a 24-hr. pre-conditioning treatment, were tested at −70° to 450° F. In the subnormal range, as temperature decreased, mortar and concrete properties generally increased. The variation with temperature is graphed. Sand-and-gravel concrete and expanded-shale concrete responded similarly to temperature variations.

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54493. SAETERSDAL, GUNNAR SELMER, 1922– . Rapport om tokt med "G. O. Sars" til Barentshavet 1. mars til 12. april 1954. (Fiskets gang, May 13, 1954. årg. 40, nr. 19, p. 234–35, illus.) Text in Norwegian. ***Title tr.:*** Report on cruise aboard the *G. O. Sars* to the Barents Sea Mar. 1–April 12, 1954.

Barents Sea temperatures were investigated during an early spring cruise east of Bjørnøya and north of Norway. Ship's route and sea temperature profile are shown and conditions compared with 1953. Occurrence of fish is discussed; 1,200 fish were tagged.

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54494. SAETERSDAL, GUNNAR SELMER, 1922– . Rapport om tokt med "G. O. Sars" til Barentshavet 16. september til 3. november 1954. (Fiskets gang, Dec. 16, 1954. årg. 40, nr. 50, p. 607–609 +, diagrs.) Text in Norwegian. ***Title tr.:*** Report of a cruise aboard the *G. O. Sars* to the Barents Sea, September 16–November 3, 1954.

Route of the cruise is mapped between 70° and 77° N., 20° and 50° E. Sections of the West Spitsbergen coast, several fishing banks, and the Murmansk coast were visited. Temperature measurements were made; the Arctic and Atlantic currents are described geographically and comparisons with 1953 measurements are given. Experimental fishing and fish tagging were done. Fish age-class determinations and the 1953–1954 fishing results lead to the supposition that age classes are not always well represented in a season's catch. Polar cod as a whale food is discussed.

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54495. SÄVE-SÖDERBERGH, GUNNAR, 1910–1948. Carl Wiman, 1867 10/3–1944 15/6. (Geologiska föreningen, Stockholm. Förhandlingar, 1946. bd. 68, häfte 3, p. 393–404, port.) Refs. in text. Text in Swedish.

A memorial account of the life and scientific work of one of Sweden's foremost paleontologists, including (p. 398–401) his participation in Gerard de Geer's expedition to Spitsbergen and Bjørnøya in 1908 and his work on Spitsbergen collections by expeditions from Uppsala 1909–1930.

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SAFRONOV, FEDOT GRIGOR'EVICH, *see* Akademiîa nauk SSSR. Îakutskiĭ filial. Istoriîa Îakutskoĭ ASSR, t. 2 . . . 1630–1917. *1957.* No. 49168.

54496. SAGGAU, PREBEN. Nybyggeri af ca. 350 boliger årligt nødvendigt; knap 200 kan opføres nu. (Atuagagdliutit: Grønlandsposten, July 7, 1958. Ukiut 98-iat, nr. 13, p. 3, 18–19, port.) Text in Danish. ***Title tr.:*** Building of about 350 houses a year is needed; barely 200 can be erected now.

House construction on government loans in Greenland is declining (1953: 293, 1958: 198) due to increased costs and the improved standard (a housing grant act came into force in 1953). The grants must be increased by 50–75% to cope with clearance of older houses, cover the increase in population, reduce the number of inhabitants per room and get the population concentrated in fewer places.

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54497. SAHAMA, THURE GEORG, 1910– . A complex form of natural nepheline from Iivaara, Finland. (American mineralogist, Jan.–Feb. 1958. v. 43, no. 1–2, p. 165–66.) 2 refs.

Notes characteristics of a nepheline sample taken from the alkaline massif

of Iivaara (65°47′ N. 29°25′ E.) and used in developing an X-ray method for determining the composition of natural nephelines. Single crystal X-ray methods of investigation revealed, in addition to strong reflections corresponding to the ordinary nepheline structure, a pattern of weak extra reflections. These indicate that the ordinary nepheline cell is only a pseudo cell and that the true cell is considerably larger. Both types are hexagonal. ***Copy seen:*** DGS.

54498. ŠAHOVIĆ, K., *and others.* Periferna motorna nervna ekscitabilnost na raznim stepenima hipotermije; uticaj gladovanja; moguća uloga kalijuma. (Srpska akademija nauka, *Belgrad.* Odeljenje medicinskih nauka. Glas. 1956. kn. 11, p. 125–31, illus.) 12 refs. Text in Serbo-Croatian. Summary in French. *Other authors:* A. Bata *and* V. Uzelac. ***Title tr.:*** Peripheral motor-nerve excitability at different degrees of hypothermia; effect of starvation; possible role of potassium.

Account of experiments with rats, indicating that hypothermia reduces the excitability of peripheral motor nerves; however, there is no parallelism between the fall in core temperature and this excitability. Hyperkalemia, which appears during hypothermia, is believed to play some role in excitability changes produced by lowered temperature and by starvation. ***Copy seen:*** DNLM.

54499. ŠAHOVIĆ, K., *and others.* Uloga pojedinih organa u metabolizmu kalijuma u hipotermiji. (Srpska akademija nauka, *Belgrad.* Odeljenje medicinskih nauka. Glas. 1956. kn. 11, p. 151–70, illus. tables.) 39 refs. Text in Serbo-Croatian. Summary in French. *Other authors:* P. Milutinović *and* A. Bata. ***Title tr.:*** Role of various organs in potassium metabolism during hypothermia.

Account of experiment with dogs. Kalemia was found to increase in hypothermia or to reach upper limits of normal values. The liver liberates K on all levels of hypothermia, and is the main source of hyperkalemia. During hypothermia, K increases in the muscle, brain and is retained by the kidney. A certain relation was found to exist between K and glucose metabolism during hypothermia. ***Copy seen:*** DNLM.

54500. ŠAHOVIĆ, K., *and others.* Uticaj hipotermije na perifernu motornu nervnu ekscitabilnost kod adrenalektomisanog belog pacova. (Srpska akademija nauka, *Belgrad.* Odeljenje medicinskih nauka. Glas. 1956. kn. 11, p. 119–24, tables.) 9 refs. Text in Serbo-Croatian. Summary in French. *Other authors:* A. Bata *and* V. Uzelac. ***Title tr.:*** Effect of hypothermia upon peripheral motor-nerve excitability in adrenalectomized white rats.

Account of experiments indicating that bilateral adrenalectomy produces within 72 hrs. a diminution of peripheral neuromotor excitability which coincides with a drop of core temperature. Artificial hypothermia is easier produced in these animals, and further reduces nervous excitability. ***Copy seen:*** DNLM.

54501. SAIDOVA, KH. M. Kolichestvennoe raspredelenie foraminifer v Okhotskom more. (Akademiîa nauk SSSR. Doklady, June 21, 1957. t. 114, no. 6, p. 1302–305, 3 text maps.) 10 refs. Text in Russian. ***Title tr.:*** Quantitative distribution of Foraminifera in the Okhotsk Sea.

Study based on the collections of the research vessel *Vitîaz'* in 1949–52 (3,000 samples). Distribution of calcareous bottom foraminifers is mapped: maximum in northern and southern sections of the sea, minimum in the Deryugin and TINRO depressions; boreal and subtropical Pacific species. Agglutinated (sand) foraminifers are distributed in all sections of the Sea: maximum in western shallow waters, Shelekhov Bay and off the southern extremity of Kamchatka; content: arctic-boreal species. Map 3 gives the distribution of planktonic foraminifers (maximum in the Deryugin depression, central section of the Sea and southern Kamchatka waters; minimum in the shallow coastal waters; content: chiefly *Globigerina pachyderma* and a few *G. bulloides*). The distribution of foraminifers is influenced by many factors, such as the sea-water temperature, salinity, content of oxygen, iron and $CaCO_3$, mechanical properties of the sea bottom, depth, etc. ***Copy seen:*** DLC.

54502. SAIDOVA, KH. M. O raspredelenii foraminifer v tolshche osadkov Okhotskogo morîa. (Akademiîa nauk SSSR. Doklady, Aug. 21, 1957. t. 115, no. 6, p. 1213–16, text map.) 7 refs. Text in Russian. ***Title tr.:*** The distribution of Foraminifera in the deposits of the Okhotsk Sea.

Vertical distribution of foraminifers is studied on the basis of bottom deposit

analyses. Three complexes were selected: the continental shoal with nine groups; the continental shelf, nine groups; and the central part of the sea, comprising the Deryugin depression, submarine elevations and the southern deep depression: three groups. Oceanographic conditions and species, listed for each horizon, are noted and discussed. The foraminifer fauna of the Okhotsk Sea deposits belongs to the Quaternary era; the two lower horizons corresponding to the Pleistocene. During the accumulation of Quaternary deposits, this study indicates, the basin of the Okhotsk Sea was slowly sinking.

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54503. SAINIO, MATTI A. Anteckningar och källor till L. L. Laestadii biografi. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1958, p. 43–58, illus.) Text in Swedish. ***Title tr.:*** Notes on and sources for the biography of L. L. Laestadius.

Discusses some details; the Swedish priest, Lars Levi Laestadius (1800–1861) was active as revivalist and botanist in Swedish Lapland. Inventory of his estate, appended, shows that he was a man of considerable means. His library seems to have been dispersed and his herbarium lost. Also appended, in translation from the Finnish, are some popular reminiscences of Laestadius collected by Professor Samuli Paulaharju.

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54504. SAINSBURY, CLEO L., 1921– . A geochemical exploration for antimony in southeastern Alaska. (*In:* U.S. Geological Survey. Mineral resources of Alaska 1954–55. Bulletin, 1957, no. 1024–H, p. 163–78, 5 maps incl. 3 fold., plate, 3 tables.) 5 refs.

Describes application of geochemical techniques to exploration for ores. Preliminary geochemical prospecting was carried out in this muskeg-covered area (Caamaño Point, Cleveland Peninsula, approx. 56° N. 132° W.) to delimit areas of stibnite concentration. Following overall soil sampling, detailed testing of promising areas proved the presence of stibnite ore, demonstrating the economic fesibility of geochemical exploration to extend mineralized areas and locate favorable portions of near-surface ore bodies. Tabular data suggest values of soil content of antimony considered normal in this type of terrain, but the method offers a new and inexpensive approach to prospecting in a region where conventional methods are slow and costly.

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54505. SAINSBURY, CLEO L., 1921– . Some pegmatite deposits in southeastern Alaska. (*In:* U.S. Geological Survey. Mineral resources of Alaska 1954–55. Bulletin, 1957, no. 1024–G, p. 141–61, illus., plate, 4 text maps, 2 tables.) 4 refs.

Describes geology of two areas that contain pegmatite bodies of possible commercial significance. One deposit, near Redfish Bay on the west coast of Baranof Island (approx. 56°30′ N. 135° W.), was examined in Sept. 1953 and Aug. 1954; it contains microcline-perthite, two varieties of mica, and large euhedral quartz crystals, all of possible economic value. The second deposit, near Sitklan Passage (approx. 54°50′ N. 130°45′ W.) and the Alaska-Canada boundary, studied in May 1953 and Sept. 1954, contains mica books of commercial size and grade, but perhaps not, because of crushing and foliating, in commercial quantities. This pegmatite consists mainly of albite or albite-oligoclase and quartz in fine intergrowths, available in large amounts, but difficult of separation. ***Copy seen:*** DGS.

SAINSBURY, CLEO L., 1921– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

SAINSBURY, CLEO L., 1921– , *see also* Twenhofel, W. S., *and* C. L. Sainsbury. Fault patterns in southeastern Alaska. *1958.* No. 55564.

54506. ST. AMAND, PIERRE, 1920– . Geological and geophysical synthesis of the tectonics of portions of British Columbia, the Yukon Territory, and Alaska. (Geological Society of America, Bulletin, Oct. 1957, v. 68, no. 10, p. 1343–70, 11 maps, incl. 1 fold., 2 diagrs., 2 tables.) 65 refs.

Contains discussion of seismic activity of Alaska, its association with the Aleutian Island arc and with a line of faulting in southeastern Alaska that appears to be the northward extension of the San Andreas fault system. Increased activity is noted where the Aleutian Range intersects the Alaska Range and where the Chugach Mts. intersect the Aleutian Range. The Denali fault is traced from Bering Sea past Mt. McKinley to Cape Decision in Christian Sound (approx. 56° N. 134°30′ W.), and the supposed "Lake Clark" line of faulting, generally

parallel, is traced to the St. Elias region, both joining a northward extension of the San Andreas system. The major Yakutat Bay earthquakes, 1899, took place, perhaps, on a lateral fault running from north of Yakutat Bay to south of the Queen Charlotte Islands (53° N. 132° W.). Maps show distribution of mountain ranges and other physiographic features, location of fault zones, and seismic activity, submarine topography of Aleutian waters; changes in elevation and sea level are graphically presented; geodetic observations and earthquake data are summarized in tables. Seismic and geologic data indicate that the North Pacific Basin, from Lower California to the Kuril Islands at least, has long been rotating counterclockwise.—From author's abstract. ***Copy seen:*** DGS.

54507. ST. JOHN, RICHARD, *and* **R. M. NARDONE.** Eosinophil levels of the turtle after exposure to cold and epinephrine. (American journal of physiology, Feb. 1957. v. 188, no. 2, p. 420–22, illus.) 6 refs.

In the turtle, *Pseudemys elegans*, cold environment produced eosinopenia; epinephrine injection, an eosinophilia; a combined treatment resulted in eosinopenia. The results suggest that the turtle shows an endocrine response to cold stress.
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ST. PIERRE, J., *see* Héroux, O., *and* J. St. Pierre. Effect . . . cold acclimation and vascularization . . . *1957*. No. 51700.

54508. SAITO, TSUNEYUKI, *and* **K. ARAI.** Slow freezing of carp muscle and inosinic acid formation. (Nature, Apr. 20, 1957. v. 179, no. 4564, p. 820–21, illus.) 8 refs.

Summary of investigation on carp muscle slowly frozen to −8° C. During this process it was observed that adenosine triphosphate and creatine phosphate decrease rapidly and inosine monophosphate is formed in considerable quantities. ***Copy seen:*** DLC.

54509. SAITO, TSUNEYUKI, *and* **K. ARAI.** Slow freezing of carp muscle and inosinic acid formation. (Archives of biochemistry and biophysics, Feb. 1958. v. 73, no. 2, p. 315–19, illus., tables.) 8 refs.

Live carp-muscle when frozen slowly to −8° C. showed a rapid decrease in adenosine triphosphate. This was accompanied by an increase in the amount of inosine monophosphate. The significance of the phenomenon is discussed.
Copy seen: DNLM.

SAITO, TSUNEYUKI, *see also* Ishihara, Y., *and others*. Structure of sperm- and sei-whale insulins . . . *1958*. No. 51971.

54510. SAKAI, AKIRA. The frost-hardening process of woody plant, 2; relation of increase of carbohydrate and water soluble protein to frost-resistance, 2. (Teion kagaku, 1958. v. 16, ser. B, p. 23–34, illus., tables.) Text in Japanese. Summary in English.

Frost resistance of cortical tissues of mulberry twigs was found to parallel their sucrose concentration, but not the concentration of their water-soluble protein. Hardening by exposure to 0° C. increased from late September to late October; this was also evident in artificially dehydrated parenchyma cells and suggests that hardiness cannot be determined solely by the values of osmotic concentration in these cells. Tissue sections of the twig's cortical layer also showed increasing survival after freezing, toward the end of October.
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54511. SAKAI, AKIRA. The injury by extracellular freezing in plant cell, I; the critical temperature range at freezing state. (Teion kagaku, 1958. v. 16, ser. B. p. 35–39, tables.) 3 refs. Text in Japanese. Summary in English.

Report on experiments with small pieces of cortex tissue from mulberry twigs found to be in the frost-hardy state, and submitted to temperatures of −10° to −183° C. It appears that the parenchyma cells of the cortex are damaged within five-ten days in a critical temperature range of −15° to −25° C.
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54512. SAKAI, AKIRA. Relation of increase of carbohydrate and water soluble protein to frost-resistance in tree. (Teion kagaku, 1957. v. 15, ser. B., p. 17–19, illus., tables.) 32 refs. Text in Japanese. Summary in English.

Account of experiments on parenchyma cells of artificially hardened mulberry twig sections. Frost resistance was not found to depend on the osmotic concentration of the cells. However, seasonal increase in sucrose concentration was paralleled by a rise in frost hardiness. Concentration of water-soluble proteins had no effect on frost-resistance.
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54513. SAKAI, AKIRA. Survival of plant tissue at super-low temperature, 2. (Teion kagaku, 1958. v. 16, ser. B. p. 41–53, illus., tables.) 11 refs. Text in Japanese. Summary in English.

Account of experiment with thin sections of cortical tissue from mulberry twigs in a frost-hardy state. The sections were frozen in liquid N_2; all parenchyma cells died when rewarmed in water below 20° C.; 50% survived water of 30°, and 70%, such of 35° C. Treatment with ethylene glycol increased survival; dehydration by freezing had a similar effect but not dehydration by hypertonic salt solutions. A critical temperature of ± 30° C. seems to account for the results observed. ***Copy seen:*** DLC.

54514. SAKAUSHI, EIJI. Studies on the blood preservation; especially on the morphological changes of stored erythrocytes. (Teion kagaku, 1957. v. 15, ser. B. p. 57–69, illus. tables.) 20 refs. Text in Japanese. Summary in English.

Account of microscopic and electronmicroscopic studies of rabbit erythrocytes stored in ACD solution at 5° and 37° C. Both ghost cells and unhemolyzed specimens were examined. No changes were noted electromicroscopically in erythrocytes stored in the cold for three weeks, an approved period for transfusion storage. Subsequent changes are described and compared with those of the controls. ***Copy seen:*** DLC.

SAKHAROV, N. V. *See* Zakharov, Nikita Vasil'evich, 1915–1945?

54515. SAKHAROVA, E. I. Noveĭshie dvizheniĭa v Priangarskoĭ chasti Eniseĭskogo krĭazha. (Sovetskaĭa geologiĭa, 1957, sbornik 62, p. 48–60, cross-section, 2 maps.) 7 refs. Text in Russian. ***Title tr.:*** Recent movements in the Angara section of the Yenisey Ridge.

Deals with the wide-range and local differential movements in this ridge, where it is crossed by the depression of the lower Angara, on the basis of the writer's investigations in 1953 during the University of Moscow expedition. The geological and morphologic structure of the Yenisey Ridge has been insufficiently explored; the Angara section had a complicated geologic history in the Cenozoic era; Neogene was a period of relative tranquillity; in the Quaternary period, the uplift of the lower Angara became intensive and caused formation of the deep and narrow valleys; locally differentiated movements are assumed to have taken place at the same time, especially in the western and central part of the lower Angara.

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54516. SAKHAROVA, M. A. Russko-komi terminologicheskiĭ slovar'. Syktyvkar, Knizhnoe izd-vo Komi, 1953. vii, 118 p. (Akademiĭa nauk SSSR. Komi filial.) Text in Russian. ***Title tr.:*** Russian-Zyryan terminological dictionary.

Presents vocabulary (approx. 5,500 words) used in junior high schools (semiletka) and by students of the Concise course of the history of the communist party. Terminology introduced during the Soviet period prevails. With Zyryan equivalents mostly lacking, the original Russian term is used, occasionally with a Zyryan suffix. The rules applied to the formation of new or compound words are explained in the introduction. ***Copy seen:*** DLC.

54517. SAKS, VLADIMIR NIKOLAEVICH *and* **I. S. EGOROVA.** Geologicheskoe stroenie zapadnoĭ chasti Severo-Sibirskoĭ nizmennosti, Taĭmyrskoĭ nizmennosti. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiĭa Sovetskoĭ Arktiki, 1957, p 243–89.) Text in Russian. The second author contributes sections on relief and Quaternary deposits; other sections are by V. N. Saks. ***Title tr.:*** Geological structure of the western part of the north Siberian lowland, the Taymyr lowland.

Outlines the relief, stratigraphy, volcanic activities, tectonics and geologic indications of mineral resources. The region extends from Yenisey Bay in the west to the Anabar-Khatanga watershed in the east (approx. 70°30′–74° N. 84°–112° E.). From the structural point of view, the Taymyr depression is the eastern extension of the Ust'-Yenisey depression. Geologic investigation and mapping of the region was carried out by the Main Administration of Northern Sea Route (Glavsevmorput') prior to 1953, when the Institute of Geology of the Arctic took charge of it. Silurian, Devonian, Carboniferous, Permian, Triassic, Jurassic, Cretaceous, Tertiary and Quaternary systems and their series are reviewed. Magmatic and effusive formations are indicated in Jurassic, Cretaceous and Quaternary periods. There are possibilities for oil in the Ust'-Yenisey and Khatanga depressions, also

indications of coal, rock salt, peat and other resources. ***Copy seen:*** DLC.

54518. SAKS, VLADIMIR NIKOLAEVICH. ĬUbileĭnaĭa sessiĭa Uchenogo soveta Instituta geologii Arktiki, posvi͡ashchennaĭa 40-letiĭu Velikoĭ Oktiabr'skoĭ sot͡sialisticheskoĭ revoli͡utsii. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ biŭlleten', 1957. vyp. 5, p. 32–35.) Text in Russian. ***Title tr.:*** Jubilee session of the scientific council of the Institute of Geology of the Arctic to commemorate the fortieth anniversary of the Great October socialist Revolution.

Reports conference held in Leningrad Dec. 9–11, 1957, on geology, stratigraphy, tectonics, volcanism, hydrogeology, marine geology, and the distribution and prospects of useful minerals. The 18 papers presented are to be published as a collection; their topics and authors are noted. The Institute is concerned with the northern regions from the Ural to Verkhoyansk Ridge, islands of the Arctic Basin, Koryak Ridge, the Antarctic, the Arctic Ocean and adjacent seas. Its director is B. V. Tkachenko.

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54519. SAKS, VLADIMIR NIKOLAEVICH, *and* **Z. Z. RONKINA.** ĬUrskie i melovye otlozheniĭa Ust'-Eniseĭskoĭ vpadiny. Pod red. L. B. Rukhina. Moskva, Gosgeoltekhizdat, 1957. 232 p. illus., diagr. (part fold.), tables incl. part fold., maps. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 90.) 83 refs. Text in Russian. ***Title tr.:*** Jurassic and Cretaceous formations of the Ust'-Yenisey basin. L. B. Rukhin, editor.

Exhaustive study of the regions (approx. 66°–72° N. and 78°–90° E.), which lie between the Taymyr folded zone and the Siberian platform. Stratigraphy (p. 8–98), lithology (p. 99–139), series and facies of the Jurassic and Cretaceous systems (p. 140–83), tectonics (p. 184–207), and geological history (p. 208–228) are treated in turn. The Ust'-Yenisey basin with Paleozoic underlying, in the Jurassic and Cretaceous periods was covered by sea, leaving a great amount of sediments, in the central part 4.5 – 5 km. thick. Fixing the stratigraphy and description of the composition of facies of Mesozoic deposits was the main task of this study. It is based on 1951–54 field work of a team of scientists of the Institute of Geology of the Arctic. The party comprised the geologist V. N. Saks, lithologist Z. Z. Ronkina, V. I. Bodylevskiĭ and N. I. Shul'gina as paleontologists, N. V. Shanovskaĭa as micropaleontologist, also E. N. Kara-Murza, N. M. Bondarenko and V. D. Korotkevich for pollen analyses. Tabular summary is given (no. 84) of a complete classification. The presence of oil is discussed as a theoretical possibility: its existence in the Lower and Middle series of the Jurassic system is more than doubtful, but possible in the Upper Cretaceous. ***Copy seen:*** DGS.

54520. SAKS, VLADIMIR NIKOLAEVICH. Nekotorye soobrazheniĭa o geologicheskoĭ istorii Arktiki. (Problemy Severa, 1958. vyp. 1, p. 65–84, diagr., maps.) 14 refs. Text in Russian. ***Title tr.:*** Some considerations on the geological history of the Arctic.

Recent studies are reviewed, and knowledge is summarized on three topics: development of geologic structures in the Arctic Basin and its surrounding territories; geologic history of the Basin with special attention to advances and retreats of the seas; and climatologic changes during the geologic past. Three major shields: Russian, Central Siberian, and the Greenland-Canadian, which has not been seriously disturbed since Precambrian times, are the frame for further development of the arctic geological structures. Later foldings and faultings are reviewed and their effects and distribution are outlined; recent tectonic movements are also reviewed and illustrated by maps. In respect to structural forms the origin and development of the Arctic Basin during Paleozoic, Mesozoic, and Cenozoic eras and periods are treated and illustrated by paleogeographic maps. Reasons for climatic fluctuations are evaluated and accumulated data on arctic paleoclimate are reviewed. ***Copy seen:*** DLC.

54521. SAKS, VLADIMIR NIKOLAEVICH, *and* **Z. Z. RONKINA.** O vozmozhnykh razmyvakh Sibirskoĭ platformy v mezozoe. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ biŭlleten', 1958. vyp. 7, p. 23–29.) Ref. Text in Russian. ***Title tr.:*** On possible outwash in the Siberian platform during Mesozoic era.

Presents preliminary report on the processes and materials of outwash occurring in various parts of the northern Siberian platform during the Mesozoic period. Paleogeography and paleoclimate

of this region, especially in the Jurassic period, is discussed, and various types of outwash minerals are indicated. More detailed study is warranted.

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54522. SAKS, VLADIMIR NIKOLAEVICH, *and others.* Predvaritel'nye rezul'taty issledovaniĭa iurskikh i nizhnemelovykh otlozheniĭ v raĭone reki Anabara i Anabarskogo zaliva v 1958 godu. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958. vyp. 11, p. 22–30.) Text in Russian. *Other authors:* N. I. Shul'gina, V. A. Basov, and E. G. Iudovnyĭ. ***Title tr.:*** Preliminary results of investigation of Jurassic and Lower Cretaceous deposits in the region of Anabar River and Anabar Bay in 1958.

Reports on the lithologic composition of these deposits on the banks of the Anabar River, on Anabar Bay and Cape Paksa (approx. 73°–74° N. 112°–114° E.) as investigated by the geologist V. N. Saks, paleontologist N. I. Shul'gina, and the micropaleontologists V. A. Basov and E. G. Iudovnyĭ, to aid in working out a new stratigraphic division of the Jurassic and Cretaceous systems of the Soviet Arctic. Various periods, series and facies are briefly outlined and paleontologic characteristics and index fossils identified. Further studies in 1959 are mentioned.

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54523. SAKS, VLADIMIR NIKOLAEVICH. Soveshchanie po geologii i poleznym iskopaemym tsentral'nykh raĭonov Krasnoiarskogo kraia v Moskovskom gosudarstvennom universitete imeni M. V. Lomonosova. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958. vyp. 7, p. 5–9.) Text in Russian. ***Title tr.:*** Conference on geology and useful minerals of the central Krasnoyarsk region in the M. V. Lomonosov State University at Moscow.

Reports many geologists representing various geologic organizations attended this conference held in Feb. 1958. At the plenary meeting L. A. Ragozin reported on the Yenisey Expedition organized by the University of Moscow and S. V. Levchenko on mineral resources in the Krasnoyarsk region. The Krasnoyark region and the Siberian platform were main subjects for sections meetings: Paleozoic and Precambrian, Mesozoic and Cenozoic, Quaternary and tectonics, and mineral resources. The Institute of the Geology of the Arctic presented seven reports on geologic structure, diamonds, and rare metals in the northern part of the Siberian platform. Authors and topics are indicated for many of the reports presented.

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54524. SAKS, VLADIMIR NIKOLAEVICH. Stratigrafiia iurskikh i melovykh otlozheniĭ Tsentral'nogo sektora Sovetskoĭ Arktiki. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958. p. 44–60, maps.) Text in Russian. ***Title tr.:*** Stratigraphy of the Jurassic and Cretaceous deposits in the central zone of the Soviet Arctic.

Presents a paleogeographic and stratigraphic review of these deposits distributed in abundance in north West and Central Siberia and in the arctic islands. Their development, lithologic, faunal and floral characteristics and stratigraphic units are outlined. For Toarcian, Bathonian, lower Kimmeridgian, upper Valanginian, Barremian, and Turonian times, the facies and possible sources of dispersal material are mapped and explained. The most promising possibilities for oil and gas are in the Ust'-Yenisey, Anabar-Khatanga, and the Lena-Olenek regions.

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SAKS, VLADIMIR NIKOLAEVICH, *see also* Ronkina, Z. Z., *and* V. N. Saks. Vozmozhnye istochniki snosa . . . *1956.* No. 54381.

54525. SALAZANOV, V. V. K voprosu ob isparenii s poverkhnosti snega v osloviiakh Iakutii. (Lenigrad. Tsentral'nyĭ institut prognozov, Trudy, 1957. vyp. 58, p. 120–26, tables, diagr.) 11 refs. Text in Russian. ***Title tr.:*** On the question of the evaporation of snow surface under conditions of Yakutia.

Presents observations made in spring 1950 and 1951, at the Yakutsk meteorological station. The Wild type evaporator was used; method is explained. Day and night measurements were made under different temperature and wind conditions. Results are tabulated to show evaporation or condensation, absolute and relative humidity, wind velocity, temperature and moisture deficit.

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SALISBURY, PETER F., *see* Galletti, P. M., *and others.* Influence of blood temperature . . . pulmonary circulation. *1958.* No. 51061.

54526. SALOMONSEN, FINN, 1909– . Sangsvanen og dens fredning. (Atuagagdliutit: Grønlandsposten, July 4, 1957. Ukiut 97-iat, nr. 14, p. 8–9, illus.) Text in Danish and Eskimo. ***Title tr.:*** The whooper swan and its protection.

The swan has been protected in Greenland since 1956, where it may be attracted in larger numbers by the milder climate. It is thought to have bred there about 1840–1855 and during the period of Norse settlement. ***Copy seen:*** DLC.

54527. SALOMONSEN, FINN, 1909– . Syvende foreløbige liste over genfundne grønlandske ringfugle. Fra zoologisk Museum XIX. (Dansk ornithologisk forening. Tidsskrift, Feb. 1957. årg. 51, hefte 1, p. 33–39.) Text in Danish. Summary in English. ***Title tr.:*** Seventh preliminary list of recoveries of birds ringed in Greenland. From Zoological Museum, 19.

Contains records of 49 recoveries, with notes on eight of the more interesting cases giving new migration data on some species. See No. 25794–95 and 42254 of *Arctic Bibliography*, for previous lists. ***Copy seen:*** DA.

54528. SALT, REGINALD WILSON, 1910– . Influence of moisture content and temperature on cold-hardiness of hibernating insects. (Canadian journal of zoology, Aug. 1956. v. 34, no. 4, p. 283–94, illus.,' tables.) 6 refs. Contribution no. 3424 Entomology Div., Science Service, Canadian Dept. of Agriculture.

Cold hardiness (measured in terms of supercooling) was only affected by moisture when the latter affected the concentration and hence the freezing point of the body fluids. Cooling at constant low temperature increased cold hardiness in one out of four species exposed, but variable temperatures of a natural environment produced cold hardiness in all four species. ***Copy seen:*** DLC.

54529. SALT, REGINALD WILSON, 1910– . Relationship of respiration rate to temperature in a supercooled insect. (Canadian journal of zoology, June 1958. v. 36, no. 3, p. 265–68, illus.) 4 refs.

Account of measurements of O_2-consumption in mature larvae of *Anagasta kühniella* Zell. down to a temperature of −15° C. The rate of consumption showed a logarithmic relationship to temperature over the whole range whose upper limits were close to 40° C. The bearing of the findings to Kozhanchikov's (q.v.) theory is discussed. ***Copy seen:*** DLC.

54530. SALT, REGINALD WILSON, 1910– . Role of glycerol in producing abnormally low supercooling and freezing points in an insect *Bracon cephi*, Gahan. (Nature, *London*, May 3, 1958. v. 181, no. 4618, p. 1281, illus.) 5 refs.

Supercooling as low as −47° C. was observed in the overwintering larvae of this species, a parasite of the wheat-stem sawfly. Analysis revealed their glycerol content was "20.0%, calculated as percentage of glycerol plus water content." This and sugars, salts, neutral solutes, etc. explains the excess super cooling point depression in this species.
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SALTMAN, W. M., *see* Meyer, G. E., *and others.* A versatile new family of elastomers. *1957.* No. 53255.

SALZANO, JOHN, *see* Zechman, F. W., *and others.* Effect . . . cooling the cervical vagi . . . breathing. *1958.* No. 56177.

54531. SALZMANN, KARL H. Driftende Forschungsstationen im Nördlichen Eismeer. (Kosmos, Dec. 1955. Jahrg. 51, Heft 12, p. 541–45, illus., maps.) Refs. in text. Text in German. ***Title tr.:*** Drifting research stations in the Arctic Basin.

Reviews history of arctic exploration (mainly Soviet), in particular the 1937–38 drift of station North Pole–1.
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54532. SALZMANN, KARL H. Die vier Pole der nördlichen Erdhalbkugel. (Kosmos, June 1958. Jahrg. 54, Heft 6, p. 207–214, map.) Text in German. ***Title tr.:*** The four poles of the Northern Hemisphere.

Discusses special features of the geographic, the cold (63°15′ N. 143°12′ E.), and the magnetic poles and the region of relative inaccessibility; reviews history of their exploration. Range of fixation for the latter two is indicated.
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54533. SAMARIN, V. P. O l'ne Komarova i vozmozhnostiakh ispol'zovaniia ego v usloviiakh Tsentral'noĭ Iakutii. (Yakutsk. Universitet. Uchenye zapiski, 1957. vyp. 1, p. 83–92, illus. table.) 20 refs. Text in Russian. ***Title tr.:*** Komarov flax and possibilities of its utilization under conditions of Central Yakutia.

Reports observations and experiments

with the wild-growing species of flax, *Linum komarovii*, aimed at elucidating its oil and fiber-producing capacities. Its biology, ecology, distribution, microscopic structure, etc. are studied for this purpose. The fibers were found to be suitable for the manufacture of coarse textiles and twines; the seeds contain 30–32.75% oil; the plant as a whole could be used for decorative purposes and for melioration of sandy soils.

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54534. SAMARIN, V. P. Ob akklimatizat͡sii v usloviiakh T͡Sentral'noĭ Iakutii nekotorykh zhirnomaslichnykh i voloknistykh rasteniĭ. (Yakutsk. Universitet. Uchenye zapiski, 1957. vyp. 1, p. 93–98, table.) 22 refs. Text in Russian. ***Title tr.:*** Acclimatization of some oil and fiber plants under conditions of Central Yakutia.

Brief report on experiments and production of some introduced plants. Hemp, flax, mustard and cockle-burs (*Xanthium*) are dealt with. Only hemp gave satisfactory results as both oil and fiber plant. The others are recommended for further study. ***Copy seen:*** DLC.

54535. SAMBORSKIĬ, V. Zimnit͡sia ėkspluatat͡siia material'noĭ chasti. (Grazhdanskaia aviat͡siia, Jan. 1958. god 15, no 1, p. 22–24, illus.) Text in Russian. ***Title tr.:*** Winter maintenance of equipment.

Contains practical hints on preparation of LI–2, YAK–12, and IL–14 aircraft, also MI–1 and MI–4 helicopters for winter operation. Conditions for preheating of oil and engine are outlined. Thinning the oil with fuel before stopping the engine is considered an excellent method to facilitate starting: no complications or engine break-downs have been experienced. ***Copy seen:*** DLC.

SAMOĬLOV, I., *see* Nikolaev, V. A., *and* E. D. Petriaev. O . . . bibliografii Sibiri. *1958.* No. 53600.

SAMPFORD, M. R., *see* Geoghegan, B., *and others.* A possible climatic effect on nail growth. *1958.* No. 51125.

54536. SAMSONOVA, T. Rabota nad zvukom "t͡s" v iakutskoĭ shkole. (Russkiĭ iazyk v nat͡sional'noĭ shkole, July–Aug. 1957. god 1, no. 4, p. 48–52.) 5 refs. Text in Russian. ***Title tr.:*** The teaching of the "t͡s" sound in Yakut schools.

Discusses the methods of teaching Russian phonetics in elementary schools taking as example the "t͡s" sound foreign to the Yakut language.

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54537. SAMUELSSON, GUNNAR, 1885–1944. Die Arten der Gattung *Alisma* L. (Arkiv för botanik, 1932. bd. 24, no. 7, p. 1–46, 3 illus., 6 plates.) Text in German. ***Title tr.:*** The species of the genus *Alisma* L.

Contains a key and descriptions of ten forms of water-plantain with synonyms, notes and distributional data. One species and some subspecies are described as new or new combinations. *Alisma plantago-aquatica* is recorded in northern Siberia (Ob and Yenisey Rivers) and in Kamchatka. ***Copy seen:*** DA.

54538. SAMYGIN, G. A. O prichinakh gibeli rasteniĭ ot moroza. (Zhurnal obshcheĭ biologii, Jan.–Feb. 1955. t. 16, no. 1, p. 23–36, illus. tables.) 14 refs. Text in Russian. ***Title tr.:*** Causes of death of plants from frost.

Reviews theories on the physiology of cold injury in plants, and reports author's studies on lemon leaves and plants exposed to temperatures down to −6° C. Formation of intercellular ice from water occurring naturally or introduced artificially was found to be the cause of death. Low temperature *per se* did not cause injury under conditions of the experiment.

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SANDBERG, GUSTAF, *see* Skuncke, F. Renbeten och deras gradering. *1958.* No. 54950.

54539. SANDEGREN, R. De senkvartära nivåförandringarnas problem. En återblick över de senaste 25 årens forskning i Sverige. (Geologiska föreningen, Stockholm. Förhandlingar, 1946. bd. 68, häfte 2, p. 303–318.) Refs. in text. Text in Swedish. ***Title tr.:*** The problem of late Quaternary changes in level; a review of the last 25 years' research in Sweden.

Research on changes in level is summarized. Recognition of isostatic and eustatic factors, and studies of strandlines, isobases, hinge lines, the constriction theory, shell deposits, diatom studies, and marine limits are grouped. The references include pertinent studies in arctic locations. ***Copy seen:*** DGS.

SANDERS, AARON P., *see* Woodhall, B., *and others.* The . . . effects of localized cerebral hypothermia. *1958.* No. 56110.

54540. SANDERS, FRED, *and others.* Effects of hypothermia on experimental intracutaneous pneumococcal infection in rabbits. (Surgical forum, 1958. v. 8, p. 92–97.) 9 refs. *Other authors:* E. S. Crawford *and* M. E. De Bakey.

Account of experiments demonstrating "that hypothermia increases the mortality rate in rabbits with a virulent infection" and converts an avirulent pneumococcal infection into one causing 69% mortality. Penicillin injected prior or during cooling prevented death in the majority of animals. ***Copy seen:*** DNLM.

54541. SANDERSON, IVAN TERENCE. Follow the whale. Boston, Little, Brown & Co., 1956. 423 p. illus., tables, maps. About 150 refs.

A history of whaling with emphasis on early and most recent times, and a natural history of whales. Prehistoric (ca. 10,000 to 3000 B.C.), the Phoenician and Graeco-Roman period, the whaling activities of the Norse, Japanese and Basques (500 to 1600 A.D.) are treated in turn. British, Dutch and American whaling (p. 145–284) and the modern period beginning by 1875 (p. 287–344) are chronicled. The phylogeny and taxonomic relationship of the whales, anatomic relation to other mammals, dolphins, freshwater forms are briefly outlined. Appended are chronologies of whaling as from 1550 A.D., and of whales as from 60 million years ago; evolution of whales' tails, and comparative sizes of whales are outlined; living whales are listed: 51 species, with illus., common and Latin names. ***Copy seen:*** DLC.

54542. SANDFORD, FOLKE, *and* **B. LILJEGREN.** Frostbeständigheten hos kalk-målade putsytor. (Teknisk tidskrift, Dec. 25, 1956. årg. 86, häfte 48, p. 1141–42, illus.) Text in Swedish. ***Title tr.:*** Frost resistibility of lime-washed plaster-surfaces.

Swedish laboratory tests showed that, subjected to several cycles of freezing at −15° C., a lime mixture of 16.5% dry substance to 83.5% water was the most durable, provided that three coats were applied. It was best able to withstand frost, responsible for flaking.
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SANDOR, JOHN A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

54543. SANFORD, FRANCIS BRUCE, 1907– . A picture study of an American whaling operation. (Commercial fisheries review. U.S. Fish and Wildlife Service, May 1957. v. 19, no. 5, p. 1–8, illus.) refs.

Contains information and photographs on west coast whaling stations; whales caught; their characteristics and habitats, whaling boats and their whaling gear; outline of cut-up operations; utilization of oil, meat, etc. ***Copy seen:*** DI.

54544. SANTESSON, ROLF. *Capillipes cavorum* g. nov., sp. nov., a new terricolous inoperculate Discomycete from Swedish Lapland. (Friesia, 1956. bd. 5, hefte 3–5, p. 390–95, 3 illus.) 4 refs.

Contains a Latin diagnosis and an English description of this new genus and species. The fungus was collected in 1945 in Torne Lappmark on plant remains in the entrance of a small rodent's burrow (probably a lemming, *Lemmus lemmus*), in the subalpine *Betula pubescens* (*B. tortuosa*) forest in Abisko National Park.
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54545. SANTORO, A., *and others.* Variazioni biochimiche in corso di ipotermia profonda in animali variamente protetti. (Archivio italiano di chirurgia, 1957. v. 82, fasc. 1, p. 13–53, illus. tables.) 133 refs. Text in Italian. *Other authors:* S. Currò *and* D. Buda. ***Title tr.:*** Biochemical changes during deep hypothermia in variously protected animals.

A study of dogs made hypothermic by three different methods. Urine nitrogen, blood sugar and protein, hematocrit and hemoglobin, electrolytes, liver function, etc., are determined and discussed. Animals made hypothermic without treatment showed symptoms of severe shock; those treated with "lytic cocktail" were protected against cold stress, down to a certain temperature; finally those treated with somatotropic hormone showed traits of hibernating animals and withstood well temperatures down to −16° C.
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SANTORO, A., *see also* Navarra, S., *and others.* Variazioni del flusso . . . di ossigeno del sangue . . . *1957.* No. 53517.

54546. SANTOS, EVARTON M., *and* **C. F. KITTLE.** Electrocardiographic changes in the dog during hypothermia. (American heart journal, Mar. 1958.

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v. 55, no. 3, p. 415–20, illus., tables.) 16 refs.

The rate was found to decrease proportionately to temperature, as did prolongation of P–R and QRS intervals. Prolongation of the Q–T intervals was greater than expected from decrease in heart rate; this prolongation reflects metabolism changes in the ventricular muscle. Changes in the P wave and the S–T segment are also noted.

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54547. SAPARINA, E. Obyknovennyĭ i zagadochnyĭ. (Znanie-sila, Jan. 1958. god 33, no. 1, p. 34–37, illus.) Text in Russian. ***Title tr.:*** Familiar and mysterious.

Popular outline of snow and of its study: the physical properties and difficulties of investigating them, its meteorological aspects; struggle with drifts and avalanches; snow retention for needs of agriculture; experiments in control of snow precipitation. The "defense against snow" service at Noril'sk is mentioned (p. 35). Research institutions and their work are noted: the snow and ice laboratory at Moscow University, All-Union Institute of Railroad Transportation's laboratory for snow control (Laboratoriîa snegobor'by), and the Cloud Seeding Laboratory (Lab. aktivnogo vozdeĭstviîa na oblaka) of the Central Aerological Observatory. ***Copy seen:*** DLC.

54548. SAPOZHNIKOV, V. Teplokhod idet po Eniseĭû. (Sibirskie ogni, Aug. 1958. god 37, no. 8, p. 116–40.) Text in Russian. ***Title tr.:*** A diesel ship travels the Yenisey.

Describes life aboard the diesel freighter *Magadan* (Krasnoyarsk-Dudinka), the Yenisey, river traffic, ports, etc.

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54549. SARAJAS, SAMULI, *and* **R. PÄTIÄLÄ.** Köldverkan på utvecklingskapaciteten hos binnikemaskens *Diphyllobothrium latum* ova. (Nordisk hygienisk tidskrift, 1958. bd. 39, no. 3–4, p. 49–52, table.) 2 refs. Text in Swedish. Summary in English. ***Title tr.:*** The effect of cold on the developmental capacity of the fish tapeworm, *Diphyllobothrium latum*, ova.

Human fecal specimens containing such ova were exposed to cold for varying periods. Cultivation tests showed that they fail to develop once exposed to below zero temperatures. This suggests that feces of infected persons do not contaminate water courses, if they are exposed to freezing temperatures.

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54550. SARAJAS, SAMULI, *and others.* Stress in hypothermia. (Nature, *London*, Mar. 1, 1958. v. 181, no. 4609, p. 612–13.) 9 refs. *Other authors:* P. Nyholm, *and* P. Suomalainen.

Report on changes in amount and distribution of sudanophilic material in the adrenal cortex of dogs and in the white blood picture, as indicators of cold stress. The results support some earlier observations and suggest that induction of hypothermia elicits a general stress response. ***Copy seen:*** DLC.

SARGENT, C. J., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

54551. SARGENT, FREDERICK, 1920– . Role of the field test in nutrition and weather stress studies. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 130–56, illus., tables.) 30 refs.

Account of contributions from previous field tests on caloric requirement and low temperature; ketonuria; results of various field trials, Canadian, American, British; winter ration trials; troop field trials, etc. In practically all these trials the problem of ketonuria was studied and is amply discussed towards the end of the paper, which concludes with a critique of previous, and suggestions for future tests. ***Copy seen:*** DNLM.

54552. SARKAR, NINA MARIE. Cytotaxonomic studies on *Rumex* section *Axillares*. (Canadian journal of botany, Nov. 1958. v. 36, no. 6, p. 947–96, 70 illus., 11 tables.) 92 refs.

North American species of *Rumex* subgenus *Rumex* (*Lapathum*) section *Axillares* were studied morphologically and their distribution plotted on maps. Chromosome numbers of 17 taxa of the section *Axillares* were determined. The three subsections were found to comprise a polyploid series, the monotypic subsection *Venosi* with 2n=40, *R. verticillatus* of the subsection *Verticillati* with 2n=60, and all but two of the species studied in subsection *Salicifolii* with 2n=20. *R. sibiricus* (Alaska and northern Alaska) and *R. subarcticus* (Hudson and James Bays) are included. ***Copy seen:*** DA.

SARKAR, PRIYABRATA, *see* Löve, Å., *and* P. Sarkar. Chromosomes . . . *Koenigia islandica. 1957.* No. 52889.

54553. SARKIZOV-SERAZINI, IVAN MIKHAĬLOVICH. Eshche raz o zakalivanie i "morzhakh." (Fizkul'tura i sport, 1957. god 27, no. 11, p. 28–30, illus.) 3 refs. Text in Russian. ***Title tr.:*** Once more about hardiness and "seals."

Discusses the therapeutic effects of ice-water bathing, reviews 19th and 20th century publications on the subject, and outlines conditioning process for ice-water swimming. ***Copy seen:*** DLC.

54554. SAS, A., *and* **J. BOROWSKI.** Instantanés de Laponie. (Géographia, Dec. 1957. no. 75, p. 45–52, illus.) Text in French. ***Title tr.:*** Snapshots of Lapland.

A photo account of authors' auto trip to the Lake Inari region. The customs, daily life, language, acculturation, clothing, housing, transportation, fishing of the settled, and reindeer herding of the nomad Lapps are dealt with. The difficulty of tourist travel due to road conditions is noted. ***Copy seen:*** DGS.

54555. SASAKI, YOSHIRO. Studies on the cold preservation of blood; especially on the effects of stored plasma protein upon the red cell. (Teion kagaku, 1958. v. 16, ser. B, p. 139–50, illus., table.) 21 refs. Text in Japanese. Summary in English.

A study of mutual interaction between erythrocytes and blood plasma during cold storage. If the latter lasted more than three weeks, volume of the red cells increased and their permeating velocity to glucose decreased. The plasma proteins showed changes in electrophoresis, especially in movement of albumin. The latter first moved faster than in fresh blood but after three weeks it became slower. ***Copy seen:*** DLC.

54556. SATER, G. S. Preliminary report on the lead and zinc deposits of the Province of Quebec. Quebec, 1958. 41 p. (Quebec. Dept. of Mines. Mineral Deposits Branch, Preliminary report no. 371.) 75 refs.

Lists and describes briefly most of the known occurrences. Seven in the Northern Quebec region are included: Attikamagen Lake, Gulf Lead Mines Ltd., Herodier Lake, Holannah Mines Ltd., Norancon Lake, Reider Lake and Ungava Copper Corporation Ltd.

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54557. SATER, JOHN L. Surface motion studies of the McCall Glacier, June to October, 1957. (*In:* American Geographical Society. Preliminary reports of the Antarctic and Northern Hemisphere glaciology programs, 1958. p. XII 4–10, table, text map, 4 diagrs.)

Ice motion surveys were established to find the character of movement in the surface ice and to help determine the mass budget. Chief tool used was stereophotogrammetry; surveys were made with a T–2 theodolite incorporated in a Wild T–30 phototheodolite. Four lateral profiles and a set of five stakes in the terminus were positioned in May and June and surveyed until October. Survey procedure is described; effect of variation of weather on accuracy is noted; problems encountered indicate surveys not accurate enough for detailed motion analysis.

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SATHYANARAYANA, RAO, *see* Soper, J. H., *and* R. Sathyanarayana. *Isoëtes* . . . Canada. *1958.* No. 55060.

54558. SATO, SHOITI. Morphological and functional changes of *Bacillus megatherium* caused by freeze-thawing or freeze-drying. (Teion kagaku, 1958. v. 16, ser. B, p. 107–127, illus., tables.) 29 refs. Text in Japanese. Summary in English.

Morphological changes observed in the bacteria include swelling, shrinking, cracking or fragmentation of cells and changes in stainability of nucleus and cytoplasm. Physiological changes concerned decrease of survival with repeated freeze-thawing and fall in O_2-consumption; decreasing rate of P^{33} incorporation, etc. Water soluble substances became easily extractable in treated lots. ***Copy seen:*** DLC.

54559. SATTLER, KLAUS. On the generic position of *Chionodes norvegiae* Strand, Lep., Gel. (Norsk entomologisk tidsskrift, 1957. bd. 10, hefte 2–3, p. 133–35, illus.) 2 refs.

Describes male and female genitalia of *Chionodes norvegiae*, found in Saltdalen, Nordland, critical notes are added on the generic position of this lepidopter.

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54560. SAUER, CARL ORTWIN, 1889– . The end of the Ice Age and its witnesses. (Geographical review, Jan. 1957. v. 47, no. 1, p. 29–43.) 18 refs.

Describes the physical geography of the Mankato in North America, and the

Dryas-Baltic Ice Lake period in Europe, about 12,000 to 10,000 years ago; compares the Upper Paleolithic cultures of the two continents. The Mankato and time preceding and following it were inauspicious for entry of Asian immigrants into the interior of our continents. A long interruption of communication is suggested. Problems of man's ingress to the United States from Alaska and Yukon during glacial times are noted; also the possibility of Ice Age man distributed along the shores of an open Arctic Ocean and finding early routes into the United States by going eastward to the Atlantic. ***Copy seen:*** DGS.

SAUKHATAS, I. S., *see* Nikitin, ÎÛ. V., *and* I. S. Saukhatas. O litievykh pegmatitakh . . . *1957.* No. 53587.

54561. SAUNDERS, DE ALTON. Four siphoneous algae of the Pacific coast. (Torrey Botanical Club. Bulletin, Jan. 1899. v. 26, no. 1, p. 1–4, plate 350.)

Describes: Codium mucronatum californicum, common along the coast from Sitka to southern California.

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54562. SAUNTE, LISE HÖST. Cytogenetical studies in the *Cochlearia officinalis* complex. (Hereditas, 1955. bd. 41, häfte 3–4, p. 499–515, 5 illus., 4 tables.) 37 refs.

The chromosomes of 59 samples of the scurvy grass *C. officinalis* complex from Scandinavia, Great Britain, and Greenland have been counted. All plants from Greenland and Iceland have the miotic number of 14. It is suggested that all the 14-chromosome types be included into one species under the name *C. groenlandica* L. *C. danica* should be maintained as a separate species. It is also proposed to follow Ascherson and Graebner and give the *officianalis* and *anglica* types rank as subspecies: *eu-officianalis* and *anglica.*

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54563. SAURAMO, MATTI, 1889– . Die Geschichte der Ostsee. Helsinki. Suomalainen Tiedeakatemia, 1958. 522 p., illus., text maps, diagrs., (*Its:* Toimituksia (Annales academiae scientiarum fennicae), ser. A, III, Geologica-Geographica, no. 51.) 382 refs. Text in German. ***Title tr.:*** The history of the Baltic Sea.

Detailed, thoroughly documented, regional study of the Baltic and its coasts, especially of changes in sea level and shore lines since the Pleistocene. Chapters 15 and 16 (p. 412–469) describe coastal changes in northern Fennoscandia, and northern Sweden. Earlier research, from the time of Hjärne in Sweden, is reviewed, and the work of Tanner is recognized. Diagram shows the relationship of raised shorelines in several parts of northern Fennoscandia; maps show extent of postglacial seas.

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SAURWEIN, THOMAS D., *see* Stevenson, G. C., *and others.* Effects . . . hypothermia on subcortical . . . potentials . . . cat. *1958.* No. 55160.

54564. SAUSHKIN, ÎÛ. G. Sorok let razvitiîa proizvoditel'nykh sil Sovetskoĭ strany. (Geografiîa v shkole, Sept.–Oct. 1957. god 20, no. 5, p. 1–10, tables, maps.) 4 refs. Text in Russian. ***Title tr.:*** Forty years' development in the productive forces of Soviet Land.

Includes data on development of arctic and subarctic areas; with 1940 as a base period (index: 100), the 1955 industrial index figure for Murmansk Province is 358, for Komi 535, and 341, Yakut A.S.S.R.; all exceeding the average index, 320, for all U.S.S.R. ***Copy seen:*** DLC.

54565. SAUSHKIN, ÎÛ. G., *and* **N. A. SOLNTSEV.** Sorokaletniĭ put' sovetskoĭ geograficheskoĭ nauki. (Geografiîa v shkole, July–Aug. 1957. god 20, no. 4, p. 9–13.) Text in Russian. ***Title tr.:*** Forty years of Soviet geographical science.

Summarizes achievements of Soviet geographers and explorers in 1917–1957. Relation of geographic studies to economic planning is stressed, significance of the Soviet arctic explorations is noted.

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54566. SAUVÉ, PIERRE. Preliminary report on De Freneuse Lake area (east half) New Quebec. Quebec, 1957. 7 p. fold. map. (Quebec. Dept. of Mines. Geological Surveys Branch. Preliminary report, no. 358.) 5 refs.

Maps (1 in.: 1 mi.) and outlines geology of this approx. 160 sq. mi. area (58°15′–30′ N. 69°00′–15′ W.) northwest of Fort Chimo. It is underlain by moderately to highly metamorphosed rocks of Precambrian age. Rock formations include metasedimentary and metamorphosed igneous rocks belonging to the Labrador Trough, and microcline gneisses which, in part, are probably metamorphosed Trough

rocks. The change from schists to gneisses possibly marks the eastern contact of the Trough. The structure of the area, folded, is discussed, also the eastward increase in metamorphism, and the origin of the gneisses. Occurrences of copper, nickel, zinc and iron appear to be of little economic value. ***Copy seen:*** DGS.

54567. SAVARENSKIĬ, FEDOR PETROVICH, 1881– . Plotiny v raĭonakh vechnoĭ merzloty. (*In his:* Izbrannye sochineniîa. Moskva, Izd-vo Akademii nauk SSSR, 1950. p. 370–71). Text in Russian. English translation at U.S. Bureau of Reclamation. Technical Library, Denver, Colo. ***Title tr.:*** Dams in permafrost regions.

Stresses importance of deep foundations and recommends a layer of peat on earth fillings to reduce frost heaving and subsequent leakage. ***Copy seen:*** DLC.

54568. SAVCHENKO, E. N. Novye palearkticheskie *Pales* MG.; Diptera, Tipulidae. (Ėntomologicheskoe obozrenie, 1957. t. 36, no. 1, p. 211–23, 7 illus.) Text in Russian. Summary in English. ***Title tr.:*** New palearctic *Pales* MG.; Diptera, Tipulidae.

Contains descriptions of five new species of this genus of crane-flies, among them: *P. stackelbergi, P. sublunulicornis* and *P. rubriventris* n. spp. occurring in Yakutia, eastern Siberia. ***Copy seen:*** DLC.

54569. SAVCHENKO, O. N. Uglevodnofosfornyĭ obmen mozga pri gipotermii i gipoksii. (Voprosy meditsinskoĭ khimii, Mar.–Apr. 1958. t. 4, vyp. 2, p. 139–48, tables.) 35 refs. Text in Russian. Summary in English. ***Title tr.:*** Carbohydrate and phosphate metabolism of the brain during hypothermia and hypoxia.

A study of labile P and a series of phosphates and lactic acid in rabbits. Cooling caused no change in the level of any of these substances, which suggests that no oxygen deficiency occurs in the brain during hypothermia. Exclusion of cardiac circulation caused less marked changes than those seen in normothermic controls. ***Copy seen:*** DNLM.

54570. SAVCHENKOVA, E. I. Ispol'zovanie indeksa atmosfernoĭ tsirkuliâtsii dliâ razrabotki dolgosrochnogo prognoza srokov vskrytiîa rek. (Meteorologiîa i gidrologiîa, May 1957, no. 5, p. 34–37, table, graphs, map.) 3 refs. Text in Russian. ***Title tr.:*** Using an index of atmospheric circulation for long-range forecasting of river breakup.

"Weather maps at the 500-mb. level for Mar.–Apr. were used to determine qualitative effects of atmospheric circulation on dates of river breakup in northeastern European Russia. Indexes were obtained by calculating differences in geopotentials between the western and eastern portions of the first synoptic region (located between Greenland and the Yenisey River) as divided by 42° E. long. Nomographic charts presented for breakup dates in the Pechora, Kama, and Mezen' Rivers show that these indexes lend accuracies of 71–93% to forecasts done from 15–45 days in advance. Promising results in the use of the index were also obtained for forecasting breakup dates in the Lena Rivers, etc."—SIPRE.

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54571. SAVEL'EV, B. A. Izuchenie l'dov v raĭone dreĭfa stantsii SP–4 v period taîaniîa i razrusheniîa ikh v 1955 g. (Problemy Severa, 1958. vyp. 2, p. 47–79, tables, graphs, diagrs.) 22 refs. Text in Russian. ***Title tr.:*** Ice studies in the drift area of North Pole-4 during the thawing and disintegration period in 1955.

Outlines the complex research program and describes instrumentation, equipment, and procedures of the studies. Results of investigations on the physical, chemical, and mechanical properties of ice, in particular its crystalline structure, salinity, and phase composition during thawing of young (1 year old) and older ice are summarized, and some (chemical) data are tabulated. The thermal exchange ice/atmosphere through a snowcover is mathematically analyzed; observed fluctuations in heat flow in May–June are graphed.

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54572. SAVEL'EV, B. A. Opredelenie vozrasta ledîanykh ostrovov Arktiki; po materialam zarubezhnykh issledovateleĭ. (Problemy Severa, 1958. vyp. 1, p. 341–45.) Refs. Text in Russian. ***Title tr.:*** Determining the age of ice islands in the Arctic; according to the data of foreign explorers.

Summarizes the results of investigations by A. P. Crary and others (No. 39384) and N. V. Polunin (No. 41923) on the age and flora of ice Island T–3. ***Copy seen:*** DLC.

54573. SAVEL'EV, B. A. Seĭsmicheskie nabliûdeniîa amerikanskikh uchenykh v Severnom Ledovitom Okeane. (Pro-

blemy Severa, 1958. vyp. 1, p. 300–302.) Ref. Text in Russian. ***Title tr.:*** Seismic observations by American scientists in the Arctic Ocean.

Summary of No. 39383.

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SAVEL'EV, B. A., *see also* TSytovich, N. A., *and others.* O fizicheskikh iavleniiakh . . . v . . . gruntakh. *1957.* No. 55539.

SAVEL'EV, DMITRIĬ VASIL'EVICH, *see* Breev, K. A., *and* D. V. Savel'ev. Kozhnyĭ ovod severnogo oleniia . . . *1958.* No. 49902.

54574. SAVEL'EVA, T. S. K faune goloturiĭ IAponskogo i Okhotskogo morei. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia morei SSSR, 1933. vyp. 19, p. 37–58, illus., tables.) 20 refs. Text in Russian. Summary in German. ***Title tr.:*** The holothurian fauna of the Japan and Okhotsk Seas.

A contribution to the knowledge of sea slugs of these areas: 24 species are described, one species and one subspecies (both from the Sea of Japan) new.

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54575. SAVENKO, I. V. Osushenie polei dobychi frezernogo torfa. (Mekhanizatsiia trudoemkikh i tiazhelykh rabot, Feb. 1958. god 12, no. 2, p. 42–43, table.) Text in Russian. ***Title tr.:*** Drainage of fields producing milled peat.

Transformation of raw peat into fuel begins with reduction of its moisture from 90–93% at least to 33–34%. Nine drainage systems operated separately or in combination are discussed in detail; comparative cost data are tabulated.

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54576. SAVICH, LIDIIA IVANOVNA (LIUBITSKAIA), 1886– . *Trichostomum cuspidatissimum* Card. et Thér., novyĭ vid dliа brioflory SSSR. (Akademiia nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rastenii. Botanicheskie materialy, 1956. t. 11, p. 200–210, 2 illus., text map.) 21 refs. Text in Russian. ***Title tr.:*** *Trichostomum cuspidatissimum* Card. et Thér., a species new to the moss flora of the U.S.S.R.

Contains a Russian description of this moss, known previously from Alaska, the Aleutians, Baffin and Cornwallis Islands, and found in the Sayan Mts. in Central Siberia by the Central Sayan Expedition of 1948–49. The Russian specimens are compared with the North American. ***Copy seen:*** DLC.

54577. SAVICH, VSEVOLOD PAVLOVICH, 1885– , *Editor.* Flora sporovykh rastenii SSSR, t. 4, Griby, I. Moskva-Leningrad, Izd-vo Akad. nauk SSSR, 1957. 419 p., 160 illus., 21 port. fold. map. (Akademiia nauk SSSR. Botanicheskiĭ institut.) ca. 1,200 refs. Text in Russian. ***Title tr.:*** Flora of cryptogams of the U.S.S.R., v. 4. Fungi, I.

Contents tr.: KUPREVICH, V. F., *and* V. G. TRANSHEL'. Rust fungi, vyp. 1, fam. Melampsoraceae. Described under the first author's name. For earlier volumes of this basic reference work see No. 42293. ***Copy seen:*** DLC.

54578. SAVILE, DOUGLAS BARTON OSBORNE, 1909– . Notes on boreal Ustilaginales, II. (Canadian journal of botany, May 1957. v. 35, no. 3, p. 279–86.) 9 refs. *Pub. also as:* Contrib. No. 1581 from the Botany and Plant Pathology Division, Science Service, Canada Dept. of Agriculture.

Contains descriptive notes and distributional data on 23 species of smut fungi, chiefly from British Columbia, but among them: *Cintractia luzulae* (Nome, Alaska on *Luzula sudetica*), *Entyloma compositarum* (Labrador, on *Erigeron humilis* and *Senecio pauciflorus*), *Ustilago violacea* (Ellesmere Island, Spitsbergen, Lapland and Ungava Bay region on *Lychnis triflora* and *Silene acaulis*), and *U. pinguiculae* (Churchill, Manitoba on *Pinguicula villosa*). For pt. I of this study, see No. 37241.

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54579. SAVILE, DOUGLAS BARTON OSBORNE, 1909– . Taxonomy, phylogeny, host relationship, and phytogeography of the microcyclic rusts of Saxifragaceae. (Canadian journal of botany, May 1954. v. 32, no. 3, p. 400–425, illus., table.) 19 refs. Contrib. no. 1347 from the Botany and Plant Pathology Div., Science Service, Dept. of Agriculture, Canada.

Contains a revision of microcyclic species of *Puccinia*, with a key to species and varieties. Five species and 13 varieties are described, some as new. Included are *P. laurentiana* (from St. Lawrence Island), *P.h.* var. *heucherae* (Alaska), *P.h.* var. *austroberingiana* n. var. (Alaska, Yukon, Kamchatka) and

P.h var. *saxifragae* (Alaska, arctic Canada, Baffin Island and Greenland).
Copy seen: DLC.

54580. SAVILOV, A. I. Biologicheskiĭ oblik gruppirovok donnoĭ fauny severnoĭ chasti Okhotskogo moriâ. (Akademiâ nauk SSSR. Institut okeanologii. Trudy, 1957. t. 20, p. 88–170, illus., tables, maps.) 19 refs. Text in Russian. ***Title tr.:*** Biological aspects of groupings in the bottom fauna of the northern Okhotsk Sea.

A study of the main animal associations of the bottom and their component forms, as seen from the standpoint of their biological peculiarities. Five zones are distinguished, each typified by the way of movement, but especially by the feeding habits of its predominant animal form. The extent of each zone; primary and secondary components; sub-zones, population density, biomass, etc., are discussed. A general characteristic of all the zones concludes the study.
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54581. SAVILOV, A. I. Rost i ego izmenchivost' u bespozvonochnykh Belogo moriâ *Mytilus edulis*, *Mya arenaria* i *Balanus balanoides*, 2; *Balanus balanoides* v Belom more. (Akademiiâ nauk SSSR. Institut okeanologii. Trudy 1957. t. 33, p. 216–36, illus., tables.) 17 refs. Text in Russian. ***Title tr.:*** Growth and its variability in the White Sea invertebrates *Mytilus edulis*, *Mya arenaria* and *Balanus balanoides*, 2; *Balanus balanoides* in the White Sea.

Continuation of a study (cf. No. 42296), the present part dealing with the common barnacle. Seasonal growth variation in various localities, substrates and depths, rate of growth, variations of growth rate with age, etc., are discussed. Experiments in transplantation of barnacles from one environment into another are also reported. ***Copy seen:*** DLC.

SAVINOVA, E. N., *see* Borovik-Romanova, T. F., *and others*. Ob otnoshenii soderzhaniĭ kaliiâ k rubidiiû . . . *1958*. No. 49854.

54582. SAVITSKIĬ, V. E. O siniĭskikh otlozheniiâkh Anabarskogo shchita. (Leningrad. Universitet. Vestnik, 1957. god 12, no. 24, p. 69–79, illus., fold table, map.) 13 refs. Text in Russian. Summary in English. ***Title tr.:*** The Sinian deposits of the Anabar shield.

The Anabar shield is an Archean denuded plateau in the form of an almost equilateral triangle with base approx. 69° N. 105°–113° E. and apex 71°30′ N.; it is bordered on all sides by ancient sedimentary terrigenic carbonaceous deposits belonging to the Mukun and Billyakh suites. The stratigraphy and paleontology of various formations of both suites are discussed in detail and summarized on folded table. Precambrian origin is claimed for these deposits and "Sinian" suggested as a collective name for this geological stage. The paper is based on material of the Scientific Institute of Geology of the Arctic, collected in part by the author, and on spore analysis. ***Copy seen:*** DLC.

54583. SAVKIN, M. M. Krupnyĭ nauchnyĭ t͡sentr v Sibiri. (Akademiiâ nauk SSSR. Izvestiiâ vostochnykh filialov, 1957, no. 7, p. 134–35.) Text in Russian. ***Title tr.:*** A big scientific center in Siberia.

Notes organization of the Siberian Section of the Academy of Sciences (Sibirskoe otdelenie Akademii nauk SSSR). It comprises 15 institutions, and includes all branches (filialy) of the Academy in Siberia, and is to be one of the biggest scientific organizations of the Soviet Union. Its center is to be in a specially built new town in the vicinity of Novosibirsk. Over a billion rubles have been allocated for the organization which is to be completed in 1960. The initiators of this enterprise, academicians M. A. Lavrent'ev and S. A. Khristianovich, are appointed chairman and deputy chairman of the Section.
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54584. SAVOURS, ANN. The manuscript collection of the Scott Polar Research Institute, Cambridge. Cambridge, England, 1958. 9 l.

Lists the principal collections of papers (of Parry, Back, Franklin, etc.), journals and notebooks of polar explorers, with brief indication of their scope. A few ships' logs, construction plans of several 20th century vessels, unpublished maps and surveys by members of British expeditions of the 19th–20th centuries are included. A sketch of the Institute's arrangements for its manuscripts and documents introduces the listings.
Copy seen: CaMAI.

54585. SAXOV, SVEND. Bevaegelsen af Vestgrønland. (Grønland, Oct. 1958, nr. 10, p. 361–67, illus., diagr.) Text in

Danish. ***Title tr.:*** The movement of West Greenland.

Contains a survey of isostasy in West Greenland since the mid-19th century. According to various series of measurements, the land was sinking until about 1940 and is now rising by about 40 mm. a year. Methods used are described and data given. ***Copy seen:*** DLC.

54586. SAXOV, SVEND. Gravity in western Greenland, from 66° N. to 69° N. København, Bianco Luno, 1958. 34 p. tables, maps, incl. 1 fold., diagrs. (Denmark. Geodaetisk institut. Skrifter, raekke 3, bd. 29.) Approx. 50 refs.

Results of detailed gravity survey (1953–57) of the area between Søndre Strømfjord and Disko Bugt are presented together with principal facts for the stations. Observation accuracy is analyzed, also measurements carried out at Martin's stations (No. 46642). The Bouquer anomaly map is discussed, also relationship between gravity and land uplift. Data on (1956) calibration measurements along the European Gravimeter Line, Oslo-Hammerfest, of the Worden gravimeter used in the survey, are tabulated and compared with values obtained with a Frost C–1–20 gravimeter. ***Copy seen:*** DGS.

54587. SAXOV, SVEND. Ringbolte, vandstand og tran i Umanak. (Grønland, Nov. 1958, nr. 11, p. 419–22, illus., map.) Text in Danish. ***Title tr.:*** Ring bolts, water level and train oil at Umanak.

Reports measurements taken in Umanak harbor (70°40′ N. 52°09′ W.) West Greenland, to determine changes of level. A ring bolt used by K. J. V. Steenstrup in 1879–80 for the same purpose was used, as well as two older ones, probably dating from 1796. According to measurements at the Steenstrup ring bolt, the land has sunk 1 m. between 1879 and 1939 (measurements by Dan Laursen) and risen 0.4 m. 1939–1957. The two older ring bolts and examination of train oil stains on the rock confirmed these finds. ***Copy seen:*** DLC.

54588. SAXOV, SVEND. The uplift of western Greenland, a preliminary note. (Dansk geologisk forening. Meddelelser, Jan. 1958. bd. 13, hefte 6, p. 518–23, tables, graphs.) 14 refs. Summary in Danish.

Reviews the various means of measuring changes of level on the Disko Bugt coast and the results achieved. During 1879–1939 there was average annual subsidence of 17 mm. at Umanak and 12 mm. at Jakobshavn, and for the period 1939–1957 there has been uplift averaging annually 20 mm. at Umanak and 17 mm. at Jakobshavn. Similar measurements were begun at Fiskemesterns Havn in Søndre Strømfjord in 1957. Astronomical observations in Qôrnoq in 1927 and 1948 do not indicate a westward displacement of Greenland, as reported elsewhere.

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54589. SAZHINA, L. I. O rasprostranenii rubidiîa v granitakh SSSR. (Geokhimiîa, 1958, no. 6, p. 602–604, tables, graphs.) 5 refs. Text in Russian. Summary in English. ***Title tr.:*** The rubidium occurrence in granites of the U.S.S.R.

Presents quantitative determination by the spectral method of the rubidium content in granites (90 samples) of Karelia, the Ural, Yenisey Ridge, Kolyma region, Primorskiy Kray and other parts of the U.S.S.R. The average proved to be 0.0257%, and is in good agreement with tests of others. ***Copy seen:*** DLC.

54590. SCALFATI, P., *and* **M. MACIOCE.** Effetti dell' ipotermia su alcuni componenti del sangue; studio sperimentale su alcune variazioni ematologiche in corso di ipotermia profonda provacata su cani. (Policlinico; sezione chirurgica, Feb. 1957. v. 64, no. 1, p. 11–28, illus. tables.) 36 refs. Text in Italian. Summary in English. ***Title tr.:*** Effects of hypothermia on some blood components; experimental study on some hematological changes during deep hypothermia of dogs.

Account of observations on animals made hypothermic down to 20° C. A significant lowering in the number of leucocytes was noted, including eosinophils and lymphocytes, with a relative increase in the number of neutrophils. A progressive rise in number of erythrocytes and in hematocrit took place with a variation in globular osmotic pressure. ***Copy seen:*** DNLM.

54591. SCANLON, JOHN EARL, 1925– , *and* **P. T. JOHNSON.** On some microtine-infesting *Polyplax:* Anoplura. (Entomological Society of Washington. Proceedings, Dec. 1957. v. 59, no. 6, p. 279–83, 11 illus.) 13 refs.

Includes a key to three species of blood-sucking lice and critical notes on them. Two occur in the far North, viz.: *P.*

alaskensis (Golovin, Takotna and Seward Peninsula) on *Microtus* species, and *P. borealis* (Alaska, Northwest Territories, Southwest Keewatin and Labrador) on species of the genera *Clethrionomys* and *Phenacomys*. The distribution of *borealis* is farther north than that of *alaskensis;* both are probably circumpolar. ***Copy seen:*** DLC.

54592. SCARSETH, GEORGE D. Fertility status of Alaskan fields 1956. College, Alaska, Sept. 1956. 8 p. (Alaska Agricultural Experiment Station. Mimeograph Circular 10.)

Describes results of a field study during summer 1956 in the Fairbanks and Matanuska areas, chiefly concerned with the fertility of potato fields. A malady reducing yields was found due to potash deficiency in the soils, and corrective fertilizer applications were recommended. The phosphate and nitrogen deficiencies of Alaskan soils are discussed; types of agriculture best suited to Alaskan soils are indicated. ***Copy seen:*** DA.

54593. SCEVOLA, GIORGIO. La mesoinosite nella prevenzione della sindrome ischemica da freddo. (Archivio per le scienze mediche, July 1958. v. 106, no. 1, p. 132–38.) 18 refs. Text in Italian. ***Title tr.:*** Meso-inositol in the prevention of ischemic syndrome due to cold.

Account of microscopic observations of circulation in the rabbit ear. Animals treated with meso-inositol before cooling showed increased blood flow, like cooled animals in general, but there did not follow vasoconstriction, with sludge formation, etc. as in non-treated, cooled controls. ***Copy seen:*** DNLM.

SCHADÉ, J. P., *see* Bok, S. T., *and* J. P. Schadé. Hypothermia and cerebral activity. *1957.* No. 49819.

54594. SCHAEFER, HELMUT. Entstehung der subarktischen Grosstadt Workuta, Nordural. (Erdkunde, Aug. 1957. Bd. 11, Heft 3, p. 204–215, maps, plan.) Text in German. Summary in English. ***Title tr.:*** The origin of the sub-arctic city of Vorkuta, northern Ural.

Conditions in the northernmost Russian coal-mining center are described by a German naturalist, who had been arrested by the Soviet army of occupation and sent to work at Vorkuta and Inta during 1950–55. The town originated as a camp for political prisoners in 1929–30; coal was discovered by a hunter and the first shaft sunk in 1933, transportation difficulties were great till the railroad was built in 1941. The Pechora coal basin became important during World War II, and after the war Vorkuta was developed with the forced labor of prisoners and deportees. The area around the oval-shaped coal basin is described and mapped (from memory): the 20 producing settlements and shafts linked by railway and auto road; the main sectors of the city, and its principal buildings: power stations, hospitals, mining school, etc., are noted. Climatic conditions are severe, with a mean temperature of −7° C, a January mean of −30° C. and a 240-day snow cover. Food, clothing and health conditions have improved recently; local agriculture is negligible though some vegetables are grown in hot houses, radishes in the open ground. Mining operations are being mechanized, manpower both forced and free, is becoming hard to get. Developments at Vorkuta are compared with those of Kiruna in Sweden. Estimates are offered of population of the area (250,000), coal output (10 million tons a year), and the resources of entire basin total approx. 20 billion tons. Foundation of mining center of Inta by forced labor in 1936 is recounted (p. 204–205). ***Copy seen:*** DGS.

54595. SCHAEFER, O. Eingeborenen-Medizin bei Indianern und Eskimos im äussersten Norden Kanadas. (Münchener medizinische Wochenschrift, Nov. 29, 1957. Jahrg. 99, No. 48, p. 1833–35, illus.) Text in German. Summary in English. ***Title tr.:*** Native medicine of Indians and Eskimos of the Canadian far North.

Author who worked for four years in the Canadian Arctic and Subarctic discusses remnants or attests of native medical praxis, including surgery of a knee-cap; stopping of bleeding from large wounds; trepanation; bladder operations and suturing of wounds. Also, childbirth, midwifery, baby care, and medication in general.

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54596. SCHALK, MARSHALL. Relation of arctic storms to shore-line changes at Point Barrow, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1792, 1910.)

Abstracts paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957, and at the Eighth Alaskan Science Con-

ference in Anchorage, Sept. 10–13, 1957. Describes studies of changes in bottom profiles caused by storms. A bar, not in existence in 1954, but found in 1955 surveys is considered to have been built by abnormally large waves during a severe storm in Oct. 1954. Comparisons with other storms in 1954 and 1956 indicate that, given a profile for the region, it should be possible to predict whether a storm exceeding a critical intensity will have no effect or will throw up a bar.

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SCHALLERT, WILLIAM, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

SCHANTZ, MAX VON, *see* Euranto, E., *and others*. Perhoshavainnot . . . *1957*. No. 50802.

SCHAPIRO, SHAWN, *see* Sobel, H., *and others*. Influence of morphine on urinary corticoid excretion . . . *1958*. No. 55017.

54597. SCHARNOW, ULRICH. Mit dem Forschungsschiff "Michail Lomonnosow" in das Seegebiet der Lofoten. (Zeitschrift für den Erdkundeunterricht, Berlin, 1958. v. 10, no. 9, p. 284–88, illus., text map, diagr.) 2 refs. Text in German. ***Title tr.:*** With the research vessel *Mikhail Lomonosov* in Lofoten waters.

Notes Soviet oceanographic program for the IGY, especially work of research vessels; this newest vessel, built in 1957; equipment of a typical oceanographic research vessel. ***Copy seen:*** DLC.

SCHATZKI, RICHARD, *see* Blair, J. R., *and others*. Sequelae to cold injury . . . *1957*. No. 49766.

54598. SCHAUDIG, A., *and* **H. HIRSCH.** Die Verkürzung der Wiederbelebungszeit des Gehirns nach Ischämie bei Normo- und Hypothermie durch zusätzliche asphyktische Herzschädigung. (Pflügers Archiv für die gesamte Physiologie, Dec. 1957. Bd. 266, Heft 1, p. 40–41.) Text in German. ***Title tr.:*** Shortening of revival time of the brain after ischemia in normo- and hypothermia, through additional asphyctic heart lesion.

Lowering of body temperature in rabbits to 23° C. increased survival time from 10 to 40 minutes. This was possible due to artificial respiration. Elimination of latter causes asphyctic heart damage and shortening of revival time at 23° to 20 minutes.

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SCHAUDIG, A., *see also* Hirsch, H., *and others*. Über die Wiederbelebung des Gehirns bei Hypothermie. *1957*. No. 51727.

SCHAUDIG, A., *see also* Hirsch, H., *and others*. Über Formänderungen von Aktionspotentialen . . . *1958*. No. 51728.

54599. SCHEFFER, VICTOR BLANCHARD, 1906– . Seals, sea lions and walruses; a review of the Pinnipedia. Stanford, Calif., Stanford University Press; London, Oxford University Press, 1958. 10, 179 p. illus., plates, tables, maps. About 500 refs.

Comprehensive study, the first since 1880. Introduction deals with the number of taxa, individuals and population. Succeeding sections discuss anatomy, physiology, biology, and their relation to the environment; evolution of orders and families, of genera, species, subspecies; taxonomic procedure. The systematic account (p. 52–135) includes also data on geographic distribution, migrations, economic value, kill, etc. A synoptic key to genera is added. Illus. with instructive photographs. Reviewed by H. D. Fisher in *Arctic*, Mar. 1959, v. 12, no. 1, p. 54–55.

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54600. SCHEIL, M. A., *and others*. Steel for Canadian pipelines. (Mechanical engineering, Sept. 1957. v. 79, no. 9, p. 853–57, illus., diagrs., tables.) *Other authors:* G. E. Fratcher, S. L. Henry, and E. H. Uecker.

Presents results of strip tensile and burst tests (to −50° F.) on Smith X52 grade line pipes of commercial, semi-killed steel to determine their suitability for low-temperature service. Strength, circumferential strength, type of fracture, and tendency to shatter were investigated. It is concluded that, though inferior to specially alloyed, heat-treated steel in notch toughness, this less expensive type of steel is suitable for low temperature service provided care is exercised in welding and trenching.

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54601. SCHELL, IRVING ISRAEL, 1906– . On the distribution of icebergs in the Northern Hemisphere with special reference to south of Newfoundland.

(*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. General Assembly, Oslo, Aug. 1948. Procès-verbaux des séances. t. 2, Travaux de la Commission de la Neige et des Glaciers, p. 19–21.). 9 refs.

From iceberg counts off Newfoundland, 1880–1948, and observations off East Greenland and north of Siberia, drifting bergs in north polar waters are found more numerous in recent years, and this is attributed to widespread warming releasing them from the fiords and bays. In Baffin Bay and Davis Strait, however, bergs are freed by factors not directly related to pressures and temperatures in the North Atlantic; this affects berg distribution off Newfoundland, and complicates prediction of iceberg conditions in that area. Circulation of waters and bergs west of Greenland should also be studied in relation to the Newfoundland situation. ***Copy seen:*** DGS.

54602. SCHELL, IRVING ISRAEL, 1906– . Theory of ice ages. (Science, Feb. 8, 1957. v. 125, no. 3241, p. 235.) 2 refs.

The author takes exception to some of the assumptions of Ewing and Dunn (cf. No. 44828). He doubts whether a greater interchange between Atlantic and arctic waters would cause a cooling of the former and whether the shrinkage, or disappearance, of the ice cover from the Arctic Ocean would favor the growth of glaciers further south, as postulated by them. To support his view he points out that the shrinkage of the polar ice pack during the past 50 years or so is accompanied by extensive glacier recessions in the Northern Hemisphere.

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54603. SCHERHAG, R. The role of tropospheric cold-air poles and of stratospheric high-pressure centers in the arctic weather. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958. p. 101–117, maps, diagrs.) 9 refs.

Mean height charts for the Northern Hemisphere at the 1,000-, 500-, and 50-mb. levels are presented based on the 40-yr. means, 1900–1939. Significant features of the circulation pattern are noted. Mention is made of two pronounced cold winter lows, over eastern Siberia, and the Canadian Archipelago, at 500 mb.; at the 50-mb. surface, only one pronounced cold low is found, near the North Pole. Changes of pressure and temperature in both arctic troposphere and stratosphere present many problems.

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SCHEVILL, WILLIAM E., *see* Worthington, L. V., *and* W. E. Schevill. Underwater sounds . . . sperm whales. *1957.* No. 56117.

SCHEYER, W. J., *see* Carlson, L. D., *and others.* The . . . effects of ionizing radiation and low temperature . . . metabolism, longevity . . . rat . . . *1957.* No. 50131.

SCHEYER, W. J., *see* Griffith, P. C., *and others.* The combined effects of ionizing radiation and low temperature . . . *1957.* No. 51371.

54604. SCHILLER, EVERETT L. Studies on the helminth fauna of Alaska, 32; *Hymenolepis echinorostrae* n. sp., a cestode from the lesser scaup *Aythya affinis,* Eyton. (Journal of parasitology, Apr. 1957. v. 43, no. 2, p. 233–35, illus.) 5 refs.

Account of five species of tapeworms recovered from scaup ducks at Amchitka Island in the Aleutians. One of them, a new species, is described in detail, including data on differential diagnosis.

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54605. SCHIMERT, GEORGE, *and* **R. A. COWLEY.** Defibrillation, cardiac arrest, and resuscitation in deep hypothermia by electrolyte solutions. (Surgery, Feb. 1957. v. 41, no. 2, p. 211–19, illus.) 13 refs.

Account of experiments on dogs made hypothermic by immersion in ice water, with ventricular fibrillation and cardiac arrest produced by electrical stimulation of the heart. Defibrillation was achieved by injecting 15% potassium chloride into the left ventricle. Resuscitation from cardiac standstill was accomplished by intracardiac injection of sodium lactate followed by Ringer's lactate combined with cardiac massage.

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54606. SCHJØTT, TURID BLYTT. Bosetning og erverv i Manndalen. Oslo, Norsk Folkemuseum, 1958. 100 p. illus., maps. (Samiske samlinger, 4, pt. 2.) About 40 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Settlement and economic life in Manndalen.

Study of this valley (approx. 69°30′ N. 20°30′ E.) in North Norway, based in part on author's field work in 1955 and 1956. Its geographic history and settle-

ment (from 1723) are outlined. The population was 130 in 1801, in 1891, 431, mostly Lapps with some Finnish and Norwegian immigrants; and in 1955 the population was 853, but without any ethnic lines of demarcation. Housing, fishing, agriculture and home industries are treated in detail, both before and after the evacuation in 1944. When the inhabitants returned in 1945, Manndalen became part of a wider economy within the framework of the post-war development plan for north Norway. Government aid and the war indemnity raised the standard of living. Larger, modern houses and cowsheds were built to replace the small timber cottages and the Lapp huts used to house the animals. The men, who formerly took part in the seasonal fisheries in Lofoten and Finnmark and fished in home waters, and until 1917 carried on barter trade, now went logging in Sweden. Agriculture was developed but some subsidiary means of subsistence is necessary. Home industries have declined appreciably since the resettlement. ***Copy seen:*** SPRI.

54607. SCHLECHTENDAL, DIEDRICH FRANZ LEONHARD, von. Ueber die Flor von Labrador. (Linnaea, 1836. Bd. 10, p. 76–114.) Text in German. ***Title tr.:*** On the flora of Labrador.

Treatment of collections obtained on the coast of Labrador by Prof. E. Meyer, W. J. Hooker and the missionary Henne (near Nain). An annotated list includes two fungi, 17 lichens, 13 mosses and liverworts, two ferns and 204 flowering plants. Some geographical notes on the Labrador coast by Lt. Roger Curtis are added. ***Copy seen:*** MH–A.

54608. SCHLOMER-JÄGER, ANNA. Alttertiäre Pflanzen aus Flözen der Brögger-Halbinsel Spitzbergens. (Palaeontographica, May 1958. Abt. B, Bd. 104, Lief. 1–3, p. 39–103, 13 plates, tables, maps.) Over 300 refs. Text in German. ***Title tr.:*** Early Tertiary plants from the seams of the Brøgger Peninsula, Spitsbergen.

Deals with fossil plants from the hanging walls of two Tertiary beds, collected in 1924–25 by Dr. Fritz Schäfer (physician at Ny-Ålesund) and later presented to the Senckenberg Nature Museum at Frankfurt a/Main. Geographic position, phylogenetic origin, age and extensive description of the plants are given. The fossils were too much decayed and decomposed for use of the maceration process, and only one species, *Taiwania schaeferi*, is directly indicated; all others by comparison. Four new species were found: *Pseudolarix septentrionalis, Acer spitzbergensis, Aesculus longipedunculus, Planera ulmifolia*, but no index fossil, therefore their Paleocene or Eocene ages left open. These finds indicate warmer climate in the Tertiary and indirectly support A. Wegener's theory of continental drift and displacement of the poles. ***Copy seen:*** DGS.

54609. SCHMERTMANN, JOHN H. A thermally controlled soil freezing cabinet. Wilmette, Ill., 1958. iv, 35 p., illus., diagrs., graphs, tables. (U.S. Army. Corps of Engineers. Snow, Ice, and Permafrost Research Establishment Report no. 50.)

"A cabinet providing good thermal control for one-dimensional heat-transfer experiments, control of water access to the sample, proper instrumentation, and adequate utility is described, together with theoretical studies and tests conducted during its development. The cabinet consists of a hinged fiber drum (18 in. wide x 18.5 in. tall) enclosing a partially demountable cylinder of Styrofoam. A coaxial cylindrical hollow (six in. wide) within the Styrofoam constitutes the sample well and is surrounded by six Variac-controlled heating tapes. A copper pan containing porous stones at the base of the sample provides water for open-system freezing and serves as a heat shield. Thermocouples are located within the sample and the Styrofoam walls. Insulator-sample heat transfer can be reduced to one percent of the heat leaving the sample by matching insulation and sample temperatures."—Author's abstract.

54610. SCHMIDT, FRITZ. Pelzbedarf und Vorkommen. (Atlantis, Jan. 1956. Jahrg, 28, Heft 1, p. 23–29, illus.) Text in German. ***Title tr.:*** Fur demand and occurrence.

Information is presented on increasing demand for and production of fur; supplies from domestic and wild animals (200 and 65 million skins); fur according to species and areas of origin including arctic species and regions; introduction of new species into alien areas (muskrat); fur farming. ***Copy seen:*** DLC.

SCHMIDT, P. J., *see* Chaplin, H., *and others.* Storage of red cells at sub-zero temperatures . . . *1957.* No. 50163.

54611. SCHMIDT, ULRICH. Saithe, arcto-Norwegian stock; German landings. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 164–65, tables.)

Analyses of catches from the Lofoten banks and Svinøy for 1950–56, including length frequencies and age composition of spawning fish. Fishery forecasts, fluctuations and their biological bases are also discussed. ***Copy seen:*** DI.

54612. SCHMIDT, ULRICH. Saithe, Iceland stock; German commercial landings. (International Council for the Study of the Sea. Annales biologiques, 1956, *pub.* 1958. v. 13, p. 157–60, tables.)

Account of size distribution and age composition of 1956 catches in different areas, including the northwest coast, and comparisons with earlier landings as from 1950. A length and age analysis of the spawning stock is also presented, as well as calculations of mean catches per day's fishing, growth rate, migrations.

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54613. SCHMIDT, ULRICH. Saithe, Norwegian stock. German investigations. (International Council for the Study of the Sea. Annales biologiques, 1955, *pub.* 1957. v. 12, p. 155, table.)

Report on population survey of this species made in Nov.–Dec. 1955 off the northwest and north coasts of Norway: age and size of the fish landed, sexual condition, year classes, shoals, spawning migrations. ***Copy seen:*** DI.

SCHMIDT, WILHELM, 1868–1954, *see* Koppers, W. Eine Würdigung . . . *1955.* No. 52402.

SCHMIDT-NIELSEN, KNUT, *see* Irving, L., *and others.* On the melting points of animal fats in cold climates. *1957.* No. 51960.

54614. SCHMIERSCHALSKI. Über den Einfluss der Propellerbeschädigung durch Eisgang auf die Propulsion. (Schiff und Hafen, Oct. 1953. Jahrg. 5, Heft 10, p. 481–83, illus., tables, graphs.) Text in German. ***Title tr.:*** The influence on propulsion of propeller damage caused by ice floes.

Describes experiments with a ship propelled by an ice-damaged propeller. Propulsion effect and velocity of the vessel in open waters decreased markedly when the damaged propeller wings were fitted; in the described example, velocity was reduced about one knot when all four wing tips were damaged. At low speed through an ice-field, a damage may not be detected, however, as the number of revolutions and the performance of a damaged and a non-damaged propeller may be about the same under such conditions. ***Copy seen:*** DLC.

54615. SCHMITZ, HERMANN, 1882– . *Megaselia* (*Aphiochaeta*) *digitalis* n. sp.; Diptera, Phoridae. (Opuscula entomologica, Oct. 1957. bd. 22, häfte 2–3, p. 189–90, illus.) Text in German.

Contains a description of this new dipter collected at Nissonjokk and Vassåive, in the Torneträsk region of Torne Lappmark, in 1944. ***Copy seen:*** DA.

SCHMOLL, HENRY R., *see* Ferrians, O. J., *and* H. R. Schmoll. Extensive proglacial lake . . . *1957.* No. 50882.

SCHMOLL, HENRY R., *see* Ferrians, O. J., *and others.* Pleistocene volcanic mudflow . . . Copper River . . . *1958.* No. 50883.

SCHNEIDER, M., *see* Hirsch, H., *and others.* Über die Erholung des Gehirns . . . *1957.* No. 51726.

54616. SCHOECK, PETER A. Glaciers and climate, nature's heat and mass transfer problem. (Heating, piping, and air conditioning, May 1958. v. 30, no. 5, p. 185–86.) Refs. in text.

The heat and mass budget of temperate, arctic and antarctic glaciers in their relation to climate is discussed on the basis of the literature. The radiation absorption of a glacier surface varies strongly with grain size, porosity, free-water content, angle of incident radiation, and to a lesser degree with the spectral composition of solar radiation as dependent on cloud cover. The most significant increase in absorption, reaching values from 0.6–0.7, occurs as the snow surface begins to melt, resulting in a rapid increase in energy input and ablation. Heat transfer by air convection is at least as important as direct solar radiation in northern latitudes, and may amount to 25% of the net heat flow during ablation in the Arctic. The recent retreat of arctic glaciers and sea ice is probably related to an increase in meridional mass exchange of the atmosphere.—From SIPRE.

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54617. SCHÖNBAUM, E., *and others.* Comparison of certain methods for assessing adrenocortical activity in rats briefly exposed to cold. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 306.) *Other authors:* R. E. Large, M. Davidson *and* W. G. B. Casselman.

Report on investigations which suggest that there is no consistent relationship between adrenal steroid production and ascorbic acid content of the adrenals in rats briefly exposed to cold.

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SCHÖNBAUM, E., *see also* Campbell, J., *and others.* Effect . . . cold . . . coenzyme A . . . liver . . . *1958.* No. 50056.

54618. SCHOERNER, G. Vår kraftigaste isbrytare. (Sveriges flotta, June 1955. årg. 51, nr. 6, p. 89–92, illus.) Text in Swedish. ***Title tr.:*** Our strongest ice-breaker.

Describes Swedish ice-breaker (later named *Oden*) under construction in Helsinki and scheduled for delivery in 1957. ***Copy seen:*** DLC.

54619. SCHOLANDER, PER FREDRIK, 1905– , *and others.* Cold adaptation in Australian aborigines. (Journal of applied physiology, Sept. 1958. v. 13, no. 2, p. 211–18, illus., table.) 22 refs. *Other authors:* H. T. Hammel, J. S. Hart, D. H. Le Messurier, *and* J. Steen.

Account of field investigation, with whites as controls, (a) while resting naked on the ground between camp fires, and (b) while resting naked in a single blanket sleeping bag. Camp fires on windless night kept both groups in heat balance throughout the night when resting under basal conditions. In the light sleeping bags whites cooled almost as much as the natives, but in contrast to them shivered and thrashed about thus elevating their metabolism. The cooling adaptation of the aborigines, resembling insulative cooling found in mammals, was found to differ fundamentally from that of white men. ***Copy seen:*** DNLM.

54620. SCHOLANDER, PER FREDRIK, 1905– , *and others.* Critical temperature in Lapps. (Journal of applied physiology, Mar. 1957. v. 10, no. 2, p. 231–34, illus., table.) 7 refs. *Other authors:* K. L. Andersen, J. Krog, F. V. Lorentzen *and* J. Steen.

Skin temperature measured under clothing in the winter gave, in nomadic Lapps, values well inside those corresponding to our own comfort. Even at very low outside temperatures the microclimate underneath the clothing was almost tropical. Critical temperature in naked Lapps was the same as in men living in moderate climate, and their physiological insulation was similar.

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54621. SCHOLANDER, PER FREDRIK, 1905– , *and others.* Metabolic acclimation to cold in man. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 114–15.) *Other authors:* H. T. Hammel, K. L. Andersen, *and* Y. Løyning.

A study of eight men who lived, lightly dressed and covered (at night), during September and October above the treeline in the Norwegian mountains. After six weeks, and in contrast with controls, they stayed warm from head to foot at night and slept well. Heat production remained 50–60 percent above basal all night in sleep. Shivering was visible or detectable during sleep.

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54622. SCHOLANDER, PER FREDRIK, 1905– , *and others.* Metabolic acclimation to cold in man. (Journal of applied physiology, Jan. 1958. v. 12, no. 1, p. 1–8, illus., table.) 21 refs. *Other authors:* H. T. Hammel, K. L. Andersen, and Y. Løyning.

Account of observations on eight men living above the tree line during September and October, in summer clothing and with insufficient night protection. After six weeks they acquired considerable cold-acclimatization, sleeping well and maintaining a warm body-surface at night. During rest their heat production remained 50–55% higher than the basal rate before acclimatization; most of them showed a slight rise in BMR. A control group did not exhibit all these signs.

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54623. SCHOLANDER, PER FREDRIK, 1905– . Studies on man exposed to cold. (Federation proceedings. Symposium on metabolic aspects of adaptation of warm blooded animals to cold environment, Dec. 1958. v. 17, no. 4, p. 1054–57, illus.) 7 refs.

Account of experiments with Norwegian students living in summer clothing above the tree line and observations on Australian aborigines, both groups lightly covered at night in environmental tem-

perature of 5° to 0° C. Behavior during sleep and capacity to do so were taken as indicative of cold-acclimatization. It is concluded that man, like other mammals, can adapt to a certain degree of ambient cold. ***Copy seen:*** DLC.

SCHOLANDER, PER FREDRIK, 1905– , *see also* Coachman, L. K., *and others.* Gases in glaciers. *1958.* No. 50294.

SCHOLANDER, PER FREDRIK, 1905– , *see also* Nutt, D. C., *and others.* Arctic Institute Greenland Expedition 1958; field report. *1958.* No. 53678.

54624. SCHOLANDER, SUSAN. Cold fish problem; with photographs by David Linton. (Natural history, Nov. 1957. v. 66, no. 9, p. 456–67, 19 photos.)

Contains account of the *Blue Dolphin* (Comm. D. C. Nutt) expedition to Labrador under Prof. P. F. Scholander, to investigate the problem of how fish survive in water of −1.7° C., almost a whole degree below the freezing point of ordinary fish blood. Experiments carried out in a portable laboratory at Hebron Fjord, were fruitless: the fish froze on the surface at −1.7° C. but lived at the bottom of the fjord at the same temperature. The mystery was solved at Woods Hole, Mass., the following winter by a chance observation on *Fundulus:* these fish had been supercooled in the laboratory for several hours without harm, but froze when they accidentally came into contact with an ice crystal. The conclusion is drawn that supercooled fish survive in bottom waters because they never encounter ice. ***Copy seen:*** DLC.

SCHOLL, H., *see* Thorn, W., *and others.* Stoffwechselvorgänge . . . *1957.* No. 55421.

54625. SCHREPFER, HANS. Inselberge in Lappland und Neufundland. (Geologische Rundschau, 1933. Bd. 24, Heft 3–4, p. 137–43, illus.) 14 refs. Text in German. ***Title tr.:*** Outlier mountains in Lapland and Newfoundland.

Describes appearance, relief energy, terraces, and denudation activity of isolated residual hills observed in northeast Finland (Kuusamo, Rukavaara), in the Tana River Basin in Norway (Ailigus, Iskuras), and in Newfoundland. Glacial action and frost-shattering phenomena are discussed; the hills are considered a function of climate. ***Copy seen:*** DLC.

SCHROCK, R. W., *see* Meyer, G. E., *and others.* A versatile new family of elastomers. *1957.* No. 53255.

54626. SCHROCK, V. E., *and* **R. E. GOTT.** Specific heats of aircraft engine lubricants at low temperatures. (Lubrication engineering, June 1957. v. 13, no. 6, p. 353–58, illus., table, graphs.) 24 refs. Corrected graph in no. 8 (Aug.) 1957, p. 439.

Investigation of a typical aircraft gas turbine engine lubricant (military specifications MIL–O–6081A, grade 1010), and a typical piston engine lubricant (military specification MIL–O–6082, grade 1080), showed that the specific heat of the two oils ranged from 0.38–0.56 Btu/lb. ° F. between −100° F. and 70° F., with no sharp breaks at any temperature. By interpolation of the specific heat graph, an apparent heat of fusion of 4.1 Btu/lb. was found for the piston engine oil near its pour point of 5° F. The turbine engine oil remained liquid to −100° F., specific heat decreasing with decreasing temperature, except for a small increase in the vicinity of the cloud point of −15° F.

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54627. SCHROCK, V. E., *and* **E. S. STARKMAN.** Thermal conductivity of aircraft engine lubricants at low temperatures. (Lubrication engineering, July 1957. v. 13, no. 7, p. 393–98, illus., table, graphs.) 28 refs.

Laboratory investigations of an aircraft gas turbine lubricant (MIL–O–6081A) and a piston engine lubricant (MIL–O–6082A) over the temperature range +80° F. to −100° F., gave an average of 0.075 Btu/hr. ° F. ft. for the first and 0.090 Btu/hr. ° F. ft. for the second. Thermal conductivity of the turbine lubricant varied linearly from 0.071–0.077 Btu/hr. ° F. ft. over the temperature range, while the piston engine lubricant showed a change in conductivity during crystallization. The thin film spherical apparatus used in the investigations, and the experimental procedure are described.

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SCHROEDER, WILLIAM CHARLES, 1895– , *see* Bigelow, H. B., *and* W. C. Schroeder. A study . . . sharks . . . Squaloidea. *1957.* No. 49717.

SCHUCHARDT, L. F., *see* Munoz, J., *and* L. F. Schuchardt. Effect . . . *H. pertussis* . . . sensitivity . . . cold stress. *1957.* No. 53455.

54628. SCHULE, JOHN J., *Jr.*, *and* W. I. WITTMANN. Comparative ice conditions in North American Arctic, 1953 to 1955, inclusive. (American Geophysical Union. Transactions, June 1958. v. 39, no. 3, p. 409–419, 6 maps, graph.) 8 refs.

Discusses ice conditions on the basis of recent systematic air reconnaissance. Types of ice and ice packs are distinguished. The complex East Greenland coastal ice extends to about 70° N. in Oct., in June it forms a continuous drift from the Arctic Basin to Kap Farvel. The Baffin Bay pack, confined to its region of formation, begins to form in Oct.–Nov. and attains total coverage by approx. Jan. 15; mobile ice containing great quantities of ridged and hummocked ice are predominant on the Baffin Island side. The Labrador ice stream contains sea ice contributed from the Baffin Island coast, Ungava Bay, and Hudson Strait. Of the Foxe Basin ice, previously believed to persist in a self-contained cyclonic circulation, only about 3% was found to have survived the season in 1955. Between Amundsen Gulf and Shepherd Bay total coverage is attained by late Nov.; disintegration completed Aug. 15–Sept. 15. The Bering-Chukchi pack, resembles that of Baffin Bay, attains maximum coverage in early March; disintegration (completed early in July) takes place *in situ*. The start of ice breakup and disintegration are traced to centers in icebound, far northerly regions. The origin and development of several of these "centers of sea-ice removal" are discussed. The annual variability in ice distribution and location of ice boundaries is believed to depend more on year-to-year variations in drift and movement than on the quantity of ice produced.

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54629. SCHULMANN, OTTO, von. Pilzstudien in Finnland. (Karstenia, 1955. v. 3, p. 17–68.) 21 refs. Text in German. ***Title tr.:*** Fungus studies in Finland.

Includes in this study, arranged by geographic regions of Finland, a short note on Lapland (p. 62) stating that *Leccinum testaceoscabrum* thrives in symbiosis with dwarf *Betula nana*.

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54630. SCHULTZ-LORENTZEN, CHRISTIAN WILHELM, 1873–1951. Det grønlandske folk og folkesind. København, Udgivet af Grønlands-departmentet, 1951. 88 p. process print. Text in Danish. ***Title tr.:*** The Greenland people and their mentality.

The mentality or thought process of Greenlanders is discussed in relation to their isolation and the severity of their living conditions. Their language, composed largely of stem words with affixed modifiers, lacking declensions or inflection, is difficult to translate. Their literature and present-day education are reviewed. Analyses are presented of the influences of observation, tradition, and ecstasy or native spiritual belief, still important in daily life, which affect their ability to adopt without reservation the western culture. Ecstasy is described as an escape mechanism common to primitive peoples in monotonous circumstances. Examples of legends and native poetry are included. ***Copy seen:*** DLC.

54631. SCHULTZ-WEIDNER, WILLY. Der Schamanismus in Sibirien. (Geographische Rundschau, Apr. 1957. Jahrg. 9, Nr. 4, p. 144–47, illus.) Text in German. ***Title tr.:*** Shamanism in Siberia.

Discusses the psychologic aspects of shamanism and holds "arctic hysteria" and other forms of polar psychosis responsible for the spirit worship of arctic and sub-arctic peoples. Far from being abstract idealizations, these spirits or "souls" tend to take possession of man or woman. Only one "possessed" and cured can gain mastery over the spirits and become a shaman with power to summon or drive away supernatural forces. ***Copy seen:*** DGS.

54632. SCHUMACHER, N. J. Some problems of meteorological observing in polar regions. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 212–14.)

Contains a summary of difficulties encountered at Maudheim (71° S. 11° W.) and ways of offsetting them, of considerable validity also in the Arctic. Problems arising from drifting snow and strong radiation effects on instruments and shelter are outlined. The difficulty of reliable precipitation measurement is also noted. Effects of extreme cold on radiosonde equipment are discussed.

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54633. SCHUSTER, R. O., *and* G. A. MARSH. A study of the North American

genus *Megarafonus* Casey; Coleoptera: Pselaphidae. (Pan-Pacific entomologist, 1958. v. 34, no. 4, p. 187–94, 14 illus.)

Contains generic characters, a key to the genus *Megarafonus* and related genera, and descriptions of two new species and two new subgenera of *Megarafonus*, and one old species, *M. ventralis*, recorded in Alaska. ***Copy seen:*** DA.

54634. SCHUSTER, RUDOLF M., *and* W. C. STEERE. *Hygrolejeunea alaskana* sp. n., a critical endemic of northern Alaska. (Torrey Botanical Club. Bulletin, 1958. v. 85, no. 3, p. 188–96.) 7 refs.

Contains a key to the hepatic genera *Taxilejeunea*, *Lejeunea* and *Hygrolejeunea*, and detailed description of *H. alaskana*, collected on the north slope of Mt. De Long, Brooks Range, approx. 68°53′ N. 161°10′ W. (Steere, Aug. 4–16, 1951).
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54635. SCHUSTER, RUDOLF M. Keys to the orders, families and genera of Hepaticae of America north of Mexico. (Bryologist, Mar. 1958. v. 61, no. 1, p. 1–66, illus.) About 100 refs.

Synoptic and artificial keys to the liverworts, including the classes of Hepaticae and Anthocerotae, the latter comprising only one family, the Anthocerotaceae. Appendices contain outline of classification adoption and annotations on taxonomy, earlier work and other references, etc. Seven plates contain morphological and anatomical details of the forms dealt with. ***Copy seen:*** DA.

54636. SCHUSTER, RUDOLF M. Notes on nearctic Hepaticae, VI; phytogeographical relationships of critical species in Minnesota and adjacent areas of the Great Lakes. (Rhodora, Aug. 1958. v. 60, no. 716, p. 209–34, 16 text maps.)

Contains a review of distributional types including arctic, Cordilleran, Pacific Coast and Appalachian species. Range of typical species from the Arctic to the Great Lakes is shown (maps), also world ranges. Some species cover practically all arctic regions. ***Copy seen:*** DLC.

54637. SCHUSTER, RUDOLF M. Notes on nearctic Hepaticae, XIII; the genus *Tritomaria*, Lophoziaceae, in arctic Canada. (Canadian journal of botany, Mar. 1958. v. 36, no. 2, p. 269–88, 3 illus.) 27 refs.

Contains an artificial key to the species and descriptions of *Tritomaria heterophylla* n. sp. (Ellesmere Island), *T. quinquedentata* (Ellesmere, Greenland, Baffin, Melville Island), *T. q.* var. *grandiretis* (northern Siberia, Ellesmere) and *T. q.* var. *turgida* (type Yenisey River, Siberia, Greenland, Ellesmere, Alaska). ***Copy seen:*** DA.

54638. SCHWARTZ, I. R., *and others.* Transplantation of bone marrow after preservation at −70° C. (Journal of applied physiology, July 1957. v. 11, no. 1, p. 22–24, table.) 13 refs. *Other authors:* E. F. Repplinger, C. C. Congdon, *and* L. M. Tocantis.

Glycerol-treated adult mouse marrow was slowly frozen to, and stored at −70° C. for seven-eight days. When thawed and given intravenously to irradiated mice, it was as effective in modifying irradiation injury as marrow from freshly killed animals.
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SCHWARZACHER, W., *see* Bates, D. E. B., *and* W. Schwarzacher. The geology of the land between Ekmanfjorden and Dicksonfjorden . . . *1958.* No. 49575.

54639. SCHWARZENBACH, FRITZ H. Ökologische Beiträge zur Quarteren Florengeschichte Ostgrönlands. (Zürich. Geobotanisches Forschungsinstitut Rübel. Bericht, 1950, *pub.* 1951. p. 44–66, tables.) 8 refs. Text in German. ***Title tr.:*** Ecological contributions to the Quaternary floral history of East Greenland.

Account of field work conducted during 1948–50 within the framework of the Danish East Greenland Expedition, headed by Lauge Koch, and covering the area between 72° and 74° N. Information is presented on the geography of the area, and its climate; Quaternary geology and climate; present vegetation, its character, ecology, etc. Detailed analysis follows of the two main aspects of the study: the early colonization of Greenland by plants and the survival of these plants during times of glacial advances. It is concluded that the present vegetation of East Greenland is the result of successive immigrations of new elements over long periods of time. The most recent, Quaternary climatic changes had only a quantitative effect upon the composition of this flora.
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54640. SCHYTT, S. VALTER. Glaciological investigations in the Thule Ramp area. Wilmette, Ill., Apr. 1955. 88 p.

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illus., graphs, tables, fold. diagr. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1954, v. 2.) SIPRE report 28.

Results of one of two glaciological investigations, carried out by a Northwestern University Dept. of Geography party of ten, June 19–Aug. 29, 1954. Accumulation and ablation measurements were made on the Ramp (near TUTO) and further inland to Mile 20. Meteorological observations were made for correlation with the glaciological work. Accumulation on the Ramp averaged 55 cm. of snow, and varied considerably. Further inland, winter snow depths ranged from 100 cm. (Mile 4 to Mile 7), to 150 cm. (Mile 8 to Mile 14), to 100 cm. (Mile 15 to Mile 20). Below 700 m. elevation, nearly all of the Ramp was in the area with net ablation. Debris features of the moraine area are reported by B. C. Bishop; trafficability in the marginal icecap area, by R. L. Cameron and V. Schytt; ice movement and structure by A. Griscom.—From author's abstract. ***Copy seen:*** CaMAI.

54640A. SCHYTT, S. VALTER. Program for an investigation of the regime of a glacier. (International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Chronicle, Oct. 1957. no. 7, p. 252–53.)

Discusses factors to be considered in: selection of a suitable glacier, measurement of accumulation and ablation, etc. ***Copy seen:*** DGS.

SCHYTT, S. VALTER, *see also* Court, A., *and others.* The classification of glaciers. *1957.* No. 50358.

SCHYTT, S. VALTER. *see also* Espenshade, E. B., *and* S. V. Schytt. Problems in mapping snow cover. *1956.* No. 50795.

54641. SCOGGAN, H. J. Flora of Manitoba. Ottawa, 1957. 619 p. plates, map, tables (Canada. National Museum. Bulletin no. 140; Biological ser. no. 47.) Refs.

Describes the physical features, climate and vegetation; vegetation regions, including in the North: the Boreal Forest, Tundra-Forest, and Tundra, their characteristic components are indicated. The systematic section presents the species and well-marked varieties, native or introduced, at present known to occur in Manitoba, with keys. Names (scientific, vernacular, common), habitat, provincial range, locality, collector and year for the northernmost and earliest collections seen, first report for Manitoba, geographic distribution, and frequently, map citations are given. Entities (204) reported for the first time as constituents, excluded species and varieties are listed. Index (Latin names) classification tables, and percentage data of circumpolar species are added. Manitoba is in a transition zone where floristic types from north, south, east and west converge. ***Copy seen:*** DGS.

54642. SCOTT, D. M., *and* **H. D. FISHER.** Incidence of a parasitic ascarid, *Porrocaecum decipiens* in the common porpoise *Phocoena phocoena* from the lower Bay of Fundy. (Canada. Fisheries Research Board. Journal, Jan. 1958. v. 15, no. 1, p. 1–4, table.) 6 refs.

Report on examinations for nematodes in 151 common porpoises and one white whale (*Delphinapterus leucas*). Only one adult *Porrocaecum* was found. Larval stages were detected in 25% of the 50 porpoise stomachs, and in that of the white whale. ***Copy seen:*** DLC.

54643. SCOTT, D. M., *and* **H. D. FISHER.** Incidence of the ascarid *Porrocaecum decipiens* in the stomachs of three species of seals along the southern Canadian Atlantic mainland. (Canada. Fisheries Research Board. Journal, July 1958. v. 15, no. 4, p. 495–516, tables, map.) 8 refs.

Based on stomach examinations of 318 harbor seals, 812 harp seals and 127 grey seals. The parasite was much rarer in the harp seal than in the two other species, where it was found practically in all stomachs. The incidence according to areas and seasons is discussed and the importance of each seal species as a vector, considered. The relation between each seal species and the incidence of larval ascarids in the Atlantic cod is also noted. ***Copy seen:*** DI.

54644. SCOTT, EDWARD MARION, 1917– , *and others.* Serum-cholesterol levels and blood-pressure of Alaskan Eskimo men. (Lancet, Sept. 27, 1958. p. 667–68, illus. table, map.) 13 refs. *Other authors:* I. V. Griffith, D. D. Hoskins, *and* R. D. Whaley.

A study of 842 subjects aged 17–53 (members of the Alaska National Guard); 80% full Eskimo, a few Aleuts (28) and Athabascan Indians included, from, altogether, 43 villages. The mean serum-cholesteral level was not found to be unusual, but there were significant

differences between men from different localities, and the northern Eskimos had higher levels than the southern. Blood pressure also showed geographic variation, though to a much lesser degree.

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SCOTT, EDWARD MARION, 1917– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

54645. SCOTT, FLORA MURRAY. On certain fossil cones from the Pacific Coast. (Torrey Botanical Club. Bulletin, Jan. 1927. v. 54, no. 1, p. 7–11.) 9 refs.

Contains notes on *Abies balsamea* from the Pleistocene of Kenai Peninsula formations, Alaska. From the Trias onwards there occur numerous *Abies*-like twigs and leaves, in a more or less imperfect state. These bear a sufficient resemblance to the genus *Abies* to warrant the name *Abietites.*

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54646. SCOTT, H. S. The role of aerial survey methods in Canada's northward development. (Engineering journal, Nov. 1957. v. 40, no. 11, p. 1647–56+, illus.)

All Canada, including the northernmost islands, is to be mapped (at scale 1 in.: 1 mi.) within five years, by aid of air photography. Survey methods and photointerpretation for use in engineering, agriculture, forestry, also in geological and geophysical studies are described. Special applications within these fields are discussed; they include route location, materials location, hydrology and water utilization, site surveys, forest reconnaissance and inventory surveys, geological reconnaissance, geophysical surveys by use of the magnetometer, electro-magnetic and gravity methods, and radioactivity detection. An evaluation of aerial photography as applied to Canada is given. ***Copy seen:*** DLC.

SCOTT, JERRY B., *Jr., see* Haddy, F. J., *and others.* Effect of change in air temperature . . . *1957.* No. 51475.

54647. SCOTT, ROBERT F. Resource planning in Northern Alaska; a problem in biological, anthropological, economic, social and moral interrelationships. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 45–48.) 6 refs.

Summarizes symposium on the ability of northern Alaska to support its mostly Indian and Eskimo population dependent on utilization of wildlife resources. Dr. J. L. Buckley outlined some biological factors and reviewed pertinent comments on human ecology made by Dr. M. Lantis in her survey of problems in the American Arctic; Dr. I. Skarland discussed resource utilization and management; R. Woolford reported on surveys of village economies in Northern Alaska; E. V. Pugh: welfare programs; T. Cunningham and S. Carrighar: various aspects of primitive and modern morality and psychology in native groups. Survival, it was concluded, depends on the degree of a people's adaptation to major social and economic changes altering the relationship with the environment and its supporting resources.

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SCOTT, ROBERT F., *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

54648. SCOTT, WILLIAM BEVERLEY, 1917– . A checklist of the freshwater fishes of Canada and Alaska. Toronto. Royal Ontario Museum, Division of Zoology and Palaeontology, 1958. 30 p. 43 refs.

The list brings together over 200 scattered records of recent publications and generic changes involving a "lumping of closely related forms to better show their relationship." The common names are those recommended by the Committee on Names of Fishes.

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SCOTT POLAR RESEARCH INSTITUTE, *Cambridge, England, see* Glen, J. W., *and* B. B. Roberts. Classification of snow, ice, frozen ground . . . Universal Decimal Classification. *1954.* No. 51224.

SCOTT POLAR RESEARCH INSTITUTE, *Cambridge, England, see* Savours, A. The manuscript collection . . . Scott Polar Research Institute . . . *1958.* No. 54584.

54649. SCRIBNER, FRANC LAMSON, 1853–1938. Some arctic grasses. (Botanical gazette, 1886. v. 11, no. 2, p. 25–26, plate 3.)

Describes: Deschampsia brevifolia and *Agropyrum violaceum,* both collected by A. W. Greely in 1888, near Ft. Conger on northeast Ellesmere (81°44′ N.), the first known also from Alaska. *Phippsia algida,* hitherto known only from Alaska, is now located near Chicago Lake, Colorado. ***Copy seen:*** DLC.

54650. SCURR, K. R. Insulated forms keep concrete construction active through winter. (Contractors and engineers, Oct. 1957. v. 54, no. 10, p. 90–93, illus.)

A method of winter concrete curing developed and used successfully in South Dakota is described. The method consists of using concrete introduced into forms that are insulated by double balsam or equivalent blankets at about 65° F. The results of several tests using this method and diagrams illustrating the method are given. The findings generally indicate that the improved insulating materials and techniques permit low-temperature quality concreting without a prohibitive price penalty.

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54651. SDOBNIKOV, VASILIĬ MIKHAĬLOVICH. Dikiĭ olen' Taĭmyra i uporiâdochenie ego promysla. (Problemy Severa, 1958. vyp. 2, p. 156–68, tables, map.) 5 refs. Text in Russian. ***Title tr.:*** The wild reindeer of Taymyr and regulation of its hunt.

Presents results of a three-year study (1947–1950) of seasonal distribution and migration, food and pasture utilization, reproduction and population growth, development, parasites, etc. A serious reduction of the reindeer stock is noted; to counteract it author recommends limiting hunting to the native population, prohibiting mass killing during river fording and other aggregations of the animals, closed seasons, etc.

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54652. SDOBNIKOV, VASILIĬ MIKHAĬLOVICH. K kharakteristike zhiznennoĭ formy u arkticheskikh zhivotnykh. (Zoologicheskiĭ zhurnal, Feb. 1957. t. 36, vyp. 2, p. 161–73, table.) 38 refs. Text in Russian. Summary in English. ***Title tr.:*** Contribution to the characteristic of life forms in arctic animals.

Discusses the main arctic environmental factors, viz: scarcity or absence of food during eight-nine months; low temperatures precluding invertebrate activity during the same period, and the very short period suitable for breeding. To these conditions, euarctic vertebrates respond with rapid metabolism growth and fat accumulation, great fecundity, hairiness, etc. Migrants respond with quick and extensive migrations; invertebrates are able to withstand eight–nine months of anabiosis at low (−20° C. or lower) environmental temperatures. ***Copy seen:*** DLC.

54653. SDOBNIKOV, VASILIĬ MIKHAĬLOVICH. Peseţs na Taĭmyre. (Problemy Severa, 1958. vyp. 1, p. 211–20, table.) 3 refs. Text in Russian. ***Title tr.:*** The polar fox on Taymyr Peninsula.

Discusses the main factors causing scarcity of foxes in northern Taymyr (permafrost preventing burrowing of nests, food scarcity); lemmings and birds preyed upon by foxes; fish and carrion and their role as food; the young, food, propagation, migrations, yields in the area (since 1936); enemies.

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54654. SDOBNIKOV, VASILIĬ MIKHAĬLOVICH. Promysel na Kraĭnem Severe i zadachi nauchnykh issledovaniĭ. (Okhota i okhotnich'e khoziâĭstvo, Nov. 1957. god 3, no. 11, p. 8–9, port.) Text in Russian. ***Title tr.:*** Hunting in the far North and tasks for scientific research.

The abundance of game in northern tundras is not fully utilized as hunters are diverted to other work. They average one/560 sq. km. in Chukchi National District, One/789 sq. km. in Yamal-Nentsy District, and one/824 sq. km. in Taymyr District. Scientific organizations must help this situation and devise new technical methods to increase hunting and trapping efficiency. Acclimatization of fur animals, study of ecology and of arctic fox migration are required. Cases are noted of arctic foxes tagged in Taymyr District and caught in Mezen' District and on Novaya Zemlya.

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54655. SDOBNIKOV, VASILIĬ MIKHAĬLOVICH. Sravnitel'no-ėkologicheskiĭ analiz fauny tundry i taĭgi. (Zoologicheskiĭ zhurnal, Apr. 1958. t. 37, no. 4, p. 481–94, illus., tables.) 23 refs. Text in Russian. Summary in English. ***Title tr.:*** Comparative-ecological analysis of the tundra and taiga faunas.

A study based on conditions in mammals and birds. It was found that the faunal composition is determined by ecological conditions rather than by historical factors. The main obstacle to penetration of taiga forms into the tundra is the lack of trees in the latter. Trees serve nesting and are a source of food. The "carnivorous" character of the tundral bird fauna is partly due to this absence of trees and partly due to the proximity of the sea, a source of animal food. ***Copy seen:*** DLC.

54656. SEAGRAN, HARRY L. Contribution to the chemistry of the king crab, *Paralithodes camtschatica*. (Commercial fisheries review, U.S. Fish and Wildlife Service, Nov. 1958. v. 20, no. 11, p. 15–22, illus., tables.) 11 refs.

A study of physical and chemical characteristics, especially those of "the crude protein fraction of the edible meats" of male animals from two Alaskan grounds. About 52% of the total weight was found to be edible. The raw meat averaged 10.8% protein, 0.67% oil, 86.2% moisture and 1.95% ash. A detailed analysis of the protein fraction is presented.

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54657. SEALY, J. ROBERT. *Amelanchier florida* forma *tomentosa*, Pomaceae. (Curtis's botanical magazine, 1937. v. 160, 4 p., illus., plate 9496.)

Contains description of this shrub well known in cultivation under the name *A. alnifolia*. The original description of the latter species is not sufficiently detailed to permit reliable identification and the name should be reduced to a synonym. The plant is common in Northwest America, from Alaska to California and occurs also in the Northwest Territories.

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54658. SEALY, J. ROBERT. *Romanzoffia unalaschensis*. (Curtis's botanical magazine, 1948. v. 164, pt. 4, 4 p., illus., plate 9683B.)

Contains a description of this perennial herb, growing only in the eastern Aleutian Islands (Unimak, Unalaska, Umnak) and on the Alaska Peninsula.

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SEARS, ROBERT C., *see* Wenger, J. N., *and others*. Scatter propagation. *1958*. No. 55991.

54659. SECHER, ALEX. Gensyn med Grønland. C. Erichsen, 1957. 87 p. illus. Text in Danish. ***Title tr.:*** Greenland revisited.

Artist's drawings, including some in color, of sites visited along the West Greenland coast from Kap Farvel to Upernavik: landforms, habitations and settlements, Greenlanders and their activities, sealing and fishery. Features of economic and social life are depicted, as the trading post, sanatorium, radio, shipping, fishing base, fuel dump, etc. Brief explanatory notes accompany the more than two hundred illus.

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54660. SECHKINA, T. V. Novye diatomovye iz gruntov ozera El'gytkhyn Anadyrskogo raĭona. (Akademiĭa nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1956. t. 11, p. 42–49, 7 illus.) 6 refs. Text in Russian. ***Title tr.*** New diatoms from the bottom sediments of Lake El'gytkhyn of the Anadyr region.

Contains Latin diagnoses and Russian descriptions of *Navicula schirschowii, Pinnularia fragilis, Surirella gravei* n. spp., and three new varieties of diatoms from bottom sediments.

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54661. SECHZER, PHILIP H. Effect of hypothermia on compliance and resistance of the lung-thorax system of anesthetized man. (Journal of applied physiology, July 1958. v. 13, no. 1, p. 53–56, tables.) 25 refs.

Report on measurements in eight anesthetized apneic patients before and during reduction of their body temperature. There was no significant change in compliance or resistance of the lung-thorax system during hypothermia as low as 29° C.

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54662. SEGAL', A. N. Znachenie svetovykh usloviĭ vneshneĭ sredy dlia urovnia i sutochnykh periodicheskikh izmeneniĭ aktivnosti i gazoobmena ptitsa. (*In:* Pribaltiĭskaia ornitologicheskaia konferentsiia, 1954. Trudy, *pub.* 1957, p. 406–412, illus.) 3 refs. Text in Russian. ***Title tr.:*** Significance of environmental light conditions for the level and periodic diurnal changes in activity and gas exchange of birds.

Account of experiments with chickens and titmice. Light conditions affected the gaseous metabolism and muscular activity of these birds. Neural receptors and the nervous system in general appear to function as mediators between the environment and the organism.

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SEGAL', M. S., *see* Gershanovich, G. L., *and others*. Opyt zimneĭ ėkspluatatsii betononasosov. *1957*. No. 51164.

54663. SEGAR, WILLIAM E. Effect of hypothermia on tubular transport mechanisms. (American journal of physiology, Oct. 1958. v. 195, no. 1, p. 91–96, tables.) 19 refs.

Account of experiments with dogs cooled to 20° C. rewarmed and studied in both phases. Changes in concentration of glucose, P, amino acid-N, protein and creati-

nine in plasma and urine, as well as changes in urine flow are recorded. It is concluded that two transport mechanisms are involved in kidney reabsorption; only one of them is affected by cooling. ***Copy seen:*** DNLM.

54664. SEGERSTRÅLE, LENNART. En observation av grönlandsfalk, *Falco rusticolus candicans* Gmelin, år 1951. (Ornis fennica, 1957. v. 34, no. 3, p. 111.) Text in Swedish. Summary in English. ***Title tr.:*** Observation of a Greenland falcon, *Falco rusticolus candicans* Gmelin, in 1951.

Notes a specimen of Greenland falcon seen on spring migration, near Porvo in South Finland (ca. 60°24′ N. 25°40′ E.) on Apr. 30, 1951. ***Copy seen:*** DA.

54665. SEGERSTRÅLE, SVEN G. The distribution of glacial relicts in Finland and adjacent Russian areas. Helsingfors, 1956. 37 p. 10 maps incl. 1 fold. (Finska vetenskaps-societeten. Commentationes biologicae, t. 15, no. 18.) 103 refs.

Contains a survey of relicts confined not only to marine areas but also to lakes (*Pallasea*), such as the ringed seal (*Phoca hispida*), a fish, *Cottus* (*Myoxocephalus*) *quadricornis*, and seven species of crustaceans. Historical notes and data on the distribution and frequency of the relicts (text maps 1–9) are followed by extensive lists of Finnish and Russian fresh-water and marine localities: in Kola Peninsula and eastern Karelia, the Gulfs of Bothnia and Finland, the White Sea. Appended is an index of the localities (249) shown on the fold. map. ***Copy seen:*** DLC.

54666. SEGERSTRÅLE, SVEN G. The freshwater amphipods, *Gammarus pulex* (L.) and *Gammarus lacustris* G. O. Sars, in Denmark and Fennoscandia; a contribution to the late- and post-glacial immigration history of the aquatic fauna of northern Europe. Helsingfors, 1954. 91 p. 42 illus., incl. text maps. (Finska vetenskaps-societeten. Commentationes biologicae, t. 15, no. 1.) 119 refs.

Contains a zoogeographic study of these two closely related species with extensive data on their immigration history and ecological aspects of distribution and immigration. "The following main conclusions were arrived at: *G. lacustris* has belonged to the fauna of Scandinavia since the last interglacial epoch at least: it survived the last glaciation in coastal refuges of Fennoscandia and since the waning of the ice-sheet had spread from this area far into the interior . . . Dispersal is mainly brought about through the intermediation of waterfowl. In contrast to *lacustris*, *pulex* did not survive the glacial age in Northern Europe. The species immigrated into this area from the continent, following the retreating margin of the ice-sheet; it lived in the ice-dammed lakes in northern Germany and was effectively dispersed by them and the subsequent fresh-water stages of the Baltic, invading many areas not reached by *lacustris*." (p. 77–78). *G. lacustris* is known from almost all Norway and adjacent parts of Sweden north of 62° N., Finland north of 66° N., and the Murman coast. *G. pulex*, entirely absent in Norway, occurs in southern Sweden and in Finland up to 66° N. ***Copy seen:*** DLC.

54667. SEGERSTRÅLE, SVEN G. On the immigration of the glacial relicts of northern Europe, with remarks on their prehistory. Helsingfors, 1957. 117 p. illus., maps. (Finska vetenskaps-societeten. Commentationes biologicae, t. 16, no. 16.) 157 refs.

Immigration of eight relict aquatic faunal species into northern Europe after the ice age is studied: ringed seal, a fish and six crustaceans, all fit for adaptation to life in fresh water. Their introduction from either west or east via brackish or saline waters during depression and partial flooding of northern continental areas is rejected. Most of the species are derived from forms inhabiting arctic marine waters of Eurasia; one amphipod, *Pallasea quadrispinosa*, may be derived from a Lake Baykal ancestor. Harbored in an ice-dammed lake in the Upper Onega valley as the icecap advanced, these relict species spread, when it waned, over wide areas from Denmark to Kola Peninsula. The mode of this spread is treated in detail. The literature on glacial conditions, flooding, and water salinity is reviewed. No definite conclusions are drawn because the actual course of events in late-glacial time is so imperfectly understood. Distribution of the eight species was considered in No. 54665. ***Copy seen:*** DGS.

54668. SEIBERT, RICHARD ALBERT, 1913– , *and* P. BROOKS. The biochemistry of tissue trauma; the effect of cold injury on muscle protein in rabbits. Randolph AFB Texas, May 1957. 4 p.

illus., tables. (U.S. Air Force. School of Aviation Medicine. Report no. 57–95.) 6 refs.

Report on the amount and composition of myosin extractable from frozen and control muscle. The composition was found to remain the same but the amount decreased considerably after freezing. Seven ways of treatment tried (including fast and slow rewarming) had no effect on the amount of myosin recovered.

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SEIDEL, G., *see* Flohn, H., *and* G. Seidel. Recent studies on the arctic troposphere . . . *1958.* No. 50932.

54669. SEISKARI, PERTTI, *and* **J. KOSKIMIES.** Ecological evidence of racial divergence in the capercaillie, *Tetrao urogallus* L., in Finland. Helsinki, 1955. 11 p. maps, diagrs. (Suomen riistanhoito-säätiö: Finnish Foundation for Game Research. Riistatieteelisiä julkaisuja: Papers on game research, 16.) 18 refs.

Two populations of this large grouse occur in Finland, distinct in many ecological respects. The boundary between them coincides with the general ecological barrier running diagonally northwest-southeast across the country at about 64°–65° N. Environmental conditions differ in the two regions, and the differences between the two grouse populations represent, perhaps, direct reactions to environment, including the effects of latitude. But the distinct and well-defined regionalization found in some ecological characteristics, such as feeding on grain fields, feeding on aspen leaves and roosting in the snow, can hardly be understood without assuming that the populations are genetically different and form two ecologically divergent races.

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54670. SEITH, ROBERT T. Testing multiwall bags at low temperatures. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 93–99.)

Results of some early low-temperature tests conducted on multi-wall bags for cement packaging are reviewed. Increasing the number of plies of paper does not eliminate breakage of container, which appears to be due to an increase in brittleness brought about by dehydration at low temperatures. Reinforcement of the papers with materials not affected by low temperatures seems indicated.

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54671. SELIVANOVA-GORODKOVA, E. A. Cheremukha i ee biologicheskie osobennosti. (Botanicheskiĭ zhurnal, Aug. 1957. t. 42, no. 8, p. 1258–66, 7 illus.) 28 refs. Text in Russian. ***Title tr.:*** Bird-cherry and its biological features.

Contains systematic and ecological notes on two species of bird-cherrry: *Padus racemosa,* growing in northern European U.S.S.R. (Kola Peninsula and Arkhangel'sk province) and western Siberia; and *P. asiatica* replacing *P. racemosa* in eastern Siberia. Both species reproduce from seed and in vegetative way. The mechanism of vegetative reproduction by so-called supporting lateral branches is described in detail. ***Copy seen:*** DLC.

54672. SELLAEG, JOHANNES, 1894– . Selfangstnaeringen. (Polarboken 1958, p. 138–57.) Text in Norwegian. ***Title tr.:*** The sealing trade.

Presents a general survey of this industry in Norway, its development, distribution of the (mainly harp and hooded) seals, the sealing-grounds (the White Sea, Svalbard area, Jan Mayen area, Denmark Strait and Newfoundland), types of ships used, shipwrecks. Protective regulations are outlined: utilization of by-products is discussed. Profits during the period 1947–1956 had an average annual value of 13.3 million Norw. kr.: 244,000 animals. Negotiations and agreements concerning sealing are discussed and details given on agreements with the U.S.S.R. The industry's future is considered: the problems include closure of the White Sea, possible extension of the fishing limit and too heavy taxation of stocks. ***Copy seen:*** SPRI.

SELLERS, ALVIN FERNER, 1917– , *see* Good, A. L., *and* A. F. Sellers. Effects of carbon dioxide, epinephrine and Ilidar . . . temperatures . . . dogs . . . cold. *1957.* No. 51267.

SELLERS, ALVIN FERNER, 1917– , *see* Good, A. L., *and* A. F. Sellers. Temperature . . . blood . . . extreme cold. *1957.* No. 51268.

54673. SELLERS, EDWARD ALEXANDER, 1916– . Adaptive and related phenomena in rats exposed to cold; a review. (Revue canadienne de biologie, June 1957. v. 16, no. 2, p. 175–88.) 28 refs.

A review of research mostly done at the Dept. of Physiology and at the Banting and Best Dept. of Medical Research, University of Toronto during 1949–1956. It includes problems of acclimatization; energy requirement in cold environment; intermediary metabolism; adrenal and thyroid reactions to cold; effects of burning upon reaction to cold (cross stress); metabolic changes; changes in organ size, etc.

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54674. ***SEL'SKOE KHOZÍAÏSTVO SIBIRI.*** 325 let vossoedineniia Íakutii k Rossii. (Sel'skoe khozíaïstvo Sibiri, 1957, no. 10, p. 73–74.) Text in Russian. ***Title tr.:*** The 325th anniversary of the union of Yakutia with Russia.

Stresses the importance of this event for agricultural acculturation and advance in Yakutia. Recent achievements are noted: progressive mechanization in farming, development of trained agriculturalists, improvement of stock and rise of farm income. By Oct. 1, 1956, farms in Yakutia had built up their stock to over 297,000 head of cattle, 246,200 reindeer, 8,090 silver foxes, etc.

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54675. SELYE, HANS, 1902– . Acquisition de résistance à la néphrocalcinose au cours de l'adaptation au froid. (Journal de physiologie, Nov. 1957. t. 49, no. 5, p. 1021–23.) 5 refs. Text in French. ***Title tr.:*** Acquisition of resistance to nephrocalcinosis during adaptation to cold.

Account of experiment with rats administered excessive amounts of phosphate. Such animals when kept in cold environment did not develop nephrocalcinosis, in contrast to controls kept at room temperature. ***Copy seen:*** DNLM.

54676. SELYE, HANS, 1902– . Acquisition of resistance to osteolathyrism during adaptation to cold. (Science, Sept. 1957. v. 126, no. 3274, p. 612, illus.) 3 refs.

Account of experiments with rats given aminoacetonitrile hydrosulphate. When kept at room temperature such animals developed severe osteolathyrism. Only traces of this bone disease were seen in rats kept in cold environment during, or prior and during treatment with AAN. In this case, cold is believed to act by increasing secretion of thyroid hormone.

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SEMENENKO, A. D., *see* Shakhov, A. A., *and* A. D. Semenenko. O pogloshchenii sveta . . . *1958.* No. 54726.

54676A. SEMENIDO, E., *and* V. SHARAPOV. Vsesezonnoe avtomobil'noe maslo. (Avtomobil'nyĭ transport, Feb. 1958. god 36, no. 2, p. 15–16, tables.) 3 refs. Text in Russian. ***Title tr.:*** All-season automobile oil.

The "all-season" oil can be used at temperatures between +40° and −35° C. The oil possesses good anti-wear properties and forms only small carbon and other deposits. Its base is made of low viscous and low molecular petroleum fractions with multi-functional additives, providing low evaporation characteristics in engines. The oil, AKZp-10, is recommended for year-round use. Comparative viscosities of this and other oils are tabulated for temperatures from +150° to −20° C. Comparative wear characteristics of cylinder surfaces lubricated with different oils during the year are given. ***Copy seen:*** DLC.

54677. SEMENOV, E. I. Leĭkofan v shchelochnykh pegmatitakh Kol'skogo poluostrova. (Akademiia nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh élementov. Trudy, 1957. vyp. 1, p. 60–63, tables.) 6 refs. Text in Russian. ***Title tr.:*** Leucophane in alkali pegmatites of Kola Peninsula.

Describes leucophane as found in pegmatites of the Lovozero nepheline syenite massif, a rare beryllium mineral hitherto known in southern Norway, Greenland, and Africa. Its appearance, crystal structure, measurements, and optical properties are described and the chemical composition is given. Its almost complete similarity to leucophane of Norway is stressed. The chemical composition and properties of minerals of the meliphanite group found in Khibiny massif are also presented.

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54678. SEMENOV, E. I. Novye vodnye silikaty berilliia: gel'bertrandit i sferobertrandit. (Akademiia nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh élementov, Trudy, 1957. vyp. 1, p. 64–69, illus., tables, plate.) 4 refs. Text in Russian. ***Title tr.:*** New hydrous silicates of beryllium: gelbertrandite and sphero-bertrandite.

Reports two new beryllium minerals of the bertrandite group, found in the pegmatites of the Lovozero nepheline-

syenite massif in Kola Peninsula, gelbertrandite from Karnasurt mountain and sphero-bertrandite from Mannepakhk mountain. They are treated in detail: their appearance, mineralic and optical properties, measurements, spectral and chemical analyses, also photos.

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54679. SEMENOV, E. I., *and others.* Novyĭ t͡sirkonievyĭ mineral seĭdozerit i drugie mineraly gruppy vëlerita v shchelochnykh pegmatitakh. (Vsesoi͡uznoe mineralogicheskoe obshchestvo. Zapiski, 1958. ser. 2, chast' 87, vyp. 5, p. 590–97, illus., tables.) 7 refs. Text in Russian. *Other authors:* M. E. Kazakova, *and* V. I. Simonov. ***Title tr.:*** A new zircon mineral, seidoserite, and other minerals of the wöhlerite group in alkaline pegmatites.

Describes seidoserite found by E. I. Semenov in the Seydozero district of Kola Peninsula in the nepheline syenites of the Lovozero massif. The mineral represents a new form of silicate of zircon, titanium and sodium; in appearance it resembles lamprophyllite. Crystallographic properties (occurrence, form, cleavage, color, X-ray diffraction) are identified by V. I. Simonov, and chemical properties by M. E. Kazakova. Titaniferous låvenite, rosenbuschite and other minerals of the wöhlerite group are also described and their properties outlined.

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54680. SEMENOV, E. I. Okisly i gidrookisly titana i niobiĭa v Lovozerskom shchelochnom massive. (Akademiĭa nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh ėlementov. Trudy, 1957, vyp. 1, p. 41–59, illus., tables, plate.) 20 refs. Text in Russian. ***Title tr.:*** Titanium and niobium oxides and hydroxides in the Lovozero alkali massif.

Outlines investigation of two types of titanium oxides, hydroxides, and dioxides previously unknown in the alkali massifs of Kola Peninsula. In these minerals instead of niobium or tantalum, titanium is sometimes present. In one type, where there are large idiomorphic crystals, the minerals are predominantly brookite (arkansite), anatase, also two minerals newly identified by the Russians as belĭakinit and gerasimovskit. The second type consists of cryptocrystalline leucoxene and titanium, and of niobium and other minerals in the aggregates. These minerals are described, their chemical composition presented, and their reaction to heat of various temperatures and to dehydration processes is graphed.

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SEMENOV, E. I., *see also* Dudykina, A. S., *and* E. I. Semenov. Lovozerskiĭ i Khibinskiĭ massivy . . . *1957.* No. 50642.

SEMENOV, E. I., *see also* Tikhonenkov, I. P., *and others.* Pervai͡a nakhodka ėl'pidita . . . *1957.* No. 55439.

54681. SEMENOV, F. D. K izucheniĭu mikroskopicheskogo stroeniĭa organov pishchevareniĭa domashnego severnogo oleni͡a. (Yakutsk. Universitet. Uchenye zapiski, 1957. vyp. 1, p. 133–35.) Text in Russian. ***Title tr.:*** To the knowledge of the microscopic structure of the digestive organs of the domestic reindeer.

Author describes the special structures indicating an adaptation to the food of these animals, structures found in the tongue, salivary glands, esophagus, stomach, intestines, etc.

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54682. SEMENOV, I. Po mori͡am i okeanam. (Neva, Feb. 1957. no. 2, p. 145–47.) Text in Russian. ***Title tr.:*** On the seas and oceans.

Account (by the vice-minister of Fisheries) of the Soviet fishing fleet, including herring trawlers operating in the North Atlantic. The floating plants for processing and freezing and the hydroacoustic and ultrasonic devices for detecting schools of fish, etc., are described; some statistical data on catches are given.

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54683. SEMENOV, S. A. Pervobytnai͡a tekhnika; opyt izucheniĭa drevneĭshikh orudiĭ i izdeliĭ po sledam raboty. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1957. 240 p. 106 illus. (Akademiĭa nauk SSSR. Institut istorii material'noĭ kul'tury. Materialy i issledovaniĭa, no. 54.) Refs. Text in Russian. ***Title tr.:*** Primitive techniques; an experimental study of prehistoric artifacts through traces of workmanship.

A study of the tools and techniques used by primitive man to manufacture stone and bone implements. Modern research facilities are reviewed, stone-age artifacts, material, tools, etc. are discussed and references to arctic finds are made throughout, including: tools used for working mammoth tusks (p. 185–88), and the bone carving technique of pre-

historic Eskimos with reference to the age of their settlements (p. 194–200). Bone implements belonging to the Okvik and Ipiutak cultures have a fineness and precision of workmanship that indicates use of metal tools. Larsen's and Rainey's dating (No. 9705, cf. Collins' *Radio carbon dating*, No. 28590) is questioned and an up-dating of the Eskimo cultures suggested, since iron import is unlikely to have started before the fifth or sixth century A.D. at the earliest.

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54684. SEMENOV, S. A. Sledy upotrebleniia na neoliticheskikh orudiiakh iz angarskikh pogrebenii. (Akademiia nauk SSSR. Institut istorii material'noĭ kul'tury. Materialy i issledovaniia po arkheologii SSSR, 1941. no. 2, p. 203–211, 301–302, illus.) Text in Russian. Summary in French. ***Title tr.:*** Traces of use on neolithic tools from burials on the Angara River.

A micro-analysis of tool blades (axes, knives, adzes, scrapers, etc.) excavated by A. P. Okladnikov in 1932–1937. An attempt is made to determine the material and kind of work each tool was used for from the traces of wear on its blade: fluted scratches from wood fiber on axes, adzes and wood-carving knives, polished surface of knives used for gutting fish and small game, cross scratches on blunted scraper edges indicating their use for scraping hides, etc.

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54685. SEMERAU-SIEMIANOWSKI, ZBIGNIEW. Zmiany czynnościowe serca w stanach obniżonej temperatury ustroju stałocieplnego. (Acta physiologica polonica, 1956. v. 7, fasc. 3, p. 247–70, illus.) 32 refs. Text in Polish. Summary in English. ***Title tr.:*** Functional cardiac changes during hypothermia of the homeotherm organism.

Description and discussion of ECG records of dogs made hypothermic by extracorporeal blood cooling with and without the aid of sympatholytic and parasympatholytic drugs. Conditions during rewarming, slow or quick, and at various speeds of cooling are also discussed. ***Copy seen:*** DNLM.

54686. SEMIKHATOV, M. A. K stratigrafii aldanskogo iarusa nizhnego kembriia Kansko-Angarskoĭ vpadiny. (Akademiia nauk SSSR. Doklady, Aug, 21, 1957. god 25, t. 115, no. 6, p. 1181–84.) 5 refs. Text in Russian. ***Title tr.:*** On the stratigraphy of the Aldan formation of the Lower Cambrian of the Kansk-Angara depression.

Presents a new comparison of cross-sections of this formation based on 1956 investigation, when the entire area, lying between Kansk in the south and the Irkineyeva River in the northeast (approx. 56°20′–60° N. 95°40′–110° E.) was studied. Distribution, thickness, composition of facies of these deposits are reviewed and distinguished into three series. Studies of others are compared. Tectonic distortion by subsidence of the region is identified and its extent, direction and effects discussed. ***Copy seen:*** DLC.

SEMIKHATOV, M. A., *see also* Grigor'ev, V. N., *and* M. A. Semikhatov. K voprosu o vozraste . . . "tillitov" . . . *1958*. No. 51376.

54687. SEMIKOV, T. T. Nabliudeniia za l'dami s pomoshch'iu sodovykh radiolokatsionnykh stantsiĭ. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 116–18, illus., table.) Text in Russian. ***Title tr.:*** Observation of ice by means of ships' radars.

Compares performances of the radars "Neptun" and "So-13" for detecting and interpreting ice cover characteristics. Both types are dependable in the 1–3 mi. range for navigation in most types of ice; large objects (bergs) are visible at 8–12 mi. distance. Characteristics of screen images of ice of various concentration density are indicated, and the use of radar for navigation in (narrow) channels in the ice is explained.

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54688. SËMINA, G. I. The dependence of the amount of phytoplankton upon the vertical stability of the surface layers in the boreal region of the Pacific. (Pacific Science Congress. 9th, *Bangkok, Thailand*, 1957. Abstracts of papers, p. 180.)

Considers water stability as a factor influencing phytoplankton production.

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54689. SËMINA, G. I. Faktory vliiaiushchie na vertikal'noe raspredelenie fitoplanktona v more. (Vsesoiuznoe gidrobiologicheskoe obshchestvo. Trudy, 1957. t. 8, p. 119–29, illus., table, map.) 39 refs. Text in Russian. ***Title tr.:*** Factors affecting vertical distribution of phytoplankton in the sea.

Contains a general discussion of such factors, viz: light, turbidity of the sea

water, temperature, stability of water layers, etc. These factors are further analyzed as they influence plankton conditions and distribution in the western part of Bering Sea. Both vertical and horizontal distribution is considered throughout the seasons.

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54690. SËMINA, G. I. O novom vide iz roda *Denticula* Ktz. (Akademiîa nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1956. t. 11, p. 82–84, 2 illus.) 2 refs. Text in Russian. ***Title tr.:*** On a new species of the genus *Denticula* Ktz.

Denticula marina n. sp., a diatom, is described in Latin and Russian from the specimens collected by the research ship *Vitîaz'* in the western section of Bering Sea.

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54691. SËMINA, G. I. Svîaz' fitogeograficheskikh zon v pelagiali severozapadnoĭ chasti Tikhogo okeana s raspredeleniem vodnykh mass v ėtom raĭone. (Akademiîa nauk SSSR. Institut okeanologii. Trudy 1958. t. 27, p. 66–76, tables, maps.) 11 refs. Text in Russian. ***Title tr.:*** The connection between phytogeographical zones in the pelagial of the northwestern part of the Pacific Ocean and the distribution of water masses in that area.

Analysis of common phytoplankton forms of the area as to their geographic distribution and as denizens of specific water masses. Accordingly, only two phytogeographical zones are distinguished in the plankton of the northwest Pacific: a subarctic and a tropical zone. The area of polar fronts has no specific, endemic forms and its phytoplankton is composed of subarctic and tropical elements.

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SEMPLE, ROBERT E., *see* Baugh, C. W., *and others.* Blood volumes of Eskimos and white men . . . *1958.* No. 49581.

54692. SEMUSHKIN, TIKHON ZAKHAROVICH. Chukotka; Priklûcheniîa Aĭvama; povesti. Moskva, Izd-vo "Molodaîa gvardiîa," 1957. 391 p. plates (1 col.). Text in Russian. ***Title tr.:*** Chukotka; Adventures of Aĭvam; tales.

Two sketches of present-day life in Chukotka, the first in the form of a novel, *Chukotka* (p. 9–344) tells the story of the boarding school for Chukchi children started at Lavrentiya Bay in 1928: the teachers' arrival, the parents' distrust, the first steps in acculturation: changing the children's food, clothing, habits; the teaching, with the teachers' difficulties increased by ignorance of the native language. The hospital, movie, radio station, and the rising economic and cultural level generally, profoundly affect life in Chukotka. A major factor is the Northern Machine Hunting Station, lending motor boats and schooners to walrus hunters. Cf. No. 15728, first part of this novel.

The second sketch, Adventures of Aĭvam (p. 345–89) is the story of a Chukchi school boy who was driven out to sea on a piece of shore ice, and was supplied with necessities by aircraft for several months till rescued by the helicopter of a high latitude expedition.

Brief sketch of the economic and cultural development of Chukotka and the education of Chukchi teachers is given in the author's foreword (p. 3–8).

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SEMUSHKIN, TIKHON ZAKHAROVICH, *see also* Voskoboĭnikov, M. G. Chukotka . . . *1957.* No. 55891.

54693. SEN, J. On the megaspores described by Nathorst from the Upper Devonian of Bear Island. (Geologiska föreningen i Stockholm. Förhandlingar, Mar.–Apr. 1958. bd. 80, häfte 2, no. 493, p. 141–48, illus.) 14 refs.

Some of Nathorst's collection from upper Devonian coal seams and sandstone on Bjørnøya (cf. No. 12092, v. 3) was reexamined. Four megaspores are described. two of them as new, viz: *Triletes mamillarius* Bartlett(?), *T. superauritus* sp. nov., *T.* sp., a single specimen, and *T. sellingi* sp. nov. Correlations are made with recently described specimens from other localities. ***Copy seen:*** DGS.

54694. SENNING, ÅKE., *and* **P. I. OLSSON.** Changes in the vascular tonus during cerebral and regional hypothermia. (Acta chirurgica scandinavica, 1957. v. 112, fasc. 3–4, p. 209–219, illus.) 10 refs.

A study of vascular tonus of a femoral artery, the left coronary artery and the common carotid arteries during autoperfusion of the latter with cooled blood. Variation in tonus was determined by measuring perfusion pressure of the arteries with blood of a fixed minute volume. Vascular tonus was also measured in the areas of the left coronary

artery and a femoral artery during regional cooling. ***Copy seen:*** DNLM.

SENNING, ÅKE, *see also* Rubio, R., *and* A. Senning. Variaciones de la presión . . . *1957*. No. 54434.

54695. SEPULVEDA, GLORIA M., *and* **B. HAURWITZ.** The geographical distribution and seasonal variation of the semidiurnal pressure oscillation in high latitudes. New York Univ. College of Engineering. Dept. of Meteorology and Oceanography, May 1956. 41 p. 18 illus., 9 tables. (U.S. Air Force Cambridge Research Center Project no. 299. Contract no. AF 19 (604)–1006. Scientific rept. no. 2.) 30 refs. *Also pub. in:* Arkiv für Meteorol., Geophys. u. Bioklim. ser. A, 1957. v. 10, no. 1, p. 29–42.

From amplitudes and phases of semidiurnal pressure waves for 16 stations, including two in Alaska, three in Canada, four in Greenland, one each in Jan Mayen and Svalbard, analysis of data showed maximum amplitude at the equinoxes and minimum in summer at most stations. No definite seasonal variation was found for the phase. A simple expression is given for the geographical distribution of the annual mean of the standing demidiurnal pressure oscillation in polar latitudes.—From authors' abstract. ***Copy seen:*** DWB.

54696. SERAFIMOV, E. Port moguchei reki. (Ogonëk, July 1956. god 34, no. 29, Sibirskiĭ nomer, p. 9, illus., port., col. plate.) Text in Russian. ***Title tr.:*** Port of a mighty river.

Krasnoyarsk at the junction of the Yenisey River and the Siberian railroad, is briefly described and its significance for the Northern Sea Route is noted. River boats built in East Germany, among them the luxurious passenger vessel *Chkalov*, were transferred via Northern Sea Route to the Yenisey in 1955 (or 1954). ***Copy seen:*** DLC.

54697. SEREBRENY, SIDNEY M., *and others.* Study of jet stream conditions in the Northern Hemisphere during summer. San Francisco, Pan American World Airways, Inc., Meteorology Dept., Oct. 1957. 111 p., 17 x 14 in., 50 illus., text maps. Technical report no. 6, Bureau of Aeronautics, Naval Air Station, Norfolk, Va., Project AROWA, contract no. N600 (188)44188. *Other authors:* E. J. Wiegman, *and* R. G. Hadfield.

Atlas of jet stream data, with illustrative synoptic charts for the Northern Hemisphere north of 50° during June, July and Aug.; second of four reports, one for each season. In two parts: (1) census of jet stream occurrence north of lat. 50° by months (June–Aug.) and for the season; (2) climatological catalog and discussion of the jet stream, patterns associated with specific blocking conditions: viz. Greenland-Iceland block, England-North Sea, Scandinavian-Russian, Ural, Central Siberian, Manchurian-Okhotsk Sea, Kamchatkan, Alaskan, Sub-Aleutian, and Central Canadian blocks. Synoptic charts illustrate each type. Summer jet streams are stronger north of 50°. Appended are tables of jet stream incidence at the 500 mb. level by 5° latitude–10° longitude squares for June, July and Aug.

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54698. SERGEEV, A. V. Silosovanie kormov v usloviâkh vechnoĭ merzloty. (Sel'skoe khozâĭstvo Sibiri, 1958, no. 11, p. 50–51, table.) Text in Russian. ***Title tr.:*** Ensiling fodder in conditions of permafrost.

In the far North, silage is the only source of the succulent fodder needed on dairy farms during the winter. To check the feasibility of preparing silage in permafrost regions, experiments have been carried out since 1952 in Yakutia with corn, green oats, sunflower, cabbage and combinations of them with straw, wild grasses and weeds. Data on composition of the silage obtained are tabulated to show percentage of moisture, carotene, pH and acids. The data are regarded as satisfactory, with best results from corn, cabbage and green oats.

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54699. SERGEEV, B. F. Kakie produkty mozhno poluchat' iz torfa. (Torfânaâ promyshlennost', 1958. god 35, no. 5, p. 8.) Text in Russian. ***Title tr.:*** The products which can be obtained from peat.

Notes as products: fuel, fertilizer, litter, heat insulation, etc.; and by-products: ethyl alcohol, phenol, wax, organic acids, humic acid, furfurol tannic concentrates, paraffins, flotating reagent, acetone, etc.

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SERGEEV, E. M., *see* Polâkov, S. S., *and* E. M. Sergeev. Inzhenerno-geologicheskaâ kharakteristika . . . *1958*. No. 54054.

54700. SERGEEV, MIKHAIL ALEKSEEVICH. Kniga o Dal'stroe. (Dal'niĭ vostok, Sept.–Oct. 1958. god 26, no. 5, p. 188–90.) Ref. Text in Russian. ***Title tr.:*** The book about Dal'stroĭ.

Appraises a collection of articles: *Dal'stroĭ, k 25-letiĭu* (Main Administration of Construction in the Far North, 25th anniversary), published in Magadan, 1956 (239 p.), and devoted to the history, activities and achievements of the organization responsible for industrial development of northeast Asia, now Magadan Province: Authors and titles of the articles are cited with brief notes of their contents. The combination of popular sketches with highly technical papers on mining is criticized. Some important branches of Dal'stroĭ's activity are omitted, and its relations with other similar organizations (e.g., AKO, Kamchatka Stock Company), are erroneously reported, etc. The book has not been seen as yet.

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54701. SERGEEV, MIKHAIL ALEKSEEVICH. Malye narody sovetskogo Severa. Magadan, Magadanskoe knizhnoe izd-vo. 1957. 156 p. Approx. 30 refs. Text in Russian. ***Title tr.:*** Small peoples of the Soviet North.

Informative review of the material and spiritual culture of the aborigines of (in turn) north Siberia, the Far East and the extreme Northeast, arranged (p. 13–89) by topics, viz: the economy, i.e., land and sea hunting, fishing, reindeer herding, dog breeding; way of life; social organization; spiritual culture, including religious beliefs, shamanism and animism, folklore, legal concepts, medical lore and taboos, arts and crafts, etc. National development and socialist reconstruction are treated in two periods, 1918–1930, 1930–1955; and the establishment and organization of national-territorial districts involving collectivization, administration, schooling, etc., are outlined (p. 90–155). Information on ethnic distribution and vital statistics (1926 census), is given in preface (p. 3–12) together with the former and Soviet names of the aboriginal groups, inhabiting both the European and Asiatic North. ***Copy seen:*** DLC.

54702. SERGEEV, MIKHAIL ALEKSEEVICH. Pushnoĭ promysel i olenevodstvo. (Okhota i okhotnich'e khozi͡aĭstvo, Mar. 1958. god 4, no. 3, p. 16–18, illus.) Text in Russian. ***Title tr.:*** Fur-animal hunting and the reindeer husbandry.

Discusses problems of reindeer breeding and use based chiefly on author's experience in the collective farm "Pobeda" in the Tomponskiy District of Yakut A.S.S.R. Various systems of organizing teams of herdsmen are noted. Reindeer are used for transport on hunting trips (wolves, squirrel and other fur animals) in Yakutia and other tundra and taiga regions. ***Copy seen:*** DLC.

SERGEEV, MIKHAIL ALEKSEEVICH, *see also* Arkhincheev, I. S. Materialy . . . soti͡sial'nykh otnosheniĭ chukchi . . . *1957.* No. 49372.

54703. SERLAPOV, S. T. Osobennosti sinopticheskikh proti͡sessov v period raboty vysokoshirotnoĭ vozdushnoĭ ėkspediti͡sii 1956 g. (Problemy Arktiki, 1958. vyp. 3, p. 47–51, maps.) 4 refs. Text in Russian. ***Title tr.:*** Features of synoptic processes during the work of the High Latitude Aerial Expedition in 1956.

In April–May 1956, a large stationary anticyclone remained over the North Pole causing clear, calm weather in the whole arctic area, interrupted only in May 4–14 by intrusion of cyclones from the Canadian Archipelago and Laptevykh Sea. Analysis of meteorological data reveals that the prevalent type of atmospheric circulation was (according to G. I͡A. Vangengeĭm's classification) W (Western) in March, E (Eastern) in April, and E and C (Central) in May, while the high pressure area grew vertically from near surface in April to a high column penetrating the entire troposphere up to the tropopause or even to lower part of stratosphere. Conclusion is reached that the W→E→C sequence of circulation types is favorable for stability of weather in the Arctic Basin and adjacent areas. Frequent fog observed in the region south of drifting station North Pole-6 (set up in April in 76°10′ N. 178° W.) was attributed to evaporation of a polynya covering 100 km.^{2} north of Vrangel Island. Synoptic maps of arctic and northern areas show distribution of atmospheric pressure in April and May (p. 48–49) and of mean monthly air temperature (p. 50). ***Copy seen:*** DLC.

54704. SERNING, INGA. Lapska offerplatsfynd från järnålder och medeltid i de svenska lappmarkerna; med numismatisk bilaga utarb. i Kungl. Myntkabinettet under medverkan av Vera Jammer [et al.]. Stockholm, H. Geber, 1956. 222 p. 65

plates (1 col.), map. (Nordiska museet: Acta Lapponica, 11.) Text in Swedish. Summary in English (p. 161–71, 216–18). ***Title tr.:*** Lappish offering-place finds from the iron age and the Middle Ages in Swedish Lapland; with numismatic appendix prepared in the royal treasury under direction of Vera Jammer et al.

Reports on eleven offering places of the tenth- to twelfth centuries located from the Torneträsk region south below Umeälven. The excavated objects, metal ornaments, coins, arrowheads, bones, etc. are analyzed and individually cataloged, with illus., date, and geographical identification. The fabricated objects are from Scandinavia, Finland, Russia, northwest Europe, the eastern Baltic region, and from native Lappish sources. The commercial and political history, colonization, and trade routes of the region are reviewed. The importance of the fur trade when these offering places were used, and the improved economic status of the Lapps are indicated by the finds of jewelry and coins from the trading countries. Sacrificial practices and offerings changed with time and decreased as the Christian religion became adopted among the Lapps. ***Copy seen:*** DLC.

54705. SERNING, INGA. Några reflektioner kring lapska offerplatsfynd och lapsk förkristen religion. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1957. p. 15–33, illus., map.) Text in Swedish. About 25 refs. ***Title tr.:*** Some reflections on finds at Lapp sacrificial sites and on Lapp pre-Christian religion.

In the Lappish religion, animistic and polytheistic under the influence of neighboring peoples, sacrifice played a great part. Iron-age and mediaeval finds from some ten sites are described and their significance discussed: bone, horn, etc. from animals like reindeer and bear, arrow points, pendants of different shapes and material, some for personal adornment, others attached to magic drums, etc. Cross-shaped pendants are discussed; some may have reached the Lapps through Russian and Karelian fur traders, others perhaps connected with early christianization. The Swedish Lapps were converted during the 17th and 18th centuries. ***Copy seen:*** SPRI.

54706. SERNING, INGA. Några stenåldersfynd från Norrbotten. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1957. p. 38–42, illus.) Text in Swedish. 9 refs. ***Title tr.:*** Some stone age finds from Norrbotten.

Describes and discusses three finds, given to the Norrbotten museum in 1957: an axe, an arrow point and a dagger. ***Copy seen:*** SPRI.

54707. SEROVA, N. V. Issledovanie teplovogo rezhima pochvy v zimnee vremîa. (Meteorologiîa i gidrologiîa, Feb. 1958, no. 2, p. 24–27, diagrs., table.) 5 refs. Text in Russian. ***Title tr.:*** Study of thermal conditions of soil in winter.

"The effects of snow cover on heat exchange in the ground are discussed on the basis of measurements at Koltushi (Leningrad Province) in the winter of 1954–55. Temperatures were measured on the surface of bare and snow-covered ground, on the snow surface, and at depths of 20 cm. Monthly heat losses on bare surface varied from 0.302 kg. cal./sq. cm. in Jan. to 0.012 kg. cal./sq. cm. in March, and diminished greatly under a snow cover 20 cm. deep. Heat losses during the period Jan. 18–30 were 13.8 cal./sq. cm. on a snow surface, 185 cal./sq. cm. on a snow-free surface, and 105 cal./sq. cm. at a depth of 20 cm. in bare soil."—SIPRE. ***Copy seen:*** DLC.

54708. SERSON, PAUL H., 1924– , *and others*. A three-component airborne magnetometer. Ottawa, Queen's Printer, 1957. 97 p. illus., diagrs., tables. (Canada. Dept. of Mines and Technical Surveys, Dominion Observatory. Publications, v. 19, no. 2) 13 refs. *Other authors:* S. Z. Mack, *and* K. Whitham.

Detailed description of a magnetometer designed and built at the Dominion Observatory 1951–1955, and discussion of survey results, obtained from approx. 400 hrs. of flight in 1953–1955. Comparison is made with airborne magnetometers developed in the United States and Great Britain; reliability of this instrument is considered satisfactory, and its accuracy sufficient for production of large-scale magnetic charts. Main source of trouble in the equipment was the gyroscopes; most important source of error is in navigation; error may be reduced by use of aerial photography.

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54709. SERVIZI, JAMES A. Project-glacier; an improved method of recording glacial advance. (Photogrammetric engineering, June 1957. v. 23, no. 3, p. 550–52, illus.)

Reviews basic rules and requirements for terrestrial photogrammetric surveying of glacial movements: choice of base line and control points, fixation, distances and angles to be measured, direction of camera, etc. ***Copy seen:*** DLC.

54710. SETCHELL, WILLIAM ALBERT, 1864–1943. Algae novae et minus cognitae, I. (California. University. Publications in botany, May 29, 1912. v. 4, no. 14, p. 229–68, plates 25–31.) Text in English. ***Title tr.:*** New and little known algae, 1.

Describes eight new species, *Callymenia oblongifructa* n. comb. found in Alaska near Sitka by Gardner, and near Seldovia by C. V. Piper. ***Copy seen:*** DA.

54711. SETCHELL, WILLIAM ALBERT, 1864–1943, *and* **N. L. GARDNER.** The marine algae of the Pacific coast of North America, I, Myxophyceae; II, Chlorophyceae. (California. University. Publications in botany, Nov. 1919, v. 8, no. 1, p. 1–138, plates 1–8; (II) July 1920, v. 8, no. 2, p. 139–374, plates 9–33.) 145+250 refs.

Contains keys and a systematic enumeration of the genera and about 250 species, with descriptions, critical notes and data on habitat and distribution. At least 45 species are recorded from Bering Sea, Aleutian waters and Gulf of Alaska. An index to the species is added. ***Copy seen:*** DLC.

54712. SETCHELL, WILLIAM ALBERT, 1864–1943, *and* **N. L. GARDNER.** The marine algae of the Pacific coast of North America, part III, Melanophyceae. (California. University. Publications in botany, 1925. v. 8, no. 3, p. 383–898, plates 34–107.) 243 refs.

Contains keys and a systematic enumeration of these algae, with descriptions, critical notes and data on habitat and distribution. At least a hundred of the species are native to Bering Sea, Aleutian waters and the Gulf of Alaska. ***Copy seen:*** DLC.

54713. SETCHELL, WILLIAM ALBERT, 1864–1943. Notes on Algae, I. (Zoe, Feb.–Apr. 1901. v. 5, no. 6–8, p. 121–23.)

Includes a description of *Hedophyllum subsessile* (Aresch.) Setchell mss. The writer's specimens came from Amaknak Island in Unalaska Bay; the species is probably common throughout the Aleutians; it seems to be the *Hafgygia bongardiana* f. *subsessilis* of Areschoug. *Pleurophycus gardneri* Setchell et Saunders mss. is also recorded at Yakutat Bay. Apparently no more parts of this series were published.

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54714. SETCHELL, WILLIAM ALBERT, 1864–1943, *and* **N. L. GARDNER.** Phycological contributions, I. (California. University. Publications in botany. July 8, 1920. v. 7, no. 9, p. 279–324, plates 21–31.) 38 refs.

Describes 27 new species and new combinations of algae from the Pacific Coast, among them *Monostroma areolatum* n. sp., growing on *Zostera* in quiet waters near Sitka, Alaska. ***Copy seen:*** DA.

54715. SETCHELL, WILLIAM ALBERT, 1864–1943, *and* **N. L. GARDNER.** Phycological contributions, II to VI: *Myrionema Compsonema; Hecatonema; Pylaiella* and *Streblonema; Ectocarpus.* (California. University. Publications in botany, May 16, 1922. v. 7, no. 11, p. 333–426, plates 32–49.) 41 refs.

Contains descriptions of 68 new algal species from the Pacific Coast, among them: *Myrionema globosum* f. *affine* n.f., *Compsonema tenue* n. sp., *Hecatonema lawsonii* n. sp., *Streblonema vorax* n. sp., and *Ectocarpus flagelliferus* n. sp., all from Sitka waters. ***Copy seen:*** DA.

54716. SETCHELL, WILLIAM ALBERT, 1864–1943, *and* **N. L. GARDNER.** Phycological contributions, VII. (California. University. Publications in botany, 1924. v. 13, no. 1, p. 1–13.)

Contains descriptions of three new genera and about 50 species (26 new) of marine algae. Seven new species and one new variety are native to Bering Sea, Aleutian waters and Gulf of Alaska. ***Copy seen:*** DA.

54717. SETCHELL, WILLIAM ALBERT, 1864–1943, *and* **N. L. GARDNER.** A preliminary survey of *Gigartina*, with special reference to its Pacific North American species. (California. University. Publications in botany, 1933. v. 17, no. 10, p. 255–340, plates 45–65.)

Contains descriptions of 30 species of this genus of algae, two of them new; *G. unalascensis* (type locality Unalaska Island) and *G. sitchensis* (type locality Sitka, Alaska) are included.

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54718. SETIN, T. Pamîatnik Vitusu Beringu. (Ogonëk, Oct. 1957. god 35,

no. 44, p. 2, illus.) Text in Russian. ***Title tr.:*** Memorial to Vitus Bering.

Memorial erected in Horsens, Denmark, Bering's birthplace, consists of a map between two guns from his ship the *Sv. Petr*, presented by the Soviet government. Photo shows unveiling of the memorial. ***Copy seen:*** DLC.

54719. SEVERNYE ZORI; stikhi iakutskikh poėtov. Moskva, Molodaia gvardiia, 1957. 144 p. illus. Text in Russian. ***Title tr.:*** Northern dawns; poems of Yakut poets. Ed. by V. Kotov.

Anthology of lyric, descriptive and patriotic verses by 15 modern Yakut poets, given in Russian translation.

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54720. SEWELL, PHILIP. The flora of the coasts of Lapland and of the Yugor Straits, N.-W. Siberia, as observed during the voyage of *Labrador* in 1888; with summarized list of the species known from the Islands of Novaya Zemlya and Waigatz, and from the north coast of western Siberia. (Botanical Society of Edinburgh. Transactions, 1889. v. 17, p. 444–81, plate 8.)

Account of the voyage with Capt. Wiggins to Gol'chikha in the Yenisey estuary. Physical features are described in relation to the flora, collections made in Lapland and at Yugor Strait, and the local vegetation are briefly discussed. A summary list of species (about 450) known from Novaya Zemlya and Vaygach and the northwest Siberian coast includes also Lapland localities: Vardø, Vadsø, Kølle and Tromsø.

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SEYMOUR, R. JAMES, *see* Pool, J. L., *and others.* Mechanism . . . centrally induced cardiac irregularities . . . hypothermia. *1958.* No. 54076.

SEYMOUR, R. JAMES, *see* Purpura, D. P., *and others.* Hypothermic potentiation . . . cardiac irregularities. *1958.* No. 54170.

SHABLYGIN, A. I., *see* Gorodetskiĭ, P. I., *and others.* Razvitie sistem razrabotki . . . *1958.* No. 51295.

54721. SHACKLETTE, HANSFORD T. Biogeochemical sampling in Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1756.)

Contains abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958. Reports research in progress (summer 1957) on methods of biogeochemical prospecting by the U.S. Geological Survey in Alaska. Plants, in varying degrees, accumulate metallic elements in far greater concentration than does the substrate; for 838 specimens, metallic-element accumulation was correlated with that of substrate.

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54722. SHADRIN, P., *and* **G. SIVTSEV.** Ob uchebnom plane natsional'noĭ shkoly. (Narodnoe obrazovanie, Sept. 1958, no. 9, p. 14–16.) Text in Russian. ***Title tr.:*** About the curricular plan for nationalities' schools.

School programs and curricular load of Russian and non-Russian schools are compared by two faculty members of Yakut State University. The addition of one school year at the end of junior high (semiletka) or senior high (desiatiletka) is advocated to permit an adequate study of Russian and the native tongue in schools for minority peoples.

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54723. SHAFER, ROBERT. Note on Athapaskan and Sino-Tibetan. (International journal of American linguistics, Apr. 1957. v. 23, no. 2, p. 116–17.) Ref.

An addition to his comparative linguistic study (No. 31903).

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54724. SHAFFER, ROBERT LYNN, 1929– . *Volvariella* in North America. (Mycologia, July–Aug. 1957. v. 49, no. 4, p. 545–79, 15 illus.) 51 refs.

Contains a generic description and discussion, a key, and an annotated list of 23 species and varieties of these fungi, with synonyms, descriptions, data on habit and habitat, and lists of specimens examined. One species is described as new and eight new combinations are established. *V. speciosa,* recorded in Dawson, Yukon Territory, is included.

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54725. SHAFRANOVSKIĬ, I. I. Kvartsgory Neroĭki, Pripolĭarnyĭ Ural. Moskva, 1937. 39 p. illus., tables, diagrs. (Leningrad. Tsentral'naia nauchno-issledovatel'skaia laboratoriia kamneĭ-samotsvetov. Trudy.) 9 refs. Text in Russian. ***Title tr.:*** Quartz of the Neroyka mountain, subpolar Ural.

Presents a monographic description of colorless quartz mountain-crystal found in 1929 at approx. 64°30′ N. 59°35′ E. and studied by the author in 1934–35. Crystallometry of the large, twin, and

simple forms is described in detail, with tabular data and diagrams. Associated minerals are characterized. The trigonal form of the Neroyka quartz is presumed to be a modification caused by metamorphism of schist. Relationship with mountain crystal of the Alps, Caucasus and Sura-Iz is discussed. The twin crystals are similar to known Brazilian twins. Economic value of the Neroyka quartz is stressed. ***Copy seen:*** DLC.

SHAFRANOVSKIĬ, I. I., *see also* Popugaeva, L. A., *and* I. I. Shafranovskiĭ. Kristall almaza . . . *1958.* No. 54091.

SHAKHNOVICH, MIKHAIL IOSIFOVICH, *see* Popov, A. A. Perezhitki . . . vozzreniĭ dolganov . . . *1958.* No. 54079.

54726. SHAKHOV, A. A., *and* A. D. SEMENENKO. O pogloshchenii sveta rasteniiami v Zapolʹar'e. (Zhurnal obshcheĭ biologii. Nov.–Dec. 1958. t. 19, no. 6, p. 428–38, illus. tables.) 20 refs. Text in Russian. Summary in English. ***Title tr.:*** Light absorption by plants in the Arctic.

Experiments with F_1 and F_2 generations of oats grown at the Polar Alpine Garden (on Kola Peninsula, 67°39′ N. 33°39′ E.) indicate a more energetic utilization of the red, green and near infra-red rays, thus compensating for the lack of warmth in the light. Potatoes showed a more energetic absorption of the far-red (thermal) radiation in the morning and evening.

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54727. SHAKHOV, A. A. O razvitii rasteniĭ na kraĭnem Severe. (Zhurnal obshcheĭ biologii, Sept.–Oct. 1957. t. 18, no. 5, p. 338–49, tables.) 20 refs. Text in Russian. Summary in English. ***Title tr.:*** On plant development in the far North.

A discussion of experiments with Albanian wheat varieties brought to the Kola Peninsula. Conditions of previous reproduction were noted to affect significantly embryogenesis and thus the development of seed. Low night temperatures during embryogenesis often cause vernalization of plants, which may account for the precocity of cereals in the North, including the introduced strains. These changes took place during the first couple of years in the new area.

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SHAKHOV, A. A., *see also* U.S.S.R. Armiia. Upravlenie Voenno-vozdushnykh sil. Sbornik materialov po . . . ėkspluatat͡sii zimnikh aėrodromov. *1942.* No. 55591.

54728. SHAKHOVSKOĬ, ALEKSANDR, *Kniaz'.* Izvi͡estiia o Gizhiginskoĭ kri͡eposti. (Si͡evernyĭ arkhiv, 1822. pt. 4, p. 283–312.) Ref. Text in Russian. ***Title tr.:*** Notes on the Gizhiga fort.

Recounts the insurrections of the nomad and settled Koryaks living along the Gizhiginskaya Guba northwest of Kamchatka, their attacks upon Russian outposts in the 1740's, the Russians' establishment of several forts, among them Gizhiga (62° N. 161° E.), which flourished as center for the Okhotsk trade. Some data on armed forces, inhabitants, housing, trade turnover, etc. are included; living conditions, Chukchi-Koryak relationship, etc. are discussed.

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54729. SHAMONT'EV, V. A. Ustroĭstvo gidrologicheskikh lunok vo l'du s pomoshch'iu͡ vzryvov. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 3, p. 103–105, illus., diagr., table.) Text in Russian. ***Title tr.:*** Making hydrological holes in the ice by blasting.

Blasting saves labor and time when making ice holes for observations in the Arctic Basin. Various methods of blasting are in use, e.g., the High Latitude Expedition in 1956 used bore-hole charges of ammonite no. 6 with good results. Relation of the amount of explosive (Q, in kg.) to ice thickness (h, in m.) for blasting holes of 0.5 m. minimum diam., is expressed by the formula $Q=Kh^3$; empirical values of coefficient K are tabulated for ice thicknesses of 0.5 to 2.0 m. Details of preparing bore-holes, inserting charges, ignition, etc. are discussed.

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SHAMSHEV, FILIPP ARISTARKHOVICH, *see* Volosi͡uk, G. K., *and* F. A. Shamshev. Pervye itogi primeneniia otechestvennykh almazov . . .*1958.* No. 55865.

54730. SHAMURIN, V. F. O sutochnom ritme i ėkologii i͡svetleniia nekotorykh arkticheskikh rasteniĭ. (Botanicheskiĭ zhurnal, Aug. 1958. t. 43, no. 8, p. 1183–91, 7 diagrs., table.) 42 refs. Text in Russian. ***Title tr.:*** On the diurnal rhythm and the ecology of blossoming in some arctic plants.

Account of three summers' (1955–57) observations in the vicinity of Tiksi Bay,

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Yakutia. The course of blooming in insect-pollinated plants, in grasses and other wind-pollinated forms is discussed and graphically represented. Most important factors in blooming were found to be temperature and light with humidity having no limiting effect. Minimum temperatures for blooming activities are given; they differ according to species.

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SHAN, REN HWA, *see* Constance, L., *and* R. H. Shan. The genus *Osmorhiza . . . 1948.* No. 50319.

54731. SHANKIN, N. M. Navstrechu utrennei zare. (Grazhdanskaia aviatsiia, Nov. 1957. god 14, no. 11, p. 4–6, illus.) Text in Russian. ***Title tr.:*** Toward sunrise.

Detailed account of first flight of a Tu–104 airplane from Moscow via Sverdlovsk, Omsk, Irkutsk, Khabarovsk, and Nikolaevsk-na-Amure to Petropavlovsk and return: 18,000 km. in 22 hr. 45 min. ***Copy seen:*** DLC.

SHANKS, R. E., *see* Drew, J. V., *and others.* Rate . . . thaw in arctic soils. *1958.* No. 50627.

54732. SHANTSER, E. V. Sovremennoe sostoianie ucheniia o chetvertichnom oledenenii. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Trudy 1955. t. 12, p. 5–21.) Text in Russian. ***Title tr.:*** The present state of knowledge of Quaternary glaciation. Paper delivered at the Conference on the Quaternary period held in Moscow Jan. 13–16, 1953.

The opinions of I. G. Pidoplichko and P. S. Makeev, who challenge the validity of the glacial theory and who represent "aglacial" or "antiglacial" drift theories, are discussed; and arguments are presented against them. The metachronism theory backed by I. P. Gerasimov and K. K. Markov and the synchronism theory concerning glaciation are reviewed. V. I. Gromov's monoglacial theory based mainly on Quaternary mammals, is compared with the polyglacial theories supported by the writer, S. A. Tsakovlev, A. Penck, and others. Cosmic and astronomic theories and those of Wegener and Milankovich are considered unsuitable and contradictory to established facts. The following questions on glaciation are treated: Pre-Pleistocene glaciation, history of flora and fauna in connection with climate changes, origin and development of tundra. Appended are questions and answers rising from the discussions.

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54733. SHAPAEV, V. M. O gospodstvuiushchikh napravleniiakh vetra na vostochnom poberezh'e Taĭmyrskogo poluostrova. (Problemy Arktiki sbornik statei, 1958. vyp. 3, p. 41–46, tables, maps.) Text in Russian. ***Title tr.:*** Prevailing wind directions on the eastern coast of the Taymyr Peninsula.

Observations of meteorological stations on Andreya Island (76°49′ N. 111°10′ E.) show that southwest and southeast winds prevail in fall, winter and spring, while the west and east winds are the most frequent in summer. Detailed analysis of 583 cases of such typical winds observed 1942–48, reveals that the seasonal changes of direction are caused by changes in location and movement of cyclones and anticyclones.

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54734. SHAPAEV, V. M. O sutochnom khode povtoriaemosti napravlenii vetra na arkticheskikh ostrovakh. (Meteorologiia i gidrologiia, Dec. 1958, no. 12, p. 32–33.) 2 refs. Text in Russian. Translated into English by John Miller, American Meteorological Society, for the Geophysics Research Directorate, Cambridge, Mass. Copy at CaMAI. ***Title tr.:*** Diurnal variation in the frequency of wind directions on arctic islands.

Presents conclusions from computed means of diurnal fluctuations Nov.–Mar. and June–Aug., based on 1936–38 observations at 12 polar stations. Two wind-creating factors are examined: thermal differences sea/land, and air pressure fluctuations. Wind directions and (where detectible) times of maximum and minimum frequencies are given for each station. ***Copy seen:*** DLC.

54735. SHAPAEV, V. M. Sviaz' bory na vostochnom poberezh'e Novoĭ Zemli s formami atmosfernoĭ tsirkuliatsii. (Problemy Arktiki, sbornik statei, 1958. vyp 4, p. 39–44, diagrs., tables.) 3 refs. Text in Russian. ***Title tr.:*** Relationship of the bora on the east coast of Novaya Zemlya to the forms of atmospheric circulation.

Examines the frequency, force and duration of this cold katabatic wind on both east and west coasts of Novaya Zemlya, and the three forms of atmospheric circulation (western, eastern, and meridional) established by G. A. Van-

gengelʹm, based on observations at five meteorological stations on these islands: Matochkin Shar, Mys Vykhodnoy, Blagopoluchiya Bay, Mys Stolbovoy and Malyye Karmakuly for the period Nov. 1930–Mar. 1941. Maximum frequency, also the strongest and most persistent bora occur by the eastern circulation. ***Copy seen:*** DLC.

SHAPALIN, B. F., *see* Granik, G. I., *and* B. F. Shapalin. Vazhnaîa problema . . . *1958.* No. 51331.

54736. SHAPLEY, ALAN HORACE, 1919– . Geographic distribution of geophysical stations on the polar cap. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 2, *pub.* 1957, p. 108.)

Regularly observing stations north of 60° geomagnetic or geographic latitude are listed: ionospheric vertical soundings (20 stations), ionospheric absorption (5), auroral patrol, visual and photographic (8), geomagnetic variations (20). ***Copy seen:*** DLC.

SHAPOSHNIKOV, L. K., *see* Uspenskiĭ, S. M., *and* L. K. Shaposhnikov. Okhrana zhivotnogo mira . . . *1957.* No. 55680.

54737. SHAPOVALOV, A. I. Vliîanie temperatury tela na peredachu vozbuzhdeniîa v verkhnem shelʹnom ganglii i delʹstvie ganglioticheskikh preparatov. (Bûlleten' èksperimental'noĭ biologii i meditsiny, Aug. 1957. t. 44, god 22, no. 8, p. 71–74, illus.) 12 refs. Text in Russian. Summary in English. ***Title tr.:*** The influence of body temperature upon impulse transmission in the upper cervical ganglion and upon the action of ganglioplegics.

Cats made hypothermic to 25°–24° C. showed a decrease in lability of the upper cervical ganglion. Response to rare (optimal) rhythms of stimulation remained almost unchanged. Effect of ganglioplegics remained practically unchanged down to 33°–31° C., but was enhanced at lower temperatures. ***Copy seen:*** DNLM.

SHARAPOV, V., *see* Semenido, E., *and* V. Sharapov. Vsesezonnoe avtomobilʹnoe maslo. *1958.* No. 54676A.

SHAREVSKAÎA, B., *see* Popov, A. A. Perezhitki . . . vozzreniĭ dolganov . . . *1958.* No. 54079.

54738. SHARGAEV, M. Ondatra na Severe. (Selʹskoe khozîaĭstvo Sibiri, 1958, no. 9, p. 103–104, tables.) Text in Russian. ***Title tr.:*** Muskrat in the North.

Muskrats were released to acclimatize in the Berezovo District of Tyumen' Province in 1932, and they have established themselves in a large area of bogs and overgrown lakes and become a valuable component in the hunting industry of the District. But no attention has been given to their propagation and living conditions, and the catch has decreased sharply in last 4–5 years. Data are given on the Oct.–Dec. 1955 catch and measures of protection and preservation are discussed. ***Copy seen:*** DLC.

SHARMA, H., *see* Murgatroyd, D., *and others.* Reaction to hot and cold . . . stimuli . . . dogs . . . *1957.* No. 53458.

54739. SHARP, ROBERT PHILLIP, 1911– . The latest major advance of Malaspina Glacier, Alaska. (Geographical review, Jan. 1958. v. 48, no. 1, p. 16–26, 4 illus., 2 text maps.) 13 refs.

Field data, obtained summers 1949, 1951, 1953, in connection with other studies indicate that Malaspina reached the limit of its latest advance 200±50 yrs. ago. Effects of subsequent melting and retreat are shown by deposition of a mantle of ablation debris, by development of dense vegetation on a marginal zone underlain by 50–150 ft. of ice (map), and by uncovering of forest debris once overridden by the glacier. Discovery of these wood fragments in the glacial till may have bearing on Pleistocene chronology. Estimated date for the climax of most recent advance of Malaspina Glacier is consistent with other Alaskan glaciers' history. ***Copy seen:*** DGS.

54740. SHARP, ROBERT PHILLIP, 1911– . Malaspina Glacier, Alaska. (Geological Society of America. Bulletin, June 1958. v. 69, no. 6, p. 617–46, illus., plates, diagrs., graphs.) 64 refs.

Describes the piedmont ice sheet covering approx. 850 sq. mi. of the southern Alaska coastal foreland along the north shore of the Gulf of Alaska (59°52′ N. 140°30′ W.). The regime, structural features, and flow of the glacier are discussed in detail on the basis of the literature and surveys from 1951–54. "The system showed marked deficits in six out of nine years 1945–1954. The ice is 2,000 ft. thick and lies in a basin at least 825 ft. below sea level. An extensive system of radial crevasses, a

prevailing foliation (with a dip of 75°–80° near the glacier center), and two sets of tight joints are consistent with the form and stresses of the sheet. Surface folds seem to have been caused by slip folding or flowage, and the ice flows uphill across the coastal foreland by folding accordion-fashion. Movement at the bottom of a 1,000-ft. borehole was 5.75 ft./yr. less than at the top, while the differential in the upper 300 ft. was 1.5 ft./3 yr. with a similar velocity distribution. The shear-strain rate seems to vary linearly with depth. The motion appears to involve basal slip or boundary-layer flow and internal flow. Surfaceward movement is required near the margin to maintain elevation and profile, and Nye's compressive flow seems the most likely mechanism to produce such movement."—SIPRE. ***Copy seen:*** DGS.

54741. SHARP, ROBERT PHILLIP, 1911– . Structures within the Malaspina Glacier, Alaska. (Geological Society of America. Bulletin, Dec. 1957, v. 68, no. 12, pt. 2, p. 1845–46.)

Abstracts paper presented at the Society meeting in Los Angeles, Apr. 19–20, 1957. Describes structures, including extensive systems of radial crevasses and of folds, a prevailing foliation, and two sets of tight joints, formed within this southern Alaska glacier which spreads out while maintaining sufficient thickness and surface slope to flow uphill by folding accordion fashion.

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SHARP, ROBERT PHILLIP, 1911– . *see also* Court, A., *and others*. The classification of glaciers. *1957*. No. 50358.

54742. SHASHKOV, ZOSIMA ALEKSEEVICH. Golubye dorogi strany. (Ogonëk, Sept. 1957. god 35, no. 37, p. 2, map.) Text in Russian. ***Title tr.:*** The country's blue ways.

The Minister of River Fleet of the R.S.F.S.R. gives a brief account of the internal waterways which today carry four-and-a-half times more goods than before the Revolution. The importance of White Sea-Baltic Canal is noted; most of the new waterways are related to recent hydroelectric engineering operations and to big water reservoirs.

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54743. SHASHKOV, ZOSIMA ALEKSEEVICH. Perspektivy razvitiia rechnogo transporta RSFSR v 1959–1965 gg. (Rechnoĭ transport, July 1958. god 17, no. 7, p. 6–10.) Text in Russian. ***Title tr.:*** Outlook of river transportation development in the R.S.F.S.R. in 1959–1965.

Reviews progress in river transportation during the period 1940–1957 with statistical data and a brief outline of major developments concerning ships, barges and ports. Plans for future expansion are discussed in detail for European and Siberian regions, including the arctic zone (Yenisey, Ob-Irtysh, Lena, etc.). Plans include reconstruction of the river fleet, harbors and landing facilities, river navigation improvements, industrial development, repair of ships and barges, construction of residential facilities, and revision of the safety code.

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54744. SHASKOL'SKIĬ, I. P. Nakhodka ostatkov poseleniia russkikh promyshlennikov xviii veka na Shpitsbergene. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Mar.–Apr. 1958. t. 90, vyp. 2, p. 183–85.) 5 refs. Text in Russian. ***Title tr.:*** Find of relics of a Russian hunters' settlement of the 18th century on Spitsbergen.

Comments on a 1955 expedition headed by Hans Christiansson, q.v. Remains of a dwelling, bath-house, smithy, etc., of Russian origin were found at Russekeila Vestspitsbergen. ***Copy seen:*** DLC.

54745. SHASKOL'SKIĬ, I. P. Skandinavskaia ėkspeditsiia 1955 g. na Shpitsbergen; otkrytie ostatkov stanovishcha russkikh pomorov xviii v. (Sovetskaia ėtnografiia, 1958, no. 4, p. 95–98.) 5 refs. Text in Russian. ***Title tr.:*** The 1955 Scandinavian expedition to Spitsbergen; discovery of remains of an 18th c. Russian Pomor camp.

Reports on the preliminary result of Christiansson's (q.v.) joint Swedish, Norwegian, Danish and Finnish archeological-ethnographic expedition which investigated the southern coast of Isfjord, Vestspitsbergen. The excavations of a Russian Pomor settlement consisting of six log-buildings, including a 5 x 5 m. main dwelling (dates 1776 and 1787 carved in a ceiling beam), a bath house, smithy and store house, are described and the artifacts found noted: work tools, fishing and hunting gear, household utensils, clothing, etc. The possibility of Spitsbergen's discovery by Norwegian or Russian fishermen prior to its "official"

discovery by Barendsz is speculated upon. The island is well-suited to have been the habitat of the "arctic paleolithic" hunter, with its abundance of reindeer, marine fauna and flora. The retouched surface of some knife- and ax-like flints found a few km. east of Russekeila may be either man-made or attributed to frost-splitting action. A new Scandinavian expedition to Vestspitsbergen is planned for the summer of 1958. ***Copy seen:*** DLC.

SHATALOV, E., *see* Shcherbakov, D. I., *and* Shatalov, E. Issledovateli nedr. *1957*. No. 54755.

54746. SHATSKIĬ, S. B. K voprosu o raznovremennosti Ural'skogo i Sibirskogo oledeneniĭ. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Biulleten', 1955. no. 20, p. 94–98, illus.) 12 refs. Text in Russian. ***Title tr.:*** On the question of age difference of the Ural and Siberian glaciations.

Critique of N. A. Naginskiĭ's division of glaciation in the Urals and Siberia. Since 1946 Naginskiĭ has been the exponent of a theory that glaciation in West Siberia, with glacier centers in the Polar Ural and mountains of Taymyr Peninsula, developed at different times. This theory on glaciation and its division as set forth in various works is outlined and the presented evidence is disputed, with conclusion that Naginskiĭ's hypothesis is not substantiated by factual material and should be discarded by geological organizations. ***Copy seen:*** DLC.

SHATUNOVSKIĬ, A., *see* Babin, O., *and* A. Shatunovskiĭ. Poselok na l'dine. *1957*. No. 49464.

54747. SHAVROV, L. A. Nekotorye obshchie morfologo-anatomicheskie cherty izmenchivosti rasteniĭ pri pereselenii v políarno-al'piĭskiĭ botanicheskiĭ sad. (Akademiia nauk SSSR. Doklady, 1958. t. 122, no. 2, p. 308–311, illus.) 4 refs. Text in Russian. ***Title tr.:*** Some general morphologic-anatomical trends in variability of plants transferred to the polar-alpine botanical garden.

Report on changes in four species of alpine plants transferred from the Caucasus to the botanical garden in the southern Khibiny massif on Kola Peninsula at 67°39′ N. 33°39′ E. In the new location these plants developed gigantism, especially of the vegetative organs; this is produced not only by increase of the number of cells but also by increased cell-size. A slowing of the aging process was also noted in these plants.

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54748. SHAVROVA, N. N. Soderzhanie radiia i toriia v lavakh vulkanov Semíachinskoĭ gruppy. (Akademiia nauk SSSR. Vulkanologicheskaia stantsiia. Biulleten', 1958. no. 27, p. 51–54, tables.) 10 refs. Text in Russian. ***Title tr.:*** The radium and thorium content in lavas of the Semyachik group of volcanoes.

Presents and discusses results of radiochemical analysis of several samples of basic and acid igneous rocks of the Semyachik volcanoes (approx. 54°16′ N. 159°57′ E.). The radium, thorium and uranium content of these lavas is considered lower than the average in similar rocks elsewhere. ***Copy seen:*** DLC.

SHAW, CHARLES GARDNER, 1917– *see* Cooke, W. B., *and* C. G. Shaw. Notes on Alaskan fungi. *1952*. No. 50331.

SHAW, CHARLES GARDNER, 1917– , *see* Govindu, H. C., *and* C. G. Shaw. Cercosporae . . . *1957*. No. 51315.

SHAW, G. W., *see* Heyes, J. K., *and* G. W. Shaw. Chemical . . . deoxyribonucleic acid in root tips . . . cold treatment. *1958*. No. 51713.

54749. SHCHEDRIN, M. Ugol'naia promyshlennost' v shestoĭ piatiletke. (Planovoe khoziaĭstvo, Feb. 1957, no. 2, p. 3–17.) Text in Russian. ***Title tr.:*** The coal industry in the sixth five-year plan.

Discusses plans for increasing the output of coal in the U.S.S.R. from 391 million tons in 1955 to 593 million in 1960. Due to delays in pit construction, especially in new mines of the Khal'mer-Yu and Yun'-Yaga districts, production in the Pechora coal basin (p. 5 and 6) is expected to be but moderate.

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54750. SHCHEDRINA, Z. G. Foraminifery vod vostochnogo Murmana. (Akademiia nauk SSSR. Kol'skiĭ filial. Murmanskaia biologicheskaia stantsiia. Trudy, 1958. t. 4, p. 118–29, tables.) 21 refs. Text in Russian. ***Title tr.:*** Foraminifers of eastern Murman waters.

Contains information on earlier studies of these protozoans in the area; their distribution in the arctic seas and basin and in coastal zones; conditions in the area dealt with here: Dal'ne Zelenetskaya Bay, Yarnyshnaya Bay and the open sea;

species encountered and their distribution; frequency of certain forms in different areas; distribution in depth.

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54751. SHCHEDRINA, Z. G. Izuchenie zakonomernostei raspredeleniia sovremennykh foraminifer, Foraminifera. (Leningradskoe obshchestvo estestvoispytatelei. Otd. zool. Trudy, 1957. t. 73, vyp. 4, p. 99–105.) 27 refs. Text in Russian. Summary in English. ***Title tr.:*** Some regularities in the distribution of recent Foraminifera.

Four ecological groups of foraminifers are established for the arctic seas (Barents, Kara, Laptev, East Siberian, Chukchi), based on depth, temperature and salinity. Depth is of chief importance in the vertical distribution. Ocean currents have considerable influence on horizontal distribution, carrying some elements into alien regions.

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54752. SHCHEGLOV, S. Stolitsa Eniseiskogo Severa. (Sibirskie ogni, May–June 1957. god 36, no. 3, p. 148–57, illus.) Text in Russian. ***Title tr.:*** The capital of the Yenisey North.

Popular account of the copper-, nickel- and coal-mining town of Noril'sk. The geographical and geological exploration of the lower Yenisey and Taymyr regions in the 16th–20th centuries is outlined; industrial development of Noril'sk since World War I is reviewed with mention of mines and plants now in operation. Educational and medical facilities, trade and communication nets, water and electricity consumption are described and some selected statistics given. The town is virtually isolated during the winter months, and construction of the Transpolar railroad is planned. The high cultural level of Noril'sk is compared with the primitive conditions of Dudinka and other towns of Taymyr Peninsula.

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54753. SHCHEGLOVA, O. S. Issledovanie taĭmyrskogo alunogena. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ biulleten', 1958. vyp. 10, p. 20–24, tables, diagr.) 2 refs. Text in Russian. ***Title tr.:*** Investigation of Taymyr alunogen.

Presents description of alunogen found by the author in Silurian clayey schists in the southern part of Cape Chelyuskin on Taymyr Peninsula. Crystal form and physical, optical and thermal properties are outlined; chemical and X-ray structural analysis are given. Comparison is made between Taymyr alunogen and that of Chile, Czechoslovakia, and New Mexico; and its similarity with the Francisco de Vergera deposit in Chile is stressed. The Taymyrian alunogen represents the first find of this mineral in the Soviet Arctic. ***Copy seen:*** DGS.

SHCHEGLOVA, O. S., *see also* Miroshnikov, L. D., *and* O. S. Shcheglova. Mezozoĭskie otlozheniia . . . *1958.* No. 53331.

54754. SHCHEPTEV, N. F. O razvitii proizvodstva torfianykh briketov. (Torfianaia promyshlennost', 1958. god 35, no. 3, p. 23–26, tables.) Text in Russian. ***Title tr.:*** Development of peat briquette production.

Prospects for expanding the use of peat have encouraged the making of briquettes, utilizing loose materials (crumbs, cutting dust, etc.) and a binding compound. Various plants are described with technological details and production data. ***Copy seen:*** DLC.

SHCHERBACHEV, V. D., *see* Nevzorov, N. V., *and* V. D. Shcherbachev. Polnost'iu ispol'zovat' lesnye bogatstva . . . *1958.* No. 53552.

54755. SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– , *and* E. SHATALOV. Issledovateli nedr. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 5, illus.) Text in Russian. ***Title tr.:*** Explorers of the depths of the earth.

Popular outline of geological exploration and prospecting in the Kolyma, Indigirka and Anadyr' River basins and in Chukotka over the last 30 years: expeditions of S. V. Obruchev, IU. A. Bilibin, I. F. Molodykh and V. A. TSaregradskiĭ in 1926–30, discovery of gold fields in 1929 on the Utinaya River, tributary of the Kolyma, and of tin, tungsten, coal. Influence of S. S. Smirnov's idea of a circum-Pacific ore belt is noted, and that of L. A. Snitkov and others' cartographic work incorporated into the geological map of the U.S.S.R., 1:2,500,000. The mining industry which has developed in this area has several new centers, Val'kumey, Iul'tin, Krasnoarmeyskiy, and a new harbor at Pevek. The majestic landscape of the North is illustrated by air photograph of the Tas-Kkayakhtakh Mts. in the Cherskogo Range, and importance of

earlier exploration by I. D. Cherskiĭ noted. ***Copy seen:*** DLC.

54756. SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– . Neischislimye bogatstva tait v svoikh nedrakh zemli͡a, i my ovladeem imi. (Nauka i zhizn', Nov. 1957. god 24, no. 11, p. 51–52, illus.) Text in Russian. ***Title tr.:*** Countless treasures are hidden in the earth, and we shall get them.

Brief outline of possibilities in developing mineral and power resources: a method of producing aluminum from nepheline, worked out by Soviet engineers, diamond discoveries in the tundras of Yakutia, combatting permafrost, the utilization of Kamchatka hot springs, etc. ***Copy seen:*** DLC

54757. SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– , *and* D. L. MOZESON. Perspektivy razvitii͡a proizvoditel'nykh sil Kamchatki. (Priroda, May 1958. god 47, no. 5, p. 51–57, illus. map.) Text in Russian. ***Title tr.:*** Prospects of developing the productive power of Kamchatka.

Reviews exploration, resources and development in Kamchatka prior to and after the Revolution. Geology and minerals, oil, peat, building materials, fisheries, forests, agriculture and animal husbandry, reindeer breeding, hunting, etc. are discussed in turn. Developmental plans, communication and transport, shipping, etc., are outlined.

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54758. SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– . Pokorennye nedra. (Nauka i zhizn', Nov. 1957. god 24, no. 11, p. 23–26, illus., diagrs.) Text in Russian. ***Title tr.:*** Conquered earth depths.

Popular account of progress in developing mineral resources of the U.S.S.R. during the 40-year Soviet period. Ore discoveries in Kola Peninsula, Krasnoyarsk Province and Yakutia (coal and diamonds) are noted. ***Copy seen:*** DLC.

54759. SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– . Puti razvitii͡a geologii v SSSR. (Priroda, Nov. 1957. god 46, no. 11, p. 49–60, 10 illus.) Text in Russian. ***Title tr.:*** The lines of development in geology in the U.S.S.R.

Reviews the developments of Russian geology since the October Revolution of 1917. The most important achievements of Soviet geologists include: the compilation of the general geological map of the U.S.S.R. (scale 1:2,500,000) in 1956, and some specialized (tectonic, paleogeographic, metallogenic, etc.) and regional maps; the study of geosynclinal regions and platforms, exploration of various sea and ocean bottoms (Kuril-Kamchatka Trench), discoveries of coal, oil and useful mineral and metal deposits in various regions of Soviet Union, etc. References are included to geological study of the northern areas and the importance of geology for resource development is stressed.

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54760. SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– . V t͡sentre Arktiki. (*In:* Burkhanov, V. F. Cherez okean na dreĭfui͡ushchikh l'dakh, 1957. p. 138–58, illus.) Text in Russian. ***Title tr.:*** In the center of the Arctic.

Representative of the Academy of Sciences and scientific consultant of the High Latitudes Expedition 1954 gives an account of his eight-day, 16,500-km. flight over the Arctic Basin in April and May 1954, from Dikson Island via Novaya Zemlya and Franz Joseph Land to Cherevichnyĭ's party working at the North Pole, to drifting stations North Pole-3 and North Pole-4, and to M. N. Kaminskiĭ's party, with a trip over ice island T–3 and back. Flight conditions, the arctic landscape, life and work of the High Latitude Expedition (called by the author "Sever-6") and of drifting station personnel, are described. The discovery of ice islands by Soviet fliers is noted. ***Copy seen:*** DLC.

SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– , *see also* Akademii͡a nauk SSSR. V otdelenii geologo-geograficheskikh nauk. *1957.* No. 49160.

SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– , *see also* Akademii͡a nauk SSSR. V otdelenii geologo-geograficheskikh nauk. *1958.* No. 49161.

SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– , *see also* Akademii͡a nauk SSSR. Komissii͡a po problemam Severa. Problemy Severa. *1958.* No. 49181.

SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– , *see also* Avetisi͡an, G. A., *and others.* Nasha rodina . . . *1957.* No. 49441.

SHCHERBAKOV, F. A., *see* Nevesskiĭ, E. N., *and* F. A. Shcherbakov. Izuchenie protsessov kontsentratsii tazhelykh mineralov . . . *1958.* No. 53550.

SHCHERBAKOV, V. V., *see* Akademiia nauk SSSR. Dmitriĭ Ivanovich Shcherbakov . . . *1958.* No. 49153.

SHCHERBINO, M. N., *see* Konstantinov, K. G., *and* M. N. Shcherbino. Sutochnye vertikal'nye migratsii morskogo okuniа. *1958.* No. 52394.

SHEA, JAMES E., *see* Ayton, M. W., *and others.* Cold weather operation of Diesel . . . *1958.* No. 49454.

54761. SHEĬNMANN, IU. M. O polozhenii i vozraste shchelochnykh ul'traosnovnykh porod Sibirskoĭ platformy. (Razvedka i okhrana nedr, Jan. 1957. god 23, no. 1, p. 12–16, table.) 10 refs. Text in Russian. ***Title tr.:*** Position and age of alkaline ultrabasic rocks of the Siberian platform.

Early descriptions of ultrabasic rocks are reviewed particularly in the Chadobets elevation, the Meymechiy and Kotuy River basins and east of the Tunguska synclinal basin. Unlike trap of regular composition, the alkaline ultrabasic magma of the Siberian platform gives origin to olivinic rocks (dunites, perioditite) and other types, including kimberlites and mymechites (chemical analyses given). Siberian kimberlites differ slightly from African in alkalinity. Their origin, position, etc., are reviewed from the literature (cited). New data on the appearance of ultrabasic rocks in the Siberian platform confirm those of previous investigations particularly on the presence of two initial trap magmas.

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54762. SHEL'PUK, L. Tipy kormleniia pushnykh zverei na Severe. (Sel'skoe khoziaĭstvo Sibiri, 1958, no. 6, p. 50–53, tables.) Text in Russian. ***Title tr.:*** Types of feed for fur-bearing animals in the North.

Reports results of experimental feeding of silver fox at Indiga reindeer kolkhoz in Nentsy National District in 1954–55. Three types of diet were tried, based chiefly on meat and fish, including wastes of the reindeer industry and fisheries. Percentage of meat in the fox food fluctuated 23.5–44.5, and that of fish 27.8–63.6; a small amount of milk products, cereals, silage and fish oil were added. All types of diet, based on locally available and very cheap products, proved to be satisfactory; they are recommended for all northern areas of the U.S.S.R., where the economy is based on the reindeer industry and fisheries.

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54763. SHELUDIAKOVA, V. A. Kratkiĭ ocherk lugov doliny r. Leny v predelakh Tsentral'noĭ Iakutskoĭ ravniny. (Akademiia nauk SSSR. Iakutskiĭ filial, *Yakutsk.* Institut biologii. Trudy, 1957. vyp. 3, p. 139–56, illus.) 13 refs. Text in Russian. ***Title tr.:*** A short account of the Lena valley meadows of the central Yakut plain.

Description of water meadows of the area, their component plants, utilization and economic prospects. The Lena valley within the area is dealt with and its morphology, geology, water regime, flood lands and meadows outlined. Humidity, plant populations and productivity of the water meadows are discussed and the shrubs and trees occurring on them noted. Typical plant communities are presented in detail and the hay production appraised. Effects of grazing, possible melioration, principal hay plants, etc., are also discussed. A list of plants dealt with, is appended. ***Copy seen:*** DLC.

54764. SHELUDIAKOVA, V. A. Stepnaia rastitel'nost' Iakutskogo Zapoliar'ia. (Akademiia nauk SSSR. Iakutskiĭ filial, *Yakutsk.* Institut biologii. Trudy, 1957. vyp. 3, p. 68–82, tables.) 13 refs. Text in Russian. ***Title tr.:*** Steppe vegetation of the Yakut Arctic.

A description of the steppe vegetation especially at its largest extent in the Yana River valley and its tributaries. The composite nature of these steppes is outlined, the component plant associations described, and representative samples presented. Problems of soil temperature and moisture are also discussed. A list of plants (98) mentioned in the text, in Latin and Russian, is appended.

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54765. SHEMANO, IRVING, *and* **M. NICKERSON.** Effect of ambient temperature on thermal responses to drugs. (Canadian journal of biochemistry and physiology, Dec. 1958. v. 36, no. 12, p. 1243–49, illus. tables.) 21 refs.

Report on experiments with rats lightly restrained or paralyzed with tubocurarine. Results showed that ambient temperature is a major factor in determining thermal responses to the drugs tried.

Critical temperatures for them were determined. Complete curarization abolished the hypothermic effect of all of them except chlorpromazine. Hypo- and hyperthermia are produced by most of these drugs via the temperature regulating centers of the central nervous system.

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54766. SHENITZ, HELEN A. Our good father; the story of an Alaskan priest who became Metropolitan of Moscow. (Russian-Orthodox journal, Feb. 1957. v. 30, no. 10, p. 6–10, illus.)

A biography of Metropolitan Veniaminov and description of his missionary and educational work among the Aleuts of Alaska. His ethnographic books and translations into Aleut are noted (No. 18649, 18650). ***Copy seen:*** DLC.

54767. SHEPARD, BEATRICE. Summary of earlier studies of Alaska's food problems presented. (Alaska's health, June 1957. v. 14, p. 3–6, illus., table.)

Contains information on food and food habits of Alaska's Whites, Eskimos, Aleuts and Indians; variations within each group; white man's influence on native diet; measures to secure a balanced diet; utilization of wild plants, of local animal products, and of imported food; school lunch program; dietary deficiency diseases, etc.

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SHEPPARD, KEN C., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

54768. SHEPPE, WALTER A., *and* **J. R. ADAMS.** The pathogenic effect of *Trypanosoma duttoni* in hosts under stress conditions. (Journal of parasitology, Feb. 1957. v. 43, no. 1, p. 55–59, illus., table.) 4 refs.

Account of experiments with mice infected with this normally non-pathogenic form, and stressed by cold (38°–47° F.) and/or starvation. Starved mice subjected to low temperature died much earlier than those kept at room temperature. There was no difference in survival when kept in the cold on full rations.

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54769. SHERMAN, JEROME KALMAN, 1925– , *and* **T. P. LIN.** Effect of glycerol and low temperature on survival of unfertilized mouse eggs. (Nature, London, Mar. 15, 1958. v. 181, no. 4611, p. 785–86, table.) 8 refs.

Account of experiments with brown C57 eggs submitted to −10° C. in a Locke-glycerol medium and then transplanted into Bagg Albino recipients. Seventeen percent of recipients became pregnant with eggs exposed for 15 minutes to the subzero temperature; 5% after a two hours' exposure and none after six hours' cooling.

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54770. SHERMAN, JEROME KALMAN, 1925– . Freeze-drying in the study of ice formation. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 148.)

A discussion of the freeze-drying method as tool for evaluation of the effects of ice formation on survival of cells and for study of ice formation. Essential steps in this histological procedure, results in various cells, effects of glycerol, character of ice formation, etc., are explained. ***Copy seen:*** DLC.

54771. SHERMAN, JEROME KALMAN, 1925– . Ice as a mechanical factor in death of spermatozoa on freeze-thawing. (Society for Experimental Biology and Medicine. Proceedings, July 1957. v. 95, no. 3, p. 543–45, illus.) 11 refs.

Account of experiments with bull spermatozoa submitted to mechanical injury in a tissue disintegrator or to freezing-thawing. Correlation in survival between the two methods suggests that death from freeze-thawing is not caused by mechanical injury from ice.

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54772. SHERMAN, JEROME KALMAN, 1925– , *and* **T. P. LIN.** Survival of unfertilized mouse eggs during freezing and thawing. (Society for Experimental Biology and Medicine. Proceedings, Aug.–Sept. 1958. v. 98, no. 4, p. 902–5, illus., table.) 10 refs.

Unfertilized mouse eggs frozen for ½–3½ hrs. in glycerolated, modified Locke's solution were indistinguishable from controls, provided no intra-cellular ice was formed. The eggs apparently survived in a supercooled state. Their vitality was confirmed by progeny development after transplantation into foster mothers. ***Copy seen:*** DNLM.

54773. SHERRARD, ELIZABETH M. Bryophytes of Alaska, 2; additions to the mosses and hepatics of the Mt. McKinley region. (Bryologist, Dec. 1957. v. 60, no. 4, p. 310–26.) 56 refs.

Following a description of the area and the collection, over 150 forms of mosses and liverworts are listed. Locality and substrate, previous records, geographic distribution, etc., are noted. Forms new for the area or for Alaska are marked. Pt. I of this study: No. 42452.

Copy seen: DSI.

SHERRARD, ELIZABETH M., *see also* Ando, H., *and others.* The first record of *Gollania . . . 1957.* No. 49301.

54774. SHERSHOV, SERGEĬ FEDOROVICH. Belyĭ ugol'. Moskva, Gos. énerg. izd-vo, 1957. 94 p. illus., diagrs., maps. 13 refs. Text in Russian. ***Title tr.:*** White coal.

Reviews development of hydroelectric power in the U.S.S.R. Technical and economic aspects are discussed; water capacities and power potentials of major rivers are outlined, including Kolyma, Lena, Yenisey, Ob', Pechora, and Severnaya Dvina. ***Copy seen:*** DLC.

54775. SHERSTNEV, N. V. Rabota shakht Pechorskogo basseĭna v novykh usloviíakh. (Ugol', Sept. 1958. god 33, no. 9, p. 3–5.) Text in Russian. ***Title tr.:*** Work in the coal mines of the Pechora basin under new conditions.

Improvements in the Pechora and Vorkuta coal mining areas are outlined; they have increased coal production during the period 1942–57 about 17 times. Obsolete machinery has been replaced and mining operations generally have been mechanized; underground transportation capacity has been increased, better ventilation and metal reinforcement of tunnels have been installed; mining has been extended under river and lake beds. Development of new coal deposits with annual production of 3 million tons is planned in the Vorkuta area with new automatic and mechanized equipment. Residential buildings providing 300,000 sq. m. of living area have been constructed with utilities (heating, water supply, sewage systems) in process, also a powerful television broadcasting center, the first in the Arctic. Production in 12 new mines has increased by 25.1% and the miners' productivity is up 30.1%.

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54776. SHESHUKOVA-PORETSKAÍA, V. S. O iskopaemom rode *Rouxia* Brun et Heribaud; Bacillariophyta. (Akademiía nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1956. t. 11, p. 64–75, 17 illus.) 16 refs. Text in Russian. ***Title tr.:*** On fossil genus *Rouxia* Brun et Heribaud; Bacillariophyta.

Contains a discussion of this fossil diatomic genus, its genesis and distribution, and descriptions of four species. Among them is *R. peragallii* f. *californica* n. comb. occurring in Kamchatka Peninsula and in Tertiary formations of Swedish Lapland. ***Copy seen:*** DLC.

54777. SHESTAKOV, G. Khoroshaía podgotovka k reĭsu, zalog uspekha. (*In:* Na promyslakh v Barentsovom more, 1956. p. 125–30.) Text in Russian. ***Title tr.:*** A good preparation for the trip is a guarantee of success.

A boatsman stresses the importance of many-sided experience for sailors on fishing vessels: handling buoys, anchors and boats, ropes, sails and oars. Emergency measures and repairs; also the importance of order and cleanliness, proper clothing, food and discipline are discussed. ***Copy seen:*** DLC.

SHESTALOV, IVAN, *see* Smelíakov, IÍA. V. Molodye poéty . . . *1958.* No. 54969.

54778. SHESTERIKOV, N. P. Predvaritel'nyĭ analiz dreĭfa radiovekh v arkticheskikh moríakh. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 85–91, maps, table.) Ref. Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge, Mass., by the American Meteorological Society. ***Title tr.:*** Preliminary analysis of the drift of radio-beacons in arctic seas.

"The drifts of seven radio-beacons in the Kara, Laptev, and East Siberian Seas in 1955 and 1956 are analyzed, and the effects of various factors on changes in direction and speed are discussed. Data on the drifts are tabulated. Minimum current effects were observed in short-period drifts in the open sea, and sufficiently accurate calculations of drift speed and direction were made from wind data only. Increased drift speed was observed in the littoral zone where drift was along the shore. The drift in De Long Strait so far exceeded calculated velocity that a strong wind current is probably involved."—SIPRE.

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SHETELIG, HAAKON, 1877– , *see* Brøgger, A. W., *and* H. Shetelig. Vikingeskipene . . . *1950.* No. 49936.

SHEVALEEVSKIĬ, I. D., *see* Gerasimovskiĭ, V. I., *and* I. D. Shevaleevskiĭ.

O sootnoshenii t͡sirkoniĭa i gafniĭa . . . *1957*. No. 51154.

SHEVALEEVSKIĬ, I. D., *see* Gerasimovskiĭ, V. I., *and others*.

O t͡sirkonievo-gafnievom sootnoshenii . . . *1958*. No. 51155.

SHEVAREVA, T. P., *see* Tamant͡seva, L. S., *and* T. P. Shevareva.

K biologii shilokhvosti . . . *1957*. No. 55322.

54779. SHEVCHENKO, N. V. Sovershenstvovanie sistemy ėtazhnogo prinuditel'nogo obrusheniia na rudnikakh kombinata Apatit. (Gornyĭ zhurnal, May 1958, no. 5, p. 6–9, illus., tables.) Text in Russian. ***Title tr.:*** Perfecting a system of forcible block-layer breaking in mines of the Apatit Combine.

The system of small sectional breakage of the ore layers, used before 1954, is described with dimensional data and diagram, on the basis of analysis of production results. A new system has the underlayer tunnels of greater height, the explosive charges arranged throughout thickness of the deposit layer. Simultaneous explosion of all charges break larger masses of ore. Comparative results are tabulated. ***Copy seen:*** DLC.

54780. SHEVELEV, M. I. Polia͡rnaia aviat͡siia. (Grazhdanskaia aviat͡siia, Jan. 1958. god 15, no. 1, p. 19–20, illus.) Text in Russian. ***Title tr.:*** Polar aviation.

Reviews Soviet arctic aviation especially the Northern Sea Route ice reconnaissance and (from 1950) flights to the drifting stations. During the navigation season of 1957, a severe ice year, the reconnaissance was carried out continuously to guide convoys through the Sea Route. With the aid of aircraft and the atomic ice-breaker *Lenin*, the Route will be navigable by cargo ships of 10,000–13,000 tons. A new device is under construction which will televise ice conditions to the vessels via aircraft. The Chukotka-Moskva run will be reduced to a day or less, by large turbo-planes of type Il–18 and AN–10, reducing freight costs by one half. ***Copy seen:*** DLC.

54781. SHEVI͡AKOV, LEV DMITRIEVICH, 1889– , *and* G. I. MAN'KOVSKIĬ. Problemy bor'by s vodoĭ pri stroitel'stve i ėkspluatat͡sii Severoural'skikh boksitovykh rudnikov. (Gornyĭ zhurnal, May 1958, no. 5, p. 19–24.) Text in Russian. ***Title tr.:*** Problems in the struggle against water in the construction and development of the Severoural'sk bauxite mines.

Geological and hydrological characteristics of the large bauxite deposits "Krasnaia shapochka" (Red cap), opened in 1931 in the Vagran, Kal'ya and Saraynaya river basins (approx. 60° N. 60° E.) are described. Attention is also given to effects of accumulation of karst cavities and ponds, reaching depths of over 400 m. Various measures to reduce or eliminate water infiltration into the mine shafts are discussed, since such leaks appear under a hydrostatic pressure from 3–12 atm., particularly during spring and autumn. The gradual opening of underground mining with a system of inclined and vertical shafts is outlined, technical and economic valuations are given. The major difficulties in digging of deep shafts were encountered in construction of the drainage systems and in pumping from low levels. ***Copy seen:*** DLC.

54782. SHEWELL, G. E., *and* F. J. H. FREDEEN. Two new black flies from Saskatchewan; Diptera: Simuliidae. (Canadian entomologist, Dec. 1958. v. 90, no. 12, p. 733–38, 22 illus.) 5 refs.

Includes descriptions of *Cnephia saskatchewana* n. sp. based partly on material from Churchill. ***Copy seen:*** DSI.

54783. SHILIN, L. L., *and* L. P. T͡SAREVA. O rasprostranenii berilliia v porodakh i mineralakh pegmatitovykh zhil Lovozerskikh i Khibinskikh tundr. (Geokhimiia, 1957, no. 4, p. 325–33, 6 tables.) 25 refs. Text in Russian. Summary in English. ***Title tr.:*** On the abundance of beryllium in rocks and minerals of pegmatite veins in the Lovozero and Khibiny Tundras.

Presents in tables the beryllium content data derived from 301 samples tested according to the morin method used by É. B. Sandell. The average for the Lovozero massif was established as 0.0012% and for Khibiny 0.006%. Four groups of beryllium mineralization are distinguished. The location and beryllium content of 44 minerals are given (table 6) together with analysts' names. ***Copy seen:*** DLC.

54784. SHILKINA, I. A. Iskopaemye drevesiny Arktiki, I; *Araucariopitys haraulachica* sp. n. iz nizhneĭurskikh otlozheniĭ Kharaulakhskikh gor, Verkhoianskiĭ khrebet. (Botanicheskiĭ zhur-

nal, Sept. 1958. t. 43, no. 9, p. 1316–19, 2 illus., plate.) 7 refs. Text in Russian. ***Title tr.:*** Fossil woods of the Arctic, I; *Araucariopitys haraulachica* sp. n. from the Lower Jurassic deposits of the Kharaulakh Mts., Verkhoyansk Range.

Contains an anatomical description of the wood and diagnostic characters of *Araucariopitys haraulachica* n. sp. It was found in Lower Jurassic deposits in these mountains 70°30′ N. 129° E., 12–15 km. from the Lena River. A key to the species of *Araucariopitys* shows three native to arctic regions.

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54785. SHILOV, N. V severnoĭ dalekoĭ storone. (Smena, Apr. 1957. god 34, no. 8, p. 2–3, illus.) Text in Russian. ***Title tr.:*** In the far northern country.

Sketch of a paper plant under construction at Koryazhma on the Pechora railroad near Kotlas (61°15′ N. 46°35′ E.) in Arkhangel'sk Province.

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54786. SHILOVA, A. I. K sistematike roda *Tendipes* MG., Diptera, Tendipedidae. (Ėntomologicheskoe obozrenie, 1958. v. 37, no. 2, p. 434–51, 44 illus.) 35 refs. Text in Russian. Summary in German. ***Title tr.:*** On systematics of the genus *Tendipes* MG., Diptera, Tendipedidae.

Contains keys to the larvae and nymphs and descriptions of imagoes, larvae and nymphs of seven species from various regions, with distributional data and systematic remarks. *Tendipes dorsalis* is recorded in Kamchatka Peninsula.

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SHIMANOVSKIĬ, S. V., *see* Martynov, G. A., *and* S. V. Shimanovskiĭ. Termoparnaĭa ustanovka dlĭa izucheniĭa temperaturnogo . . . *1957.* No. 53159.

SHIMANOVSKIĬ, S. V., *see* Tŭtŭnov, I. A., *and others.* K voprosu . . . khimicheskogo izmeneniĭa pochv. *1957.* No. 55456.

54787. SHIMIZU, HIROMU. Determination of the resistance to air flow of frost snow layer, 3; air-flow resistance of frost mass; idealized models of ice particles. (Teion kagaku, 1956. ser A, v. 15, p. 73–79, illus., tables.) 2 refs. Text in Japanese. Summary in English.

An attempt at deducing equivalent model particles having the same specific surface as frost particles grown on cooling pipes in the laboratory, in order to study the correlation between the resistance to air flow of a frost-particle aggregate and crystal shape and size. The specific surface of the frost sample was computed from measured values of resistance and porosity. Prolate and oblate ellipsoids of revolution and two types of spheres, each having approximately the same volume as the original, proved a failure as their specific surface came out too small. To obtain the coincidence, ellipsoids or spheres much smaller in volume and much greater in number than the original particles had to be assumed.

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SHIMIZU, HIROMU, *see also* Ishida, T., *and* H. Shimizu. Determination . . . resistance to air flow . . . snow, 2 . . . *1956.* No. 51970.

SHINN, D. A., *see* Johnson, J. B., *and* D. A. Shinn. Application of metals in aircraft . . . *1952.* No. 52097.

54788. *SHIPBUILDER AND MARINE ENGINE BUILDER.* The diesel-electric propulsion equipment in the royal research ship *John Biscoe.* (Shipbuilder and marine engine builder, Feb. 1957. v. 64, no. 586, p. 115–18, illus., diagr.)

This vessel is specially designed for supply missions to permanent British research bases in the Antarctic. It is powered by two eight-cylinder 1,040 b.h.p. diesel engines, each directly coupled to a D.C. generator. The 1,350 h.p., double-armature, reversible propulsion motor may be driven by one or both generators; propeller speed is regulated from rest to half-speed by increasing the field-strength of the generators, further speed increase is obtained by increasing the engine speed. The air-cooling system and auxiliary power plant are briefly described.

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54789. *SHIPBUILDING AND SHIPPING RECORD.* Canada's arctic supply fleet. (Shipbuilding and shipping record, Aug. 21, 1958. v. 92, no. 8, p. 259.)

Notes the annual resupply of northern outposts, in 1958 by six ice-breakers, 21 cargo ships and tankers, and 120 small craft. Altogether 75,000 tons of supplies are being carried, nearly twice that in 1957. ***Copy seen:*** DLC.

54790. *SHIPBUILDING AND SHIPPING RECORD.* Cargo motorship *Elgaren* for Swedish owners. (Shipbuilding and shipping record, Apr. 18,

1957. v. 89, no. 16, p. 502–503, illus., diagrs.)

Contains brief description, with deck plans and profile, of this 7,750 t.d.w. vessel strengthened for navigation in ice.

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54791. ***SHIPBUILDING AND SHIPPING RECORD.*** Cargo motorship for polar service. (Shipbuilding and shipping record, Oct. 10, 1957. v. 90, no. 15, p. 466–67, illus., diagr.)

Describes briefly the ice-strengthened 3,200 t.d.w. ore carrier *Freda Dan*, built for the J. Lauritzen Lines, Copenhagen, by Werft Nobiskrug, Rendsburg, in 1957.

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54792. ***SHIPBUILDING AND SHIPPING RECORD.*** *Nautilus* navigation equipment. (Shipbuilding and shipping record, Aug. 21, 1958. v. 92, no. 8, p. 236.)

Three separate systems were employed on the transpolar trip: The S.I.N.S. (ship's inertia navigation system), Sperry gyro-compass equipment comprising two types of naval gyro-compass, and an aircraft-type of directional gyro from the Sperry C.11 gyrosyn-compass. The position established at the Pole by all three systems corresponded exactly. The *Nautilus* is also fitted with a Sperry automatic course- and depth-keeping control system and a Sperry celestial altitude recorder which is used to monitor the other systems. ***Copy seen:*** DLC.

54793. ***SHIPBUILDING AND SHIPPING RECORD.*** A nuclear-powered icebreaker for the U.S.A. (Shipbuilding and shipping record, June 19, 1958. v. 91, no. 25, p. 818.)

Construction of a nuclear-powered icebreaking vessel for operation by the U.S. Coast Guard is proposed by the House of Representatives' Committee on Merchant Marine and Fisheries in bill H.R. 9196, June 5, 1958. A cargo-carrier and research vessel, the ice-breaker is estimated to cost 40–60 million dollars.

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54794. ***SHIPBUILDING AND SHIPPING RECORD.*** Polar ships. (Shipbuilding and shipping record, Dec. 26, 1957. v. 90, no. 26, p. 832–36, illus.)

Surveys ice-breakers and supply ships engaged in antarctic activities during the International Geophysical Year, 1957–58. Previous notable achievements of the British research vessels *Endeavour* (formerly *John Biscoe*) and the new *John Biscoe*, are reviewed. ***Copy seen:*** DLC.

54795. ***SHIPBUILDING AND SHIPPING RECORD.*** Submarine navigation across the pole. (Shipbuilding and shipping record, Aug. 21, 1958. v. 92, no. 8, p. 234–35.)

Contains a brief description and evaluation of the main navigational aids for polar submarine navigation, the most important of which is inertial guidance, a dead reckoning device recently developed for military purposes. The system, fully automatic and self-contained, derives the distance traveled from double integration of acceleration instead of from integration of speed through water. Its dependence on the development of highly accurate components, gyroscopes, integrators and accelerometers, is stressed.

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54796. SHIPILOV, F. Shirota 75°20′, dolgota 173°35′. (Smena, Apr. 1957. god 34, no. 8, p. 15–16, illus.) Text in Russian. ***Title tr.:*** Latitude 75°20′, longitude 173°35′.

Photographs and sketches by its meteorologist, of life and work at drifting station North Pole-6, set up on ice island, Apr. 19, 1956.

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SHIPP, H. L., *see* Drummond, J. C., *and others.* The examination . . . tinned foods . . . *1938.* No. 50637.

54797. ***SHIPPING REGISTER AND SHIPBUILDER.*** Canada's new icebreaker. (Shipping register and shipbuilder, May 1957. v. 40, no. 5, p. 10, 34, illus.)

Brief performance and construction details are given of the Dept. of Transport's new steam-driven ice-breaker *Montcalm.* The twin-screw vessel went into service Mar. 13, 1957 operating out of the Port of Quebec. The ice-breaker is of all-welded steel construction and is equipped for the additional duties of lighthouse supply and buoy tender.

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54798. ***SHIPPING REGISTER AND SHIPBUILDER.*** Fine icebreakers built in Finland. (Shipping register and shipbuilder, May 1957. v. 40, no. 5, p. 6–7, illus.)

Contains a description of the machinery, equipment, and hull design of the *Kapitan* class, ice-breaker built by Wartsila-Koncernen A/B of Helsinki at its

Sandvikens Skeppsdocka. This diesel-electric ice-breaker is approx. 83 m. long, displaces 5,360 tons and has a draft of 7 m. and 10,500 hp. Twin screws are located at the bow and stern for increased maneuverability. The ship is equipped with an open upper bridge and a completely closed lower bridge fitted with electrically heated windows. Accommodations are provided for a crew of 117. A small plan and photo of the *Kapitan Melekhov* are included.

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54799. ***SHIPPING REGISTER AND SHIPBUILDER.*** Latest addition to D.O.T. fleet. (Shipping register and shipbuilder, Apr. 1957. v. 40, no. 4, p. 21, 34, illus.)

A description (with illus.) is given of the Canadian ice-breaker *Montcalm* built by the Davie Shipbuilding Co., Lauzon, Que., and launched Oct. 23, 1956. The vessel is of all-welded steel construction, has twin propellers, and is powered by two marine steam reciprocating engines. The single-deck type vessel complies with Lloyd's 100 A.I. Class specifications. Overall length exceeds 201 ft., beam 48 ft., and draft 16 ft. A photo of the ice-breaker is included.

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54800. ***SHIPPING REGISTER AND SHIPBUILDER.*** Mid-Canada operations. (Shipping register and shipbuilder, Apr. 1957. v. 40, no. 4, p. 7, illus.)

More than 40 Canadian Dept. of Transport landing-craft were used during the 1956 season to unload more than 45,000 tons from vessels to Mid-Canada assembly points in the Hudson Bay area. The shallow approaches required the larger vessels to anchor one–twelve mi. from shore. Some of the unloading operations are illus. ***Copy seen:*** DLC.

54801. ***SHIPPING REGISTER AND SHIPBUILDER.*** Operations on the Pacific coast: icebreaker for West Coast. (Shipping register and shipbuilder, May 1957. v. 40, no. 5, p. 17.)

Announces construction of a new Canadian icebreaker to be assigned to Western Canadian Arctic duty during the navigating season, the first Government ice-breaker so assigned. The new vessel will be powered with twin-electric propulsion motors delivering a total of 4,250 shp. A helicopter deck is carried near the stern. The vessel will be employed for lighthouse supply and buoy tender outside the navigating season.

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54802. ***SHIPPING REGISTER AND SHIPBUILDER.*** Report on Hudson Bay route. (Shipping register and shipbuilder, May 1957. v. 40, no. 5, p. 8, 30, illus.)

Contains a brief report on 1956 shipments through Churchill and the outlook for 1957. Record traffic was reported in 1956 and an even larger volume of wheat is expected for 1957. Mineral development (International Nickel Co.) at Moak and Mystery Lakes and power development at the Grand Rapids on the Nelson River will affect the entire northern Manitoba economy, as well as the Hudson Bay Railway. Previously the Railway and port were used almost entirely for grain; increased shipments may eliminate the annual operating deficits. A photo of the port shows three ocean freighters loading at the Government grain elevator.

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54803. ***SHIPPING REGISTER AND SHIPBUILDER.*** Super ice-breaker from Davie yards. (Shipping register and shipbuilder, May, 1957. v. 40, no. 5, p. 22.)

A brief description is given of Canada's largest ice-breaker to be built by Davie Shipbuilding Co. at Lauzon, Que. The ocean-going ice-breaker is designed to have a cruising radius of 20,000 mi. at a speed of 10 knots, and to cruise a full arctic season without resupply or refueling. The vessel will be powered by diesel-electric engines, equipped with three propellers aft, and is expected to develop 18,000 brake hp. It is to be equipped with a helicopter hangar and flight deck. Specifications include overall length of 315 ft. and draft when loaded of 28 ft.

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54804. ***SHIPPING WORLD.*** Experimental ice channel. (Shipping world, Apr. 9, 1958. v. 138, no. 3380, p. 371, illus.)

Notes use of the Atlas Copco system to keep a 7,000-yd. channel in Lake Mälaren, Sweden, ice-free during the winter. A 100 h.p. compressor forces air through a 4-in. perforated polythene pipe laid on the bottom of the lake; the warmer bottom water starts circulating, rises to the surface, and melts the ice. Reviewed

(in Russian) by Z. Martynova in *Morskoĭ flot*, Sept. 1958, p. 24.

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54805. *SHIPPING WORLD.* Three recent icebreakers; vessels built for Scandinavian governments. (Shipping world, June 30, 1954. v. 80, no. 3183, p. 655–57, illus.)

Notes role of ice-breakers in merchant marine of countries on the Baltic Sea; their construction activity, etc. Three locally-built icebreakers are described and illus.: the Swedish *Thule* (profile cross-section), the Finnish *Voima*, and the Danish *Elbjørn*. ***Copy seen:*** DLC.

54806. SHIPTON, ERIC EARLE. The true book about the North Pole. London, Frederick Muller, 1957. 144 p. illus., maps.

Contains brief accounts of some of the major expeditions to the Arctic, from Pytheas's journey of 300 A.D. through Peary's discovery of the North Pole in 1909. ***Copy seen:*** DLC.

SHIRÎAEV, I. E., *see* Kalinko, M. K., *and* I. E. Shirîaev. Neftegazonosnost' severa Sibiri. *1958*. No. 52134.

54807. SHISHKANOV, G. F., *and* V. D. MATVEEV. K voprosu o zalozhenii fundamentov na promorozhenoe osnovanie. (Khabarovskiĭ institut inzhenerov zheleznodorozhnogo transporta. Trudy, 1956. vyp. 9, p. 77–86, illus., tables, diagrs.) 6 refs. Text in Russian. ***Title tr.:*** Laying foundations on frozen ground.

Describes experiments by the Khabarovsk Institute of Railroad Transport with foundations on ground frozen to 1.7 m. Physical processes in frozen ground are discussed, also effects of soil moisture and granulometric composition, speed of ground freezing, and depth of ground water on moisture migration, ice formation, and changes in the mechanical properties of the frozen ground. The investigations showed that intense moisture migration and ice formation are confined to the upper 0.5-m. layer; foundations can be laid on frozen sand and gravel, and also on sandy loam and silty clay soils when their moisture is below the plastic limit.—From SIPRE. ***Copy seen:*** DLC.

SHISHKANOV, G. F., *see also* Danilovskaîa, L. I., *and others*. Opyt stroitel'stva sbornykh domov . . . *1956*. No. 50438.

54808. SHISHKIN, ALEKSANDR ALEKSANDROVICH. Zadachi v oblasti povysheniîa kachestva zimnego kamennogo stroitel'stva. (Stroitel'naîa promyshlennost', Sept. 1957. god 35, no. 9, p. 2–4, table.) Text in Russian. ***Title tr.:*** Problems in the area of quality improvement in winter brick construction.

From analysis of faulty construction, methods are recommended, and described for assembly, mortar composition, duration and temperature conditions for wall setting, etc. Special consideration is given to window and door arches, their reinforcement, particularly for northern regions, where a seven-month winter limits construction work to four or five months. Preheating of buildings and foundations on frozen ground is described; mechanical stresses of foundation and walls for temperatures of −2° to −25° C. are tabulated. The low stability of walls during thaw is analyzed in respect to their height, length and reenforcement anchors; and the sagging which takes place is related to the wall thickness, mortar composition, winter conditions, etc. Flexible or floating tie-rods, permitting free sagging, must be used to reinforce brick walls of a steel frame construction. In assembling pre-fabricated blocks, concrete slopes, boxes and other wall parts, sufficient sagging clearances must be provided. High quality can be obtained in assembly seams under severe winter conditions, with preheated mortar and very rapid work.

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54809. SHISHKIN, I. V. Sadovodstvo v Karel'skoĭ ASSR. (Sad i ogorod, Dec. 1958. god 96, no. 12, p. 36–41, illus., table.) Text in Russian. ***Title tr.:*** Horticulture in the Karelian A.S.S.R.

Includes climatic data for northern Karelia (0.5° C. mean annual temperature 70 days with temperature over 10° C., summer precipitation up to 300 mm.) and a note on the horticulturist A. F. Dobrynina who successfully cultivates raspberry, black currant and over a hundred other small fruits and ornamental plants on her lot in Yushkozero (approx. 64°45′ N. 32°10′ E.).

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54810. SHISHKIN, N. I. Solîanaîa problema Evropeĭskogo Severa. (Akademiîa nauk SSSR. Izvestiîa, ser. geograficheskaîa, Jan.–Feb. 1958, no. 1, p. 102–107, map) 7 refs. Text in Russian.

Title tr.: The salt problem of the European North.

Gives data on salt consumption at present; estimates needs for the immediate future. Salt exploration possibilities are discussed for the region which includes Kola Peninsula and Arkhangel'sk province. Its present salt supply from Baskunchak and Artemovsk is expensive and inconvenient. Geologic explorations at these local sites are indicated: Tyb'yu on the upper Pechora, Koryazhma near Kotlas, and Seregovo on the right bank of Vym' River. The Seregovo (approx. 62°25′ N. 50°40′ E.) deposits are abundant, but have not been considered hitherto for development because of their high chloride and sodium content. A special lixivation method is said to have been discovered which may solve this problem. Map shows these three salt-mining sites and the distribution of fisheries and other salt-using industries.

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SHITAREV, I. S., *see* Tavrovskiĭ, V. A., *and* I. S. Shitarev. Materialy po pitaniiu sobolia . . . *1957*. No. 55339.

54811. SHKOL'NIKOV, M. G. Nekotorye problemy razvitiia Angaro-Eniseĭskogo ėnergopromyshlennogo kompleksa. (Planovoe khoziaĭstvo, Jan. 1957. no. 1, p. 60–74.) Text in Russian. ***Title tr.:*** Some problems in the expansion of the Angara-Yenisey industrial power development.

Economic problems of the future in the U.S.S.R. are discussed, with emphasis on a major shift of industrial development to the east, particularly in the region of Angara-Yenisey River basins. This region has about one-third of all Soviet hydro-electric power resources and 75% of the potential coal reserves. "Cascade" developments are initiated in the upper regions of the Angara, Yenisey and Tunguska and continued down stream. In addition to water power and coal, apparently unlimited reserves of raw materials are present in this region, especially: aluminum-magnesium (bauxites, nephelines, syenite rocks) iron and non-ferrous ores, and various chemical compounds. This favorable concentration of power, raw materials and silicates naturally leads to extensive economic and technological research and industrial development. Work on various existing and proposed projects is discussed for specific localities of these river basins.

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54812. SHKOL'NIKOV, M. G. O perspektivakh razvitiia i ėkonomicheskom raĭonirovanii vostochnykh raĭonov RSFSR. (Akademiia nauk SSSR. Izvestiia vostochnykh filialov, 1957. no. 9, p. 3–18, tables.) Text in Russian. ***Title tr.:*** Development and economic zoning prospects of the eastern areas of the R.S.F.S.R.

General characteristic of the present-day economy of the Siberian and Far Eastern provinces of the R.S.F.S.R. and of their basic economic zones: West Siberia, Angara-Yenisey, Transbaykal, Far Eastern and Northeastern areas or zones. The main economic features of the Northeastern economic zone, comprising northeast Yakutia and Magadan Province, are outlined (p. 14–17); sparse population, lack of transportation and scarcity of local food production affect the utilization of the rich mineral resources of this zone; problems of its further industrial development are discussed.

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54813. SHLIAKOVA, E. V. Ispytanie gerbisidov dlia bor'by s sornîakami v Murmanskoĭ oblasti. (Botanicheskiĭ zhurnal, July 1957. v. 42, no. 7, p. 1087–1090, 2 tables.) 4 refs. Text in Russian. ***Title tr.:*** Experiments with herbicides for the control of weeds in Murman province.

Results of applying herbicides to various weeds: *Stellaria media, Spergula sativa, Urtica urens*, etc., are tabulated: 2.4–D, 2M–4X and DNOK were found most effective preparations, but the doses should be larger than in central U.S.S.R. Further study is recommended.

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54814. SHLIAMIN, BORIS ALEKSANDROVICH. Mozhno li ispravit' klimat? (Vokrug sveta, Sept. 1958, no. 9, p. 29–30, illus.) Text in Russian ***Title tr.:*** Is it possible to improve the climate?

Discusses plans to improve the climate of the arctic area by constructing a dam across Bering Strait and pumping water from the Pacific into the Arctic Basin (Shumilin's plan) or from the Arctic Basin to the Pacific (P. M. Borisov's plan). Advantages of Borisov's plan are stressed and criticism of some experts (Drogaĭtsev, q.v., and others) is refuted.

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54815. SHLIONSKIĬ, SH. Raschet radiotrass. (Radio, Feb. 1957, no. 2,

p. 16–17, table.) Text in Russian. ***Title tr.:*** Computation of radio courses.

The stereographic method of computation of spherical distances from radio stations is described. Various data assembled in a table for computation of distances include such for the Moscow-Mys Shmidta radio course.

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54816. SHLYKOV, V. A. Perspektivy razvitiia gornodobyvaiushcheĭ promyshlennosti Kol'skogo poluostrova. (Gornyĭ zhurnal, May 1958, no. 5, p. 3–5.) Text in Russian. ***Title tr.:*** Development prospects of the mining industry in Kola Peninsula.

Contains a general review of recent production by different mining centers and of proposed expansion of work on iron, nickel, apatite and other ore deposits. Iron ores of the Kola mining districts are of low iron content (35%) and special enrichment methods are used. Annual iron production is 3.2 million tons. The development of methods for separating and utilizing all useful components of the waste materials from the apatite plants is discussed. Expended production of mica vermiculite is planned.

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54817. SHMAKIN, B. M. Psevdomorfozy muskovita po skapolitu s reki Kuranakh, Aldan. (Moskva. Moskovskiĭ geologo-razvedochnyĭ institut. Trudy, 1957. t. 31, p. 130–33, illus., tables.) 10 refs. Text in Russian. ***Title tr.:*** Pseudomorphoses of muscovite in the scapolite from the Kuranakh River, Aldan.

Describes the muscovitization processes in scapolite in waters of the Kuranakh, tributary to the Aldan. Distribution of scapolite in the phlogopite layers of the region and its association with other minerals are outlined. Scapolite in the river undergoes changes through sericitization or, rather, muscovitization. These pseudomorphic processes are described and observed changes in scapolite are identified. The muscovitization seems to be connected with potassium metasomatism. The similarity of these processes is compared with those in Canadian phlogopites, described by K. K. Landes. ***Copy seen:*** DLC.

SHNEĬDER, KSENIIA, *see* Uspenskiĭ L., *and* K. Shneĭder. Podzemnyĭ muzeĭ Priangar'ia. *1957.* No. 55675.

54818. SHOEMAKER, CLARENCE RAYMOND, 1874–1958. The Amphipod genus *Unciola* on the east coast of America. (American midland naturalist, Sept. 1945. v. 34, no. 2, p. 446–65, 9 illus.)

Contains a critical revision of this crustacean genus with descriptions of four new species. *U. irrorata* formerly reported from West Greenland and Labrador seems a wrong identification; it was probably *U. leucopis*, which is found in West and East Greenland waters and also in Novaya Zemlya. *U. laticornis* first described from West Greenland is now found on the northeast coast of the United States.

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54819. SHOROKHOV, SERGEĬ MIKHAĬLOVICH. Razrabotka rossypeĭ otkrytymi rabotami. Moskva, Gos. nauchno-tekhnicheskoe izd-vo literatury po chernoĭ i tsvetnoĭ metallurgii, 1948. 560 p. illus., tables, graphs, diagrs. Text in Russian. Textbook approved by Ministry of Higher Education of the U.S.S.R. for mining colleges. ***Title tr.:*** Open mining of placers.

Contains description of different equipment and methods of open mining of various deposits (gold, ores and minerals), including those in the Yenisey, Lena, Kolyma basins. Work on frozen and permafrost ground is outlined in chap. 26 (p. 272–79). The excavated ground is flooded from the adjacent river to prevent deep freezing of deposits during the winter period. The ice cover is partly cut away and removed to higher ground before under-water excavation of deposits. The operations are described and figured; data on man-power are included.

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SHORTT, TERENCE M., 1910– , *see* Snyder, L. L. Arctic birds of Canada. *1957.* No. 55012.

54820. SHOWLER, J. G., *and* A. C. HAMILTON. Shoran trilateration in the Arctic Islands. (Canadian surveyor, July 1958. v. 14, no. 3, p. 91–98, illus., map.) 14 refs.

Reviews transportation and operational problems of the R.C.A.F. 408 squadron, engaged in trilateration of the Canadian Arctic Islands since 1955. In 1956 operational base was set up at Churchill, with forward bases at Cambridge Bay and Foxe (Igloolik); in 1957 main base was at Thule, North Greenland, with Resolute

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Bay as a secondary base. Types of aircraft employed, landing techniques, ground transportation equipment, etc. are outlined, and recommendations for future survey operations are given. The technical problems are described and results analyzed (p. 94–98). Improvements in accuracy introduced with the hiran (high accuracy shoran) equipment are discussed; experiences with the tellurometer are compared favorably with those obtained with hiran. The trilateration net established 1956–57 is mapped; the horizontal control was extended north to Lake Hazen on northern Ellesmere Island. ***Copy seen:*** DGS.

54821. SHPAĬKHER, A. O. Sovremennye kolebaniĭa lednikov severo-atlanticheskogo sektora. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, July.–Aug. 1958. t. 90, vyp. 4, p. 358–62, tables, diagrs.) 15 refs. Text in Russian. ***Title tr.:*** Recent changes of glacier fluctuation in the North Atlantic area.

Presents data on the shrinkage and retreat of several glaciers: the Herbert (Southeast Alaska) for the period 1700–1948, Nordenskiöld (East Greenland) 1898–1948, Vatnajökull (Iceland), Karsa (Sweden), also some in Norway. These data are evaluated and compared with data of glaciers in the Alps, also in retreat. Climatic changes are noted and temperature trends of Iceland examined on the basis of Reykjavik's data and the sea surface temperature at the Papey station. Increase of yearly temperature and decrease of precipitation account for the shrinkage of glaciers, which is evident.
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54822. SHPARLINSKIĬ, VIKTOR MATVEEVICH. O vybore raĭona bazirovaniia rybolovnogo flota v Severnoĭ Atlantike; v poriadke obsuzhdeniia. (Rybnoe khoziaĭstvo, Apr. 1957. god 33, no. 4, p. 46–52, tables.) Text in Russian. ***Title tr.:*** Choosing an area for bases for the fishing fleet of the North Atlantic; a discussion.

Author analyzes the trawl fisheries of the Barents Sea, and, foreseeing their imminent expansion into the North Atlantic, recommends the establishment of fishing bases in the Baltic. This is required even more for the Russian herring fisheries which operate in the northern Atlantic and for other developing fisheries of this area. Some objections to the author's scheme are appended by the editors. ***Copy seen:*** DLC.

54823. SHPATAKOVSKIĬ, V. S. Perenosnaia ustanovka dlia ochistki krovel' promyshlennykh zdaniĭ ot snega. (Stroitel'naia promyshlennost', Sept. 1958. god 36, no. 9, p. 19–20, illus.) 2 refs. Text in Russian. ***Title tr.:*** Portable installation for snow removal from roofs of industrial buildings.

A steam-heating arrangement with a set of pipes connected to exhaust steam from auxiliary machinery, and movable along the roof proved satisfactory for melting a heavy layer of snow.
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SHPIS, K. V., *see* Akademiia nauk SSSR. Dmitriĭ Ivanovich Shcherbakov . . . *1958*. No. 49153.

54824. SHTAVEMAN, V. O snezhnom mototsikle. (Okhota i okhotnich'e khoziaĭstvo, Sept. 1957. god 3, no. 9, p. 60–61, illus.) Text in Russian. ***Title tr.:*** Snow motorcycle.

Describes, with technical details, a ski attachment, to adapt the ordinary motorcycle to over-snow travel (packed or crusted snow). ***Copy seen:*** DLC.

54825. SHTEĬNGOL'D, Ė. V. Inostrannye snegokhody legkogo tipa. (Ratsionalizatsiia okhotnich'ego promysla, 1958. vyp. 7, p. 42–46, illus.) 4 refs. Text in Russian. ***Title tr.:*** Foreign light-type snowmobiles.

Four types of over-snow vehicles described by A. C. Blue, *American fur breeder*, q.q.v., etc., also one German and a French model are noted and compared with two Soviet models (Kupriianova and Karel'skikh). ***Copy seen:*** DLC.

54826. SHTEMPEL', B. M. Vozrast konglomeratov metamorficheskoĭ tolshchi Sredinnogo khrebta Kamchatki. (Akademiia nauk SSSR. Doklady, June 11, 1957. t. 114, no. 5, p. 1099–1100.) 9 refs. Text in Russian. ***Title tr.:*** The age of the conglomerates of the metamorphic stratum of the Sredinnyy Ridge of Kamchatka.

Contains an attempt at determination of the geological age of this ridge on the basis of fossil plant remains, collected in its central part by Iu. V. Makarov in 1956. The collection contains: *Cephalotaxopsis* cf. *intermedia*, *Taxodium* sp., *Glyptostrobus europaeus* and *Phyllites* sp. The content of the fossil flora suggests that the conglomerates in question belong

to the Tertiary system, probably to Eocene (Tigilsk series) or even to the Paleocene period. Possibility of coal deposits in the plains of Kamchatka is suggested. ***Copy seen:*** DLC.

54827. SHTERNBERG, LEV ÍAKOVLEVICH, 1861–1927. Antichnyĭ kul't bliznetsov pri svi˘etĭe ėtnografii. (Akademiîa nauk SSSR. Muzeĭ antropologii i ėtnografii. Sbornik, 1916. t. 3, p. 133–89.) Refs. Text in Russian. ***Title tr.:*** The antique cult of twins in the light of ethnography.

Includes (p. 161–69) description of the posthumous worship of twins among the Gilyaks and Kamchadals, based in part on author's own observations. The anthropomorphological and zoomorphological origins of these cults are discussed: ancestor worship, bear and wolf cults.

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54828. SHTUKENBERG, E. K. Novyĭ vid lishaĭnika roda *Cladonia* (Hill.) Hoffm. (Akademiîa nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1956. t. 11, p. 12–18, text map.) 4 refs. Text in Russian. ***Title tr.:*** A new species of lichenous genus *Cladonia* (Hill.) Hoffm.

Contains description of *Cladonia aberrans* n. sp., native to the Chukotskiy and Anadyr' regions, Kamchatka Peninsula and the Okhotsk Sea region.

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54829. SHUBIN, G. G., *and* **ÍU. ÍAZAN.** Losepromyslovoe khozîaĭstvo. (Okhota i okhotnich'e khozîaĭstvo, July 1958. god 4, no. 7, p. 5–8, illus., plan.) Text in Russian. ***Title tr.:*** Elk hunting farm.

Describes an experimental farm organized in 1956 by the administration of the Pechora-Ilych Preserve. Along the Pechora River bank on the elks' fall and spring migration route several corrals approx. 0.2 sq. km. were built. The enclosures allow the elk to enter but their egress is controlled; selected mature animals are killed and the rest released to continue migration. This ensures a regular thinning of the herd which had reached the saturation level in relation to pastures available in the Preserve.

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SHUKEVICH, A. M., *see* Morozov, A. I., *and* A. M. Shukevich. Shchelochnye granity . . . *1958.* No. 53397.

54830. SHUL'GIN, ALEKSANDR MIKHAĬLOVICH. Temperaturnyĭ rezhim pochvy. Leningrad, Gidrometeorologicheskoe izd-vo, 1957. 242 p. tables, diagrs., text maps. 266 refs. Text in Russian. ***Title tr.:*** The temperature regime of soils.

Monograph based on investigations of the last 20 years in different parts of the U.S.S.R. Main problems of soil climatology, laws of temperature penetration in the soil, factors affecting soil temperature, temperature variation in cold and warm periods, soil freezing at various depths, soil temperature control and regulation, are dealt with. Northern regions are partly included, e.g., some data on soil temperature are given (p. 40, 43) for Kola Peninsula.

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SHULGINA, E. L., *see* Pirozhnikov, P. L., *and* E. L. Shul'gina. Osnovnye cherty zooplanktona . . . *1957.* No. 54010.

54831. SHUL'GINA, N. I. Paleoėkologicheskaîa kharakteristika îurskikh i nizhnemelovykh otlozheniĭ raîona Ust'-Eniseĭskoĭ vpadiny. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik statteĭ po geologii Arktiki, vyp. 6, p. 81–90, illus.) 2 refs. Text in Russian. ***Title tr.:*** Paleoecological characteristics of Jurassic and Lower Cretaceous deposits in the region of the Ust'-Yenisey depression.

Describes pelecypods, cephalopods, gastropods, brachiopods, echinoderms, fishes and other fossils collected by V. I. Bodylevskiĭ from drill holes in the area (approx. 66°–70° N. 82°–88° E.). Lower, Middle and Upper Jurassic and Lower Cretaceous deposits are reviewed, the forms identified and their ecology described. This fauna, it is concluded, developed under flowing water and some species indicate the presence of sea water. Conditions for such development are discussed. ***Copy seen:*** DLC.

SHUL'GINA, N. I., *see also* Bodylevskiĭ, V. I., *and* N. I. Shul'gina. Îurskie i melovye fauny nizov'ev Eniseîa. *1958.* No. 49793.

SHUL'GINA, N. I., *see also* Saks, V. N., *and others.* Predvaritel'nye rezul'taty . . . îurskikh . . . otlozheniĭ . . . Anabara . . . *1958.* No. 54522.

54832. SHULMAN, GERRY, *and* **W. SHULMAN.** Hunting the R. & M. subscriber in Alaska. (Rocks and min-

erals, Mar.–Apr. 1957. v. 32, no. 3/4, p. 115–23, text map, illus.)

Popular account of station wagon trip in summer 1955, visiting numerous subscribers to this journal in Alaska and Yukon Territory; their collections of rocks and minerals are noted, as well as mines, dredges, ghost towns, the University of Alaska, conditions of travel on the Alaska road net, etc.

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SHULMAN, WILL, *see* Shulman, G., *and* W. Shulman. Hunting the R. & M. subscriber . . . *1957.* No. 54832.

54833. SHULYNDIN, A. F. Formirovanie svoĭstva zimostoĭkosti u rasteniĭ mezhvidovykh gibridov pshenit͡sy *Triticum vulgare* x *Tr. durum.* (Zhurnal obshcheĭ biologii, Mar.–Apr. 1958. t. 19, no. 2, p. 108–119, illus., tables.) 22 refs. Text in Russian. Summary in English. ***Title tr.:*** Formation of winter-hardiness in interspecific hybrids of wheat, *Triticum vulgare* x *T. durum.*

Account of hybridization and selection of cold resistant strains of hard wheat. Such a strain is claimed not to exist and was obtained by crossing cold resistant winter soft wheat (*T. vulgare*) with summer hard-wheat (*T. durum*). Chromosome number in the new variety is 2n=28; this strain preserves its specific constitution after fall sowing.

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54834. SHULYNDIN, A. F. Nasledovanie sposobnosti nakopleniя sakharov mezhvidovymi gibridami pshenit͡s v svi͡azi s povysheniem zimostoĭkosti rasteniĭ. (Zhurnal osbshcheĭ biologii, Sept.–Oct. 1954. t. 15, no. 5, p. 336–52, tables.) 21 refs. Text in Russian. ***Title tr.:*** Inheritance of capacity to accumulate sugars by interspecific wheat hybrids connected with increased winter-hardiness.

Winter varieties of wheat were found to accumulate in the fall 20–30% sugars (dry weight) i.e., 3–4 times more than semi-winter varieties and 5–10 times more than spring wheat. Hybrids between soft spring forms and hard semi-winter forms developed by author, are claimed to produce plants of a hard-wheat type with a sugar content approaching the soft, winter-type wheat.

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SHUMACKER, HARRIS B., *Jr.*, **1908–** , *see* Kajikuri, H., *and others.* Effect of hypothermia . . . chlorpromazine on survival . . . shock. *1957.* No. 52126.

54835. SHUMAN, RICHARD F. Bear depredation on red salmon spawning populations in the Karluk River system, 1947. (Journal of wildlife management, Jan. 1950. v. 14, no. 1, p. 1–9, maps.) 5 refs.

Account of investigations conducted during 1947. "It was determined that 31.3 percent of the fish which entered Moraine Creek, a typical tributary, were killed by bear before spawning, and left partly or wholly uneaten." The monetary value of this loss is appraised.

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54836. SHUMILOVA, E. V. Materialy k litologo-mineralogicheskoĭ kharakteristike mezo-kaĭnozoĭskikh otlozheniĭ severo-vostochnoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (Akademiя nauk SSSR. Zapadno-Sibirskiĭ filial. Gorno-geologicheskiĭ institut. Trudy, 1956. vyp. 15, Voprosy geologii Zapadno-Sibirskoĭ nizmennosti, p. 155–63, plates, table, diagrs. (1 fold), map.) Text in Russian. ***Title tr.:*** Material for lithologic-mineralogic characteristics of Meso-Cenozoic deposits in the northeastern part of the West Siberian lowland.

Presents results of investigation on minerals of Cretaceous, Tertiary and Quaternary deposits in the Taz River basin (approx. 63°–67°30′ N. 78°–85° E.). Various minerals and their groups were studied in each deposit. Their lithologic and qualitative and quantitative properties are outlined. Comparison is made between the minerals of Cretaceous, Tertiary and Quaternary deposits. Completely different conditions of their development are said to be disclosed by this study. ***Copy seen:*** DLC.

54837. SHUMILOVA, E. V. Materialy po mineralogii mezozoĭskikh i kaĭnozoĭskikh otlozheniĭ severo-vostochnoĭ okrainy Zapadno-Sibirskoĭ nizmennosti. (Akademiя nauk SSSR. Sibirskoe otdelenie. Izvestiя, 1958, no. 5, p. 26–42, diagrs., tables, map.) 6 refs. Text in Russian. ***Title tr.:*** Materials on the mineralogy of the Mesozoic and Cenozoic deposits in the northeastern border region of the West Siberian lowland.

Reports results of analyses of rock samples collected by a geological party of the Academy of Sciences' West Siberian Branch under V. V. Vdovin, in the Upper Cretaceous, Paleocene and

Quaternary layers in the Bol'shaya and Malaya Kheta basins (both left tributaries of the lower Yenisey). The data as summarized in a table (p. 30–33) indicate locality, geological age and mineral composition (in percent) of 59 samples. Paleo-geographic, stratigraphic and structural aspects of these data are discussed. ***Copy seen:*** DLC.

54838. SHUMSKIĬ, PETR ALEKSANDROVICH. Glîatsiologicheskie metody izucheniîa chetvertichnogo perioda i nekotorye rezul'taty ikh primeneniîa. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Trudy, 1957. t. 13, p. 413–22, diagrs.) 10 refs. Text in Russian. ***Title tr.:*** Glaciological methods for investigating the Quaternary period and some results of their application.

Division of the atmospheric cryosphere into zones of recrystallization, infiltration and congelation in latitudinal and longitudinal distribution is diagrammed. The effects of the cryosphere are explained. Features in the appearance of underground ice veins are studied. Epigenic and syngenic ice veins are treated and their forms diagrammed. Study of these ice veins, buried and preserved by permafrost, may contribute to knowledge of Quaternary history, and to the composition structure and distribution of former glaciers. This work on the cryosphere and ice petrography embraces the arctic and antarctic, northern Siberia and other regions. ***Copy seen:*** DLC.

SHUMSKIĬ, PETR ALEKSANDROVICH, *see also* Armstrong, T. E. The ice . . . polar basin. *1957.* No. 49385.

SHUMSKIĬ, PETR ALEKSANDROVICH, *see also* T͡Sytovich, N. A., *and others.* O fizicheskikh îavleniîakh . . . v . . . gruntakh. *1957.* No. 55539.

SHUMWAY, G., *see* Fisher, R. L., *and others.* Deep-sea bathymetry . . . Point Barrow. *1958.* No. 50907.

SHUNDIK, NIKOLAĬ ELISEEVICH, *see* Voskoboĭnikov, M. G. Chukotka . . . *1957.* No. 55891.

SHUN'GIN, A., *see* Na promyslakh. *1956.* No. 53476.

54839. SHURKIN, K. A. K voprosu o klassifikat͡sii ul'trametamorficheskikh porod voobshche i migmatitov v chastnosti. (Akademiîa nauk SSSR. Laboratoriîa geologii dokembriîa. Trudy. 1957. vyp. 7, p. 74–108, illus., table.) 15 refs. Text in Russian. ***Title tr.:*** On the question of classification of ultrametamorphic rocks in general and migmatites in particular.

Presents a new classification of ultrametamorphic rocks on the west coast of Beloye More in three groups: gneisses, migmatites and anatexites. The morphologic-genetic classification of migmatites (to which main emphasis is given) is presented in a table and treated in detail. Eleven types are distinguished, characterized and illustrated. Advantages of the new classification for geologic mapping are outlined. Vein facies of ultrametamorphic rocks should be called, according to the author, ultrametagenic. This rock and stages of its transformation are discussed. ***Copy seen:*** DLC.

54840. SHUSHERINA, E. P., *and* **N. A. T͡SYTOVICH.** Nekotorye opyty po izucheniîu vliîaniîa promorazhivaniîa i posleduîushchego ottaivaniîa na prochnost' glinistykh gruntov. (*In:* Materialy po laboratornym issledovaniîam merzlykh gruntov, sbornik 3, 1957. p. 280–88, illus., tables, graphs.) 2 refs. Text in Russian. ***Title tr.:*** Experiments on the effects of freezing and subsequent thawing on clay strength.

"The effects of repeated freezing of Tertiary and Quaternary clays on their mechanical strength were studied in the laboratory at the Institute of Permafrostology to determine the shear strength and cohesion of subfoundation soils for a hydroelectric power plant. The experimental procedure and methods of measurement used are described, and data on the physical and mechanical properties of the clays as well as strength variations are tabulated. Decreased strength was associated with ice formation and deformation of the frozen ground. Strength changes were not observed when the clay froze without ice formation or moisture migration to the frozen strata."—SIPRE. ***Copy seen:*** DLC.

SHUSHERINA, E. P., *see also* T͡Sytovich, N. A., *and others.* O fizicheskikh îavleniîakh . . . v . . . gruntakh. *1957.* No. 55539.

54841. SHUTOV, V. D. Litologo-stratigraficheskoe raschlenenie i usloviîa osadkonakopleniîa permskikh i nizhnetriasovykh otlozheniĭ Verkhoîanskogo khrebta. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, July 1958,

no. 7, p. 20–36, maps, fold. table.) 18 refs. Text in Russian. ***Title tr.:*** Lithologic-stratigraphic subdivision and the sedimentation conditions of Permian and Lower Triassic deposits of the Verkhoyansk Range.

Results of author's investigation in 1951–55 in the central Verkhoyansk Range, and adjacent areas (63°–71° N. 124°–130° E.). Five Upper Paleozoic formations are distinguished and a new lithologic-stratigraphic division of Permian and Triassic deposits is presented, based on paleontologic characteristics (fold. table). The paleogeography of each formation is discussed extensively and summarized on maps. The sedimentation of each formation is treated, its sources, type and distribution explained. Review of recent studies by others introduces this report. ***Copy seen:*** DLC.

SHUTOV, V. D., *see also* Kossovskaîa, A. G., *and* V. D. Shutov. K istorii razvitiîa zapadnogo Verkhoîan'îa . . . *1958*. No. 52433.

SHUTOV, V. D., *see also* Kossovskaîa, A. G., *and* V. D. Shutov. Kharakter i raspredelenie mineral'nykh novoobrazovaniĭ . . . *1956*. No. 52434.

54842. SHUTOVA-KORZH, I. V. Biologiîa sel'di i perspektivy razvitiîa promysla ee v Barent͡sovom more. (Akademiîa nauk SSSR. Kol'skiĭ filial. Murmanskaîa biologicheskaîa stant͡siîa. Trudy, 1958. t. 4, p. 157–64, tables.) 8 refs. Text in Russian. ***Title tr.:*** The biology of herring and prospects of developing its fishery in the Barents Sea.

Contains information on the spawning grounds of the Murmansk herring and its migrations; size and age composition of catches during the spring–summer and fall–winter periods in Murman waters; size composition in the open sea and in southern coastal waters of the Barents Sea. Use of drift nets in the open waters of that sea is recommended for developing this fishery. ***Copy seen:*** DLC.

54843. SHUTOVA-KORZH, I. V. The herring stock in the southern Barents Sea in 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 169, illus., maps.)

Information is presented on the year classes represented in the 1956 catch, distribution of the dominant 1953 year-class, migrations, rate of growth, supposed places of wintering, etc. ***Copy seen:*** DI.

SHUVALOV, S. A., *see* Ivanova, E. N., *and others*. Pochvenno-geograficheskoe raĭonirovanie. *1958*. No. 52014.

54844. SHVAĬSHTEĬN, Z. I. Laboratoriîa dliîa issledovaniîa l'da i ispytaniîa modeleĭ ledokolov i sudov ledovogo klassa. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 171–78, illus., tables, diagrs.) Text in Russian. ***Title tr.:*** A laboratory for studying ice and testing models of ice-breakers and ice-breaking vessels.

The construction of this laboratory of the Arctic Institute in Leningrad (completed in Jan. 1955) is described in detail. Cold rooms (to −45° C.) are provided for studying the physical and mechanical properties of ice and examining instrument operation at low temperatures; samples of homogeneous ice covers were produced for measuring ice resistance to ship movement. Seismic, ultrasonic, and electromagnetic methods of ice study were examined in 1955–56, also new techniques of producing ice samples. ***Copy seen:*** DLC.

54845. SHVAĬSHTEĬN, Z. I. Laboratoriîa dliîa issledovaniîa snega i l'da v Kanade. (Problemy Arktiki, 1958, vyp. 3, p. 110–11.) Ref. Text in Russian. ***Title tr.:*** Laboratory for snow and ice study in Canada.

Summary of article by Lorne W. Gold, No. 45155. ***Copy seen:*** DLC.

SHVART͡SMAN, B. F., *see* Berdichevskaîa, T. M., *and others*. Temperaturnyĭ ėffekt . . . mezonnoĭ intensivnosti . . . *1958*. No. 49666.

54846. SHVEDE, EVGENIĬ EVGENIEVICH. I͡Uliĭ Mikhaĭlovich Shokal'skiĭ i Geograficheskoe obshchestvo SSSR; k 100-letiîu so dnîa rozhdeniîa. (Vsesoîuznoe geograficheskoe obshchestvo. Izvestiîa, Mar.–Apr. 1957. t. 89, vyp. 2, p. 93–100.) 4 refs. Text in Russian. ***Title tr.:*** I͡Uliĭ Mikhaĭlovich Shokal'skiĭ and the Geographical Society of U.S.S.R. on the centenary of his birth.

Recounts I͡U. M. Shokal'skiĭ's activities in and for Geographical Society which he headed during 1917–1931; his interest in studies of the Arctic and far North, and organization of the Society's Committee for Study of the North are noted. ***Copy seen:*** DLC.

54847. SHVEDOV, N. A. K stratigrafii triasovykh tolshch Taĭmyrskogo poluostrova. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki.

Sbornik statei po paleontologii i biostratigrafii, vyp. 6, 1957, p. 3–14, 4 tables (1 fold.), text map.) 5 refs. Text in Russian. ***Title tr.:*** On the stratigraphy of the Triassic stratum of Taymyr Peninsula.

Description of fossil flora from collections assembled by geologists in 1945–55 from Triassic deposits in the eastern (Cape Tsvetkova), central (Fad'ya and Kuda Rivers), and western Taymyr (Uboynaya and Malaya Pyra Rivers). For each of these locations, the stratigraphy of the Triassic stratum and its horizons is outlined and the fossil flora identified and described. A stratigraphic scheme is presented for each location, and a composite scheme for the entire Taymyr. The fossil flora of the Taymyr Triassic may be compared with similar flora of Greenland, Sweden, China, and has much in common, especially, with Triassic flora of Surakan, the eastern Ural and the Nizhnyaya Tunguska region.

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54848. SHVETSOV, PETR FILOMONOVICH. O soderzhanii i osnovnykh problemakh geokriologii v SSSR. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report 1957. v. 4, *pub.* 1958. p. 394–96.) Text in Russian. Summary in English. ***Title tr.:*** Geocryology and its main problems in the U.S.S.R.

Discusses the physical and geological conditions resulting in permafrost, or freezing and thawing; the effects of heat exchange on construction; the distribution of frozen soils and rocks; engineering problems associated with permafrost, as parts of the study of geocryology.

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54849. SHVETSOV, PETR FILOMONOVICH. Soderzhanie i zadachi sovetskoĭ geokriologii. (Sovetskaia geologiia, Dec. 1958. god 1, no. 12, p. 36–42.) 19 refs. Text in Russian. Summary in English. ***Title tr.:*** Content and objectives of Soviet geocryology.

Outlines geologic-geographic and engineering-geophysical knowledge and the development of geocryology in the U.S.S.R. during the last thirty years (1927–1957), with mention of the principal scientists and institutions concerned in it. Permafrost observations at Vorkuta and Igarka, in Yakutia, Anadyr, Aldan and other northern regions have been of major importance. The main objectives of geocryology are summarized as the extension of investigation of processes and conditions of soil and ground heat exchange; and determination of physico-geologic principles of permafrost developmental processes, prognosis of the manner of heaving during freezing and of subsidence during thawing of the rocks.

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SHVETSOV, PETR FILOMONOVICH, *see also* Akademiia nauk SSSR. V otdelenii geologo-geograficheskikh nauk. *1958.* No. 49161.

SHVETSOV, PETR FILOMONOVICH, *see also* Hentgès, P. Sovetskiĭ Soĭuz daleko vidit. *1957.* No. 51687.

54850. SHVORIN, B. I. Dlia zdorov'ia polĭarnikov. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 29.) Text in Russian. ***Title tr.:*** Health service in the Arctic.

Interview with B. I. Shvorin, chief of the Section of Polar Medicine in the Main Administration of the Northern Sea Route: service by specialists, disappearance of scurvy, low incidence of infectious disease and frostbite, tooth decay caused by use of snow water; higher birth rate and lower child mortality in the Arctic than elsewhere. Activities of the Commission for problems of acclimatization of population in the Arctic, established by Academy of Medical Sciences, and those of medical expeditions to the Arctic, are noted.

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54851. SIAGAEV, N. A. Geologicheskoe stroenie vostochnoĭ chasti Severo-Sibirskoĭ nizmennosti, Leno-Anabarskoe mezhdurech'e. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiia Sovetskoĭ Arktiki, 1957, p. 290–312.) Text in Russian. ***Title tr.:*** Geological structure of the eastern part of the north Siberian lowland, the Lena-Anabar interfluve.

Outlines the relief, stratigraphy, volcanism, and tectonics of the region (approx. 72°–74° N. 108°–128° E.) which lies between Khatanga Bay and the Lena River. In the north it opens to the Laptev Sea and in the south it ends with the contact between Permian and Cambrian deposits. The oldest deposits of the region are the Permian, the classification as yet uncertain. Triassic deposits are best known in the Ust'-Olenek zone. Jurassic deposits are

extensive and include all three series. The Cretaceous system is represented only by lower series. Volcanic activity is noted in Permian times. Hard coal and boghead, chalky coal-bearing deposits, are of practical importance as mineral resources. Some prospects for oil are noted. This region is covered by the geological map in scale 1:2,500,000, which accompanies the volume.

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54852. SÎÂGAEV, N. A. O melovom predtaĭmyrskom progibe. (Nauchnye doklady vysshelĭ shkoly. Geologo-geograficheskie nauki, 1958. no. 4, p. 40–46, cross-section, map.) 6 refs. Text in Russian. ***Title tr.:*** On the Cretaceous flexure in the Taymyr foreland.

Offers a preliminary report on the Mesozoic history of Taymyr Peninsula lowland (monograph in preparation). Analysis of geologic and geophysical data indicate regional flexure in Cretaceous time in the background of Jurassic and Triassic development of the parageosyncline. The mode of development, extent and correlation with Taymyr-Severozemel'skaya syncline are outlined and the effects on present regional structures in the area (approx. 70°–74° N. 84°–112° E.) are discussed and illustrated in a tectonic map. ***Copy seen:*** DLC.

SÎÂGAEV, N. A., *see also* Atlasov, I. P., *and* N. A. Sîâgaev. K tektonike severnogo Verkhoîân'îâ . . . *1956.* No. 49419.

54853. SIBIRÎÂKOVA, MARIÎÂ DMITRIEVNA. Osushitel'naîâ melioratsîâ na bolotakh severa. (Lesnoe khozîâĭstvo, Apr. 1957. god 10, no. 4, p. 77–78, illus., graph.) Text in Russian. ***Title tr.:*** Reclamation of northern marshes by drainage.

The results of drainage of taiga ground during recent decades are discussed, particularly in the Karelian Republic. Considerable areas of former marshlands have become suitable for grass and forest culture. The economic aspect of reclamation work is considered in relation to various regions. ***Copy seen:*** DLC.

54854. ***SIBIRSKIE OGNI.*** Budushchee sibirskoĭ ėnergetiki. (Sibirskie ogni, Mar. 1958. god 37, no. 3, p. 189.) Text in Russian. ***Title tr.:*** The future of Siberian power resources.

Reports on the project of creating a unified system encompassing all power-producing regions of Siberia to supersede the present regional systems of the Angara, Ob', Yenisey Rivers and the Kuzbass power stations. The problems involved were discussed in Feb. 1958 at a scientific-technical joint meeting of scientists of the West Siberian Branch of the Academy of Sciences and the personnel of Siberian regional power systems.

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54855. ***SIBIRSKIE OGNI.*** Irkutsk Bratsk. (Sibirskie ogni, Jan. 1958. god 37, no. 1, p. 189.) Text in Russian.

Notes opening of the power line, about 650 km. long, carrying electricity from Irkutsk to the Bratsk power station construction site. On completion, Bratsk will become, in turn, the source of current for the Irkutsk industrial complex.

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54856. ***SIBIRSKIE OGNI.*** Krupneĭshiĭ v mire zheleznorudnyĭ basseĭn. (Sibirskie ogni, May–June 1957. god 36, no. 3, p. 190.) Text in Russian. ***Title tr.:*** The largest iron ore basin in the world.

Describes the discovery of limonite with up to 40% iron content in the middle Ob' basin (approx. 58°–59° N. 81°–82° E.). The ore was found during an oil-drilling survey at 200 m. depth and another layer 70–100 m. below that. About 10,000 sq. km. of the ore basin have been surveyed and its deposits with commercial iron content estimated at tens of billions of tons.

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54857. ***SIBIRSKIE OGNI.*** Novye dragotsennosti ÎÂkutii. (Sibirskie ogni, May 1958. god 37, no. 5, p. 197.) Text in Russian. ***Title tr.:*** New precious stones in Yakutia.

Notes the discovery of chrysolites, suitable for jewelry production, by Yakut diamond searchers. ***Copy seen:*** DLC.

54858. ***SIBIRSKIE OGNI.*** Novye instituty. (Sibirskie ogni, May 1958. god 37, no. 5, p. 196.) Text in Russian. ***Title tr.:*** New institutes.

Notes opening of an agricultural research institute of the Far North at Noril'sk. Development of agriculture and animal husbandry in northern areas make necessary a research center for polar agronomy, horticulture, fur farming, etc. ***Copy seen:*** DLC.

54859. ***SIBIRSKIE OGNI.*** Novyĭ nauchno-issledovatel'skiĭ institut v Krasnoîârske. (Sibirskie ogni, Nov.

1958. god 37, no. 11, p. 190.) Text in Russian. ***Title tr.:*** A new scientific research institute in Krasnoyarsk.

This multi-purpose institute of the Academy of building and architecture of U.S.S.R. will have laboratories, workshops, etc., for the study of climatic and permafrost problems of eastern Siberia relevant to housing and industrial construction. ***Copy seen:*** DLC.

54860. ***SIBIRSKIE OGNI.*** Pervyĭ poėt mansi. (Sibirskie ogni, Apr. 1958. god 37, no. 4, p. 182.) Text in Russian. ***Title tr.:*** The first Vogul poet.

Reviews the literary work of Ivan Shestalov, first poet to write in the Vogul language. ***Copy seen:*** DLC.

54861. ***SIBIRSKIE OGNI.*** Poėty narodov Severa. (Sibirskie ogni, Mar.–Apr. 1957. god 36, no. 2, p. 119–20.) Text in Russian. ***Title tr.:*** Poets of the peoples of the North.

Translations into Russian of four poems: one Evenki (Tungus) by G. Chinkov, the others Nenets (Samoyed) written by Vasiliĭ Ledkov and Alekseĭ Pichkov. ***Copy seen:*** DLC.

54862. ***SIBIRSKIE OGNI.*** Proekt sozdaniîa Nizhne-Obskoĭ GÉS. (Sibirskie ogni, Mar. 1958, god 37, no. 3, p. 190.) Text in Russian. ***Title tr.:*** Project of creating a lower-Ob' hydroelectric station.

Notes a new project to utilize the water resources of the Ob', from Novosibirsk to its estuary (approx. 3,000 km.), and those of its tributaries, the Irtysh and Tom'. A several million kwt. hydroelectric power station is to be built with a reservoir for complete regulation of the water flow. Technical and economic difficulties will necessitate long-range research. ***Copy seen:*** DLC.

54863. ***SIBIRSKIE OGNI.*** Raskopki v raĭone Bratskoĭ GÉS. (Sibirskie ogni, Jan.–Feb. 1957. god 36, no. 1, p. 190.) Text in Russian. ***Title tr.:*** Excavations in the area of the Bratsk hydroelectric station.

Notes work of the summer 1956 archeological expedition of the Academy of Sciences, headed by A. P. Okladnikov. Some 300 km. of the high bank terraces of the Angara River near the Bratsk station site were explored. Stone spear and arrow heads, lamellar blades, flints and ornamented potsherds were excavated. The find of a particularly fine elk head of shiny [sic] black flint is noted. ***Copy seen:*** DLC.

54864. ***SIBIRSKIE OGNI.*** Sobolîa stalo bol'she. (Sibirskie ogni, Mar. 1958. god 37, no. 3, p. 191.) Text in Russian. ***Title tr.:*** Sables have increased.

Notes a sharp increase in sables in the Krasnoyarsk taiga. Sable and polar-fox hunters are flown in by helicopter and light transport planes. ***Copy seen:*** DLC.

54865. ***SIBIRSKIE OGNI.*** Sokrovishcha sibirskoĭ zemli. (Sibirskie ogni, Jan.–Feb. 1957. god 36, no. 1, p. 190–91.) Text in Russian. ***Title tr.:*** Siberian treasures.

Notes geological field work in 1956 between the Yenisey River and the Pacific Ocean. A prospecting team drilling in eastern Siberia (no location given) discovered an oil-bearing horizon at 2,700 m. depth. Natural gas was found at Tas-Tumus (70°40′ N. 131°15′ E.) at 2,574 m. depth; the pit already yields up to two million cu. m./day of high quality gas; the gas layer has a pressure of 250 atmospheres. The diamond mines of Yakutia with a several hundred million carat potential are mentioned. ***Copy seen:*** DLC.

54866. ***SIBIRSKIE OGNI.*** Tret'îa v angarskom kaskade. (Sibirskie ogni, Apr. 1958. god 37, no. 4, p. 181.) Text in Russian. ***Title tr.:*** The third in the Angara cascades.

Notes project for construction of a third Angara power plant, the Ust'-Ilim station, near the Yershovyye narrows, 550 km. downstream from Bratsk. Accommodations have been prepared for the research team. ***Copy seen:*** DLC.

54867. ***SIBIRSKIE OGNI.*** Vesti iz kamennogo veka. (Sibirskie ogni, Mar. 1958. god 37, no. 3, p. 191.) Text in Russian. ***Title tr.:*** News from the stone age.

A neolithic burial with skeletal remains and bone and flint implements was discovered by an archeological expedition of Irkutsk University on the left bank of the Angara River, near the mouth of its Kitoy tributary. Of particular interest is a perfectly preserved skull, sent for further study to the anthropologist M. M. Gerasimov. ***Copy seen:*** DLC.

54868. **SICHKAR', G.** Vertolet Mi-4 nad Okhotskim morem. (Grazhdanskaîa aviatsiîa, Oct. 1957. god 14, no. 10, p. 23, illus.) Text in Russian. ***Title tr.:*** Helicopter *Mi-4* over the Okhotsk Sea. ***Copy seen:*** DLC.

54869. SICILIA TRASPADERNE, FELIPE. Sensibilización a los agentes atmosféricos; accidentes causados por el frío y cambio de clima. (Actas dermosifilográficas, 1957. año 48, nums. 6–7, p. 422–24.) Text in Spanish. ***Title tr.:*** Sensitivity to atmospheric agents; diseases caused by cold and climatic change.

Contains information on the various types of cold injury, their symptoms and specific causes; diseases caused by cold: endarteritis obliterans, cold allergies; presentation and discussion of cases caused by cold. ***Copy seen:*** DNLM.

54870. SIDDALL, WILLIAM R. Seattle: regional capital of Alaska. (Association of American Geographers. Annals, Sept. 1957. v. 47, no. 3, p. 277–84, 4 text maps, diagrs., 4 tables.) 13 refs.

Alaskan occupations, manufacturing and freight shipments, retail sales, airline passenger traffic, etc., were studied, and the common center for all Alaska was found to be Seattle in the state of Washington. The Alaskan cities of Fairbanks, Anchorage, Juneau, and Ketchikan were found to have "central place characteristics" for various parts of Alaska, but not for the Territory as a whole. This fact must be understood in considering Alaska's current problems, statehood, etc. ***Copy seen:*** DGS.

54871. SIDENKO, P. D. K voprosu o solʹânykh kupolakh Eniseĭskogo-Khatangskogo progiba. (Leningrad. Nauchno-issledovatelʹskiĭ institut geologii Arktiki. Informat͡sionnyĭ bʉ̂lleten', 1957. vyp. 5, p. 43–45, table.) Text in Russian. ***Title tr.:*** On the question of salt domes in the Yenisey-Khatanga depression.

Reports known and assumed salt domes. They are present southeast of Lake Taymyr, in the Yuryung-Tumus Peninsula, and in the Kozhevnikova Bay (73°40′ N. 110°00′ E.) region, etc. Covered salt domes have been assumed west of the regional break, near the 102° E. meridian; but chemical analyses (presented) of ground waters indicate these assumptions are unwarranted.

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54872. SIDENKO, P. D. Merzlota i podzemnye vody Khatangskogo raĭona. (Leningrad. Nauchno-issledovatelʹskiĭ institut geologii Arktiki. Informat͡sionnyĭ bʉ̂lleten', 1958. vyp. 8, p. 38–43, table, map.) Text in Russian. ***Title tr.:*** Permafrost and ground waters in the Khatanga region.

Outlines climatic conditions, thickness of frozen layer, ground water reserves, and identified bore wells distributed over a considerable area (approx. 71°30′-73°30′ N. 96°–106° E.). Chemical analyses of eleven wells are presented in appended table. The wells are divided in groups; their location, temperature, amount of discharge and mineralization are characterized. Permafrost conditions are treated.

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54873. SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– . Dolednikovai͡a kora vyvetrivaniĭa Kolʹskogo poluostrova. Moskva, Izd-vo Akademii nauk SSSR, 1958. 107 p. illus., tables, diagrs., maps incl. fold. (Akademiĭa nauk SSSR. Kolʹskiĭ filial.) 30 refs. Text in Russian. ***Title tr.:*** Preglacial crust weathering in the Kola Peninsula.

Presents account of the distribution, processes, phases and types of preglacial weathering in Kola Peninsula, which is about 75% covered with friable deposits. Previous studies are reviewed. Locations and sections where preglacial crust weathering has been indicated are treated in detail. For each section, the appearance, mechanical and lithologic composition and other properties of the crust are described. For some locations, cross-sections, thermal diagrams, chemical analyses and photos are included. The products of such weathering in the Khibiny tundra and Lovozero mountains are studied and the results outlined. Various types of weathering are distinguished and characterized; agents and conditions affecting it are discussed. Some problems of preglacial weathering are disclosed by this work and suggestions are made for further study.

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54874. SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– , *and* A. V. GALAKHOV. Dolednikovye kontinentalʹnye otlozheniĭa v Khibinakh i nekotorye voprosy paleogeografii. (Akademiĭa nauk SSSR. Doklady, July 1, 1957. t. 115, no. 1, p. 161–63, 2 tables.) 4 refs. Text in Russian. ***Title tr.*** Preglacial continental deposits in the Khibiny, and certain problems of paleogeography.

Pre-glacial deposits in 13 localities, mostly in river valleys of central Kola Peninsula were investigated. Ancient deposits found in the Poachvum basin consist of tightly cemented breccia which

include fragments of feldspar, nepheline, aegirite, hornblende, apatite and sphene. Besides breccia, lightly cemented gravel and sandstone are also present. Chemical analysis of the cement is given (49.76 percent SiO_2). The results of granulometric analysis of breccia and degree of smoothness of its fragments are tabulated. These ancient deposits indicate that the principal elements of Khibiny relief were well developed in pre-glacial time.

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54875. SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– . Kol'skiĭ filial AN SSSR i razvitie proizvoditel'nykh sil Murmanskoĭ oblasti. (Akademiîa nauk SSSR. Izvestiîa vostochnykh filialov, 1957. no. 8, p. 100–111.) Text in Russian. ***Title tr.:*** The Kola Branch of the Academy of Sciences and development of productive forces of the Murmansk Province.

Outlines the history, organization and activities of this branch, founded in 1930 as Khibinskaîa gornaîa stant͡siîa (Khibiny Alpine Station), reorganized in 1934 as a base (baza) and in 1949 as a branch of the Academy. It comprises at present: the Geological Institute with its six laboratories, seven technological laboratories, the Murmansk Biological Station in Dal'niye Zelentsy (under reorganization into the Murmansk Marine Biological Institute of the Kola Branch), and the Polar-Alpine Botanical Garden; these institutions aré described and their activities briefly noted. The geological exploration and mineral resource development in Kola Peninsula are reviewed (p. 103–106). ***Copy seen:*** DLC.

SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– , *see also* Akademiîa nauk SSSR. Obsuzhdenie raboty . . . Kol'skogo filialov. *1958.* No. 49157.

SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– , *see also* Akademiîa nauk SSSR. V otdelenii geologo-geograficheskikh nauk. *1958.* No. 49161.

SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– , *see also* Fugzan, M. D. Ubileĭnaîa . . . *1958.* No. 51020.

54876. SIDOROV, ALEKSEĬ SEMENOVICH, 1892– . Otrit͡satel'nye predlozheniîa i otrit͡satel'nye oboroty v komi îazyke. (Akademiîa nauk SSSR. Institut îazykoznaniîa. Doklady i soobshcheniîa, 1955. no. 7, p. 55–67.) Text in Russian. ***Title tr.:*** Negative sentences and negative turn of phrases in the Komi language.

Discusses syntactical and grammatical ways to express negation in the Zyryan language and suggests the existence, originally, of a verbal clause (now lost), based on a pronominal-impersonal agreement of its main units.

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54877. SIDOROV, ALEKSEĬ SEMENOVICH, 1892– . Soveshchanie po voprosam izucheniîa komi îazyka. (Voprosy îazykoznaniîa, July–Aug. 1953. no. 4, p. 144–48.) Text in Russian. ***Title tr.:*** Conference on the problems connected with the study of the Komi language.

Summarizes eleven papers (two by this author) read at a joint conference of the Institute of Linguistics (Institut îazykoznaniîa) of the Academy of Sciences, U.S.S.R., and the Academy's Komi A.S.S.R. branch, Jan. 29–Feb. 1, 1952, in Syktyvkar. These papers dealt with the development of the Zyryan literary language, influence of Russian on its grammatical structure and syntax, use of Russian loanwords, study of Zyryan dialects, problems of orthography and translation, etc.; need for continued linguistic research was stressed.

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54878. SIDOROV, G. Nashi almazy. (Smena, June 1957. god 34, no. 12, p. 14–15, illus.) Text in Russian. ***Title tr.:*** Our diamonds.

Brief account of the achievements of the Lenin prize-winning discoverers of diamonds in Siberia: the geologist Aleksandr Petrovich Burov, who drew attention to the similarity of the Central Siberian structure with diamantiferous areas in South Africa and who found the first diamond in the Lower Tunguska River basin; Grigoriĭ Faĭnshteĭn, who found the first diamonds in Vilyuy basin; Yuriĭ Khabardin, who found the first diamantiferous pipe. The importance of the diamond discoveries to Soviet industry is stressed. ***Copy seen:*** DLC.

54879. SIDOROV, GEN. Élektrostant͡siîa nad gelzerom. (Smena, Jan. 1958. god 35, no. 1, p. 3, illus.) Text in Russian. ***Title tr.:*** Electric power station over a geyser

Notes plans to utilize subterranean heat in the Geyzernaya and Paushetka River valleys, two areas of geyser occurrence in Kamchatka. Winter baths at Para-

tunka and a hot-spring sanatorium at Nachiki (53°05′ N. 157°45′ E.) are mentioned. ***Copy seen:*** DLC.

SIEGLITZ, WALTER, *see* Kannt, H. S., *and others.* Eisbrecher "General San Martin." *1955.* No. 52166.

54880. ***SI͡EVERNYĬ ARKHIV.*** Izvi͡estie o tret'eĭ Ėkspedi͡tsii Kapitan-Leĭtenanta Litke v Si͡evernyĭ Ledovityĭ Okean, v 1823 godu. (Si͡evernyĭ arkhiv, 1824. pt. 9, p. 325–34, table.) Ref. Text in Russian. ***Title tr.:*** News of the third expedition of Lt. Capt. Litke to the Arctic Ocean in 1823.

Reports Litke's survey of the coasts of Russian Lapland and Novaya Zemlya, with location (lat. and long.) of the main geographic features, cf. No. 10212.

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54881. ***SI͡EVERNYĬ ARKHIV.*** Vzgli͡ad na torgovli͡u, proizvodimui͡u chrez Okhotskiĭ port. (Si͡evernyĭ arkhiv, 1823. pt. 7, p. 28–45.) 2 refs. Text in Russian. ***Title tr.:*** Note on the trade of the port of Okhotsk.

Reports the trade turnover (with statistics) of the port of Okhotsk, stressing its importance as clearing house for the Kamchatka trade. The main exports (sable, fox and squirrel pelts, native fur and leather goods, walrus tusks) and imports (tobacco, tea, sugar and other foodstuffs, textiles, soap, etc.), the barter relations with the Chukchis, their trading customs and feasts following completion of business transactions are described. Transportation difficulties and costs, sales losses on certain vital commodities (salt), etc. are mentioned.

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54882. SIGAFOOS, ROBERT SUMNER, 1920– . Vegetation of northwestern North America, as an aid in interpretation of geologic data. Washington, D.C., U.S. Govt. Print. Off., 1958. p. 165–85, illus., 3 maps incl. fold. (U.S. Geological Survey. Bulletin 1061–E. Contributions to general geology.) 52 refs. to key map, 31 refs. to text.

Presents distribution map, 33 x 48 in., scale 1:2,500,000, of three major forest groups and some treeless vegetation types in the area from Hecate Strait to Cape Bathurst and Point Barrow; and from Great Bear Lake to St. Lawrence Island. Data were drawn from published maps and U.S. Geological Survey field reports. The most common plant communities in the interior spruce and birch forest, the coastal spruce and hemlock forest, and the treeless regions are briefly described. Vegetation is discussed as an aid to understanding of local permafrost, of Upper Pleistocene and recent fossil plants, and of ecology, geomorphology and hydrology; examples are given. Small-scale maps of the distribution of the principal tree species, and a key map showing sources of data, are included.

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54883. ***SIGNAL.*** The *Nautilus;* there were two. (Signal, Oct. 1958. v. 13, no. 2, p. 5–7.)

Reviews attempts by the *Nautilus* of 1931 to navigate under the polar pack, based on accounts by its chief radio operator, Raymond E. Meyers; and outlines briefly communications facilities available to the new *Nautilus* during its polar crossing in 1958.

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54884. SIGUNOV, P. N. O nakhodkakh islandskogo shpata v raĭone mezhdurech'i͡a Gorbiachin-Kulu͡mbė. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bu͡lleten', 1958. vyp. 9, p. 62–66.) Text in Russian. ***Title tr.:*** On a find of Iceland spar in the region of the Gorbiyachin Kulembe interfluve.

Presents results of investigation at 14 sites (approx. 67°40′ N. 90° E.) by a field party of the Institute of the Geology of the Arctic. A possibly Triassic tufa-lavic stratum, 800–1,200 m. thick, in the western edge of Tungusska syncline is divided in five series, and for each the characteristics are given. The various sites of Iceland spar are indicated; its crystals, occurrence, measurements and defects are outlined. Mineralization and hydrothermal effects on the spar are discussed; its possible practical use is considered. ***Copy seen:*** DGS.

54885. SIIVONEN, LAURI. The problem of the short-term fluctuations in numbers of tetraonids in Europe. Helsinki, 1957. 44 p. diagrs., tables. (Suomen Riistanhoito-Säätiö (the Finnish Game Foundation.) Riistatieteellisiä julkaisuja (Papers on game research), 19.) 91 refs.

A study of food sources, breeding and reproduction of these birds (grouse, etc.) started in 1946 and comprising all Finland. Fluctuation in number of the fall population was found to be mainly

due to spring diet (green plants) available to the female and affecting egg laying. The fluctuation in number becomes steeper and shorter in cycle length towards the North. Experiments appear to confirm this view. Measures for prevention of numerical decrease in the field are discussed, as well as similarity of conditions for these birds in Europe.
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54886. SILINA, E. N. Novye predstaviteli roda *Podozamites* iz nizhnemelovykh otlozheniĭ severnogo Zaural'ia. (Akademiia nauk SSSR. Ural'skiĭ filial. Gorno-geologicheskiĭ institut. Trudy, 1957. vyp. 28, p. 34–35, plate.) 6 refs. Text in Russian. ***Title tr.:*** New representatives of the genus *Podozamites* from Lower Cretaceous deposits of the northern Trans-Ural.

Describes: Podozamites accurata, P. formalis, and *P. allecta,* n. ssp. fossil conifers of fam. Araucariaceae. The material was found in open holes in Berezovo (approx. 63°54′ N. 65°05′ E.) and at Kuznetsovo farther south. Illus. of pollen of these and another, related, species are added (plate). Some 30–40 genera of fossil plants known by pollen or spore analysis, are cited. ***Copy seen:*** DLC.

54887. SILVA, PAUL CLAUDE, 1922– . *Codium* in Scandinavian waters. (Svensk botanisk tidskrift, 1957. bd. 51, häfte 1, p. 117–34, 8 illus., 2 plates.)

Contains a key to the species of this algal genus, spreading rapidly in Scandinavian waters, descriptions of one species and three varieties. *C. fragile* subsp. *scandinavicum* n. subsp. occurring in Nordland, northern Norway, and intergrades between subsp. *scandinavicum* and subsp. *tomentosum,* recorded in Nordland and Lofoten Islands, are included.
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SILVER, J., *see* Guttmann, L., *and others.* Thermoregulation in spinal man. *1958.* No. 51459.

54888. SIM, VICTOR W. Geographical aspects of weather and climate at Eureka, Northwest Territories. (Geographical bulletin, 1957. no. 10, p. 37–53, illus., graphs, maps.) 5 refs. Summary in French.

Describes weather and climate and their effects upon the Eureka meteorological station on the west coast of Ellesmere Island; based on 1948–1952 record, writer's observations May–Sept. 1955, and work of R. W. Rae (No. 25333). Temperature, precipitation, wind direction and force, and visibility are discussed both as meteorological elements and as they relate to movement within the area and to accessibility by sea or air. Surface observations were made every three hours, and twice-daily rawinsonde "runs" and pilot balloon flights were carried on. Prevailing low temperature limits outdoor activity, use of the airstrip, and the ice-free period on the sea route to Eureka. Mean annual precipitation of 2.59 inches (short record) is the lowest total of any regularly reporting meteorological station in Canada. Mean cloud cover and visibility are favorable for air navigation near Eureka in April and May, when the main airlift is flown. Worst flying weather is in September; best in April and December. Prevailing winds are from the east Oct.–Apr.; west June–Aug. Present airstrip is oriented east-west. ***Copy seen:*** DGS.

54889. SIM, VICTOR W. Geographical Branch survey on Melville Peninsula, 1957. (Arctic circular, 1958. v. 11, no. 2, p. 27–29.)

Describes experiences during a reconnaissance study with Donald Bissett during summer 1957, on the geomorphology and human geography of northern Melville Peninsula.
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54890. SIMAK, MILAN, *and* **K. Å. GUSTAFSSON.** Experimentell förbättring av det norrländska tallfröets grobarhet. (Skogen, *Stockholm,* Aug. 15, 1957. årg. 44, nr. 16, p. 490–93, illus. tables.) Text in Swedish. ***Title tr.:*** Experimental improvement of the germination capacity of Norrland pine seed.

By means of stratification in sand at +4°–5° C. and long-time equilibration of seeds with air of +4°–5° C. and 100% relative humidity, germination capacity of poorly ripened northern pine seed was improved. X-ray photography disclosed the improved quality as due to growth of embryos within the treated resting seeds, in both cases. The equilibration method, originally developed for mutation research, is promising for use on a large scale. ***Copy seen:*** DA.

SIMAK, MILAN, *see also* Müller-Olsen, C., *and* M. Simak. X-ray . . . pine . . . *1955.* No. 53437.

54891. SIMERL, LINTON EARL, 1911– . Water vapor permeability of sheet materials. (*In:* U.S. Quarter-

master Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 80–91, 2 graphs, 5 tables.) 3 refs.

States problem of protecting packaged foods in long-term frozen storage against water loss from surface tissue. Its importance to the Armed Forces is noted in view of storage temperature fluctuations introduced by weather, handling, airplane transport, etc. The water vapor permeability characteristics of the food containers should be known over the temperature range from −60° to +50° F. A series of five round robin tests was made by 11 laboratories Feb. 1950–Dec. 1952, to develop standard test methods. Results, in good agreement among the laboratories, are given. The work was done primarily to develop test methods, not to rate packaging materials, and recommended procedure is outlined. Water vapor permeability of certain packaging films should be determined for temperatures of −20° and −80° F. Values for four films, flat and creased, are given for temperatures of 100° and 0° F. ***Copy seen:*** DLC.

SIMONOV, V. I., *see* Semenov, E. I., *and others.* Novyĭ t̂sirkonievyĭ mineral seĭdozerit . . . *1958.* No. 54679.

54892. ŠIMONOVIĆ, IVAN, *and others.* Regeneration of hemoglobin in rats exposed to low ambient temperature. (American journal of physiology, Mar. 1958. v. 192, no. 3, p. 557–59, tables.) 12 refs. *Other authors:* B. Šlat *and* K. Kostial.

Rats kept at 5° C. for 20 days showed, on the second and fifth day of exposure, slightly lower hemoglobin values than controls. Hemoglobin regeneration after bleeding showed approximately the same rate in both groups.

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54893. SIMONSEN, POVL. An animal-headed dagger from Karlebotn in east Finnmark. (Acta archaeologica, København, 1954. v. 25, p. 304–309, illus.) 12 refs.

Describes a 25-cm. long, narrow-bladed dagger made from a single piece of green-mottled, reddish-brown slate found near the Sirdagoppe farm during the summer 1952 Tromsø Museum excavations at Karlebotn. A 1.2 cm. elk head worked in the round adorns its handle. The Sirdagoppe dagger is compared with similar finds from northern Norway and Swedish Lapland and dated into the early bronze age. ***Copy seen:*** DSI.

54894. SIMONSEN, POVL. Bygdeborgen på Sørskott. (Ottar, Oct. 1957. nr. 15 (1957, nr. 4), p. 7–10, illus.) Text in Norwegian. ***Title tr.:*** The local stronghold at Sørskott.

Describes a site visited by the author in 1955: a shelf 180 m. above sea level, reached by about 600 steps cut in the rock at Sørskott (approx. 67°40′ N. 14°50′ E.), Salten, north Norway. No traces of buildings are found as the outpost was used only in times of danger; it probably dates from about 300–600 A.D. Three others are known in north Norway. ***Copy seen:*** DLC.

54895. SIMONSEN, POVL. Folk og strandlinjer. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4), p. 31–33, illus.) Text in Norwegian. ***Title tr.:*** People and shore lines.

Present heights above sea level of stone age finds and settlements are cited as indicating former shore-line levels, in different parts of north Norway.

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54896. SIMONSEN, POVL. Fra den første arkeologiske Svalbard-ekspedisjons arbeid. (Polarboken 1957, p. 76–84, illus., maps.) Text in Norwegian. ***Title tr.:*** On the work of the first Svalbard archeological expedition.

Contains results of investigations carried out by a Scandinavian expedition to Vestspitsbergen in summer 1955. Flint finds show that a stone age people lived in the area west of Grønfjorden (78° N. 14° E.) as far as Kap Linné, but the character, age and origin of the culture are still unknown. Some Norwegian occupance prior to 1720 was established, but whether communications were maintained between 1194 (discovery by Norwegians) and 1596 (rediscovery by Dutch) is not known. The main excavations of 1955 were made at Russekeila (78° N. 13°30′ E.), a Russian station, where well-preserved finds from the period 1720–1800 were made; various aspects of life on the station and of north Russian peasant culture are shown.

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54897. SIMONSEN, POVL. Menneskets innvandring til Nord-Norge. Tromsø. 14 p., illus., map. (Ottar, Jan. 1957. nr. 10 (1956, nr. 3.) 7 refs. Text

in Norwegian. ***Title tr.:*** The settling of man in north Norway.

Describes finds (mainly stone tools) of the Komsa, Fosna and Nøstvet cultures. Over 100 Komsa settlements are known between Alteidet (approx. 70° N. 22° E.) and Murmansk; their people are thought to have come from central Russia 10,000–6,000 years ago. The Fosna settlements (several hundred) are distributed along the coast from Varberg, Sweden, to Tysfjord (approx. 68°10′ N. 16°20′ E.). This culture originated in Poland and may have reached north Norway at about the same time as the Komsa culture. It developed into the Nøstvet culture (ca. 4,200–ca. 2,300 B.C.). Climatic conditions and the fauna at the time of these cultures is given. No finds from the old stone age have been made as yet in Troms. ***Copy seen:*** DLC.

54898. SIMONSEN, POVL. Minner om Barents i Tromsø Museum. (Polarboken 1958, p. 133–37, illus.) Text in Norwegian. ***Title tr.:*** Souvenirs of Barendsz in Tromsø Museum.

Describes finds from Barendsz' camp on Novaya Zemlya in 1596–97, based mainly on No. 51213, and gives a brief history of the expedition. The camp was discovered by a Norwegian in 1871 and more objects were found by Norwegian and British expeditions in 1875 and 1876. In all about 300 objects have been recovered, most donated to the Netherlands (the main ones listed), 28 in Tromsø Museum. The finds indicate that the expedition was well fitted out according to contemporary knowledge, but that it lacked equipment essential for wintering. ***Copy seen:*** SPRI.

54899. SIMONSEN, POVL. Ottar fra Hålogaland. Tromsø, 1957. 14 p. (Ottar, Apr. 1957. nr. 14 (1957 nr. 3).) Text in Norwegian. ***Title tr.:*** Ottar from Hålogaland.

Contains text (in modern Norwegian) of the north Norwegian chieftain Ottar's account to King Alfred of conditions in north Norway about 895. He describes the country, his agricultural and whaling activities, reindeer husbandry, taxes levied by him on the Lapps, etc., also his travels: Ottar is throught to have penetrated to Belomorsk (64°32′ N. 34°48′ E.) on the White Sea, where he encountered a people whom he calls "Bjarmer". This text is based on that in *Alfred the Great, his life and works*, 1884 which contains also an English translation. ***Copy seen:*** DLC.

54900. SIMONSON, ERNST, 1898– . Effect of local cold application on the fusion frequency of flicker. (Journal of applied physiology, Nov. 1958. v. 13, no. 3, p. 445–48, illus., tables.) 11 refs.

A study of conditions in 106 healthy, older men. Immersion of one arm in ice water produced a pronounced increase of the FFF, which was more marked at the lower brightness than at the higher brightness of the test patch. The magnitude of the blood pressure increase was not correlated to the increase of the FFF. ***Copy seen:*** DNLM.

54901. SIMPSON, CORTLANDT JAMES WOORE, 1911– , *and others*. North ice; the British North Greenland Expedition. Drawings by Ann Simpson. London, Hodder and Stoughton, 1957. 384 p. 57 illus. (8 col.), 4 maps (incl. endpapers) 2 diagrs. *Other authors:* M. E. B. Banks, J. B. Walker, A. B. Erskine, H. Lewis, G. Rollitt, P. Wyllie, R. Brooke, E. Jones, C. Bull, R. A. N. McCready, J. P. Masterton, and R. W. Moreton.

Narrative (no scientific results) by the leader of the expedition (1952–1954) to Dronning Louises Land, Northeast Greenland (76°46′ N. 24°15′ W.), and to the inland ice, with contributions by various members of the expedition, and preface by A. U. Willis, Chairman of the Organizing Committee. Chronological account deals with the leader's preliminary visits to Greenland, in summer 1950 as guest of the Danish Pearyland Expedition, and in summer 1951 as leader of a four-man reconnaissance group; organization and plans for scientific program, buildings and equipment, transport and fuel, food and clothing, etc.; establishment of the 25-man group at Britannia Sø in Aug. 1952 and airlift of equipment and supplies; sledge journey and establishment of inland ice station "Northice" (78°07′ N. 38°10′ W.) by air drop, Sept.–Oct. 1952. The autumn, spring, and summer scientific journeys (geologic, seismic, gravity surveys) along the coast and on the inland ice by sledge and "weasel" during 1952–1953, 1953–1954, are described by members taking part; also the two winterings at Britannia Sø base camp and Northice. Members of the expedition for both years (21 men in 1953–1954) are listed according to their scientific function (p. 9–10). *Appended* (p. 352–84) are descriptions of the lay-out and construction of the base huts and Northice station; food and cooking; dog

sledging; clothing and tentage; vehicles and trailers; survey of sea and air freight; survey of expenditure; glossary of Danish geographic terms with English equivalents; chronological index of main events.

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54902. SIMPSON, *Sir* GEORGE CLARKE, 1878– . Further studies in world climate. (Royal Meteorological Society. Quarterly journal, Oct. 1957. v. 83, no. 358, p. 459–85, text map, 5 diagrs. 2 tables.) 13 refs.

Continuation of discussion reported in No. 37432. "The effects of changes in solar radiation on the climate of the earth are discussed with special reference to glacial phases in high latitudes and to pluvial periods which are common to the earth as a whole. The relationship between the radiation and the glacial and pluvial phases is expressed in tabular form. Adopting the chronology of the glacial and pluvial phases during the Pleistocene period, as published by K. P. Oakley, a curve of solar radiation is constructed using only the glacial phases; this proves to be a periodic curve with three complete oscillations between the beginning of the Pleistocene period and the present day. Using this radiation curve, the periods of heavy and light precipitation are determined, and compared with the pluvial periods. Three periods of heavy precipitation during the Pleistocene are indicated and a correlation of these with the observed pluvial periods in Africa is suggested."—Author's abstract.

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54903. SIMPSON, LLOYD S. Estimation of sea ice formation and growth. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 162–66, 6 text maps.) 3 refs.

Describes the potential method of forecasting rate of ice growth in the Arctic, being used by the U.S. Hydrographic Office. Oceanographic soundings (temperature and salinity) are taken; information is converted to an "ice potential" of the water column. Method of conversion is explained; estimates of ice conditions for as much as 150 days may be made under certain conditions.

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54904. SIMPSON, R. A. Uranium in Canada 1956: number of producing mills may reach 22. (Canadian mining journal, Feb. 1957. v. 78, no. 2, p. 129–30.)

Uranium production which began in Canada in 1942 has grown to six producers capable of processing in excess of 10,700 tons of ore per day. Production of the richest ore in Canada is carried out at Port Radium on Great Bear Lake, N.W.T. The ore is complex with a wide variety of metallic minerals. The uranium occurs in massive pitchblende.

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54905. SINEL'NIKOV, A. Taĭny okeana (Smena, Oct. 1957. god 34, no. 19, p. 23, illus., port.) Text in Russian. ***Title tr.:*** Mysteries of the ocean.

Notes explorations of deep-water fauna in the Kuril-Kamchatka Trench and other regions of the North Pacific, carried out by the research vessel *Vitiaz'* in 1949–1957. Several specimens of fish taken at over 7,000 m. depth are briefly described. During the 1957 cruise the vessel anchored at 9,600 m. depth; activities of Prof. T. S. Rass, head of the ichthyological team on the *Vitiaz'* are noted.

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SINGH, H., *see* Fernández, C., *and others.* Effect . . . hypothermia on cochlear responses. *1958.* No. 50880.

54906. SINITSYN, M. O tundre, purge i skazochnykh bogatyrʃakh. (Sovetskiĭ soʃuz, 1958, no. 11 (105), p. 32, port.) Text in Russian. ***Title tr.:*** About the tundra, blizzards and legendary heroes.

Sketches scientific and cultural advances of the Nenets (Samoyeds) and reports on a lecture on Samoyed legends delivered recently in Moscow by the Nenets folklorist, U. V. Ledkova.

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54907. SIN'KEVICH, M. S. Mekhanizatsiia podgotovki pochvy v usloviiakh Karelii. (Lesnoe khozʃaĭstvo, Jan. 1958. god 11, no. 1, p. 56–58, illus., tables.) Text in Russian. ***Title tr.:*** Mechanized preparation of the soil under Karelian conditions.

Preparation of the ground for seeding or planting pine, fir or spruce is described. The ground is burned over and the remaining stumps are stubbed out with a multi-prong tractor-drawn plow. A harrow, made of heavy plates with strong wedge-shaped prongs, is used for further softening of the ground. Seeding is usually done on plots of ½ sq. m. spaced 3–3½ m. apart. In autumn, the seedlings are sorted and cleaned; further replanting

is done after two or more years. Seeding and growth data are tabulated.

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SIPRE, *see* U.S. Library of Congress. Bibliography on snow, ice and permafrost . . . *1957–58.* No. 55635.

SIRELIUS, UUNO TAAVI, 1872–1929, *see* Vahter, T. Ornamentik der Ob-Ugrier. *1953.* No. 55705.

54908. SIREN, ALLAN. The drainage basin evaporation in Finland. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. General Assembly, Oslo, Aug. 1948. t. 1, Travaux des commissions de potamologie et de limnologie, *pub.* 1950? p. 129–30, table, 2 text maps.) Ref.

Contains data on basin area, percentage of area in lakes, mean temperatures for Apr.–Oct., average annual precipitation and evaporation. Formulas for determining amount of evaporation are presented. Three basins in the North are included: Kemijärvi, Kemijoki-Taivalkossi, and Patsjoki-Vitaniemi; map of evaporation distribution, based on averages 1911–1940, shows annual evaporation decreasing northward to less than 100 mm. ***Copy seen:*** DGS.

54909. SIRÉN, GUSTAF. The development of spruce forest on raw humus sites in northern Finland and its ecology. Helsinki, 1955. 408 p. illus., map, tables, diagrs. (Acta forestalia fennica 62.4.) 465 refs. Summary in Finnish.

Presents results of field investigations mainly during 1950–52, on the natural development of spruce forests on fresh site types. The succession which begins after a forest fire as a more or less pure birch stand and ends as a pure secondary spruce climax stand was studied exclusively. The dynamics of the *Hylocomium-Myrtillus* type forest and ecological changes in the stand climate and in the soil are treated in detail. A short chapter on practical application is included. ***Copy seen:*** DLC.

54910. SIRÉN, GUSTAF. Skogen vandrar åter mot norr. (Nordenskiöldsamfundet i Finland. Tidskrift 1958. årg. 18, p. 101–108, illus., maps, diagrs.) 32 refs. Text in Swedish. ***Title tr.:*** The forest penetrates further north again.

Contains a brief survey of the fluctuations of the pine forest line in Fenno-Scandinavia since the latest ice age. At present, pine is advancing in north Finland, partly because of milder climate, also as a result of improved forestry.

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54911. SIRIN, A. N. Sostoi͡anie nekotorykh vulkanov Kamchatki v nachale 1957 g. (Akademii͡a nauk SSSR. Vulkanologicheskai͡a stant͡siі͡a. Bi͡ulleten', 1958. no. 27, p. 16–24, illus., plan.) 3 refs. Text in Russian. ***Title tr.:*** The state of some Kamchatka volcanoes at the beginning of 1957.

Reports activities of Zhupanovskiy, Avachinskiy and Vilyuchinskiy volcanoes in Jan.–Mar. 1957. For Zhupanovskiy, its geomorphology, and previous exploration are outlined, plan and photographs given of its summit, with notes on the series of weak eruptions which began in Dec. 1956 and were observed by the author during flights on Jan. 8 and 28, 1957; the eruptions were limited to ejections of vapors and ashes. On the basis of local reports and occasional observations, Vilyuchinskiy volcano, hitherto regarded as extinct, is said to emit vapor and smoke, probably from fumaroles located at its summit.

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SIROTIN, D., *see* Hentgès, P. Sovetskiĭ Soi͡uz daleko vidit. *1957.* No. 51687.

54912. SISKO, R. K. Periodicheski ischezai͡ushchee ozero. (Problemy Arktiki, 1958. vyp. 3, p. 114–16, illus., map.) Text in Russian. ***Title tr.:*** A periodically disappearing lake.

Description of Lake Melkoye, a shore lake on Stolbovoy Island (74°05′ N. 136° E.) of the New Siberian Islands. Its basin (4.5 km. long and up to 2 km. wide) fills with fresh water at the beginning o the summer, which then breaks through and empties into the sea.

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SISKO, R. K., *see also* Zhadrinskai͡a, N. G., *& others.* Metel' v razgar leta. *1958.* No. 56195.

SIVTSEV, DMITRIĬ KONONOVICH (SUORUN OMOLLON), 1904– , *see* P'esy sakutskikh dramaturgov. *1957.* No. 53949.

SIVTSEV, G., *see* Shadrin, P., *and* G. Sivtsev. Ob uchebnom plane natsional'noĭ . . . *1958.* No. 54722.

54913. SJÖDÉN, RUNE. Högfjäll. (Svenska turistföreningen. Årsskrift,

1957. p. 127–44, 8 illus., text map.) Text in Swedish. ***Title tr.:*** High mountains.

Describes landscape, weather, and personal experiences on a journey in the Kebenkaise region of arctic Sweden to make plant studies and photographs. Plant habitats are described; new altitude records in Sweden were determined for *Gentiana tenella* and *Trientalis*.

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54914. SJÖDIN, EINAR. Meteorological observations on the Mikka Glacier in the Sarek massif, Swedish Lappland, during the summer of 1956. (Geografiska annaler, 1957. årg. 39, häfte 1, p. 54–83, 4 illus., 6 text maps, diagrs., graphs, 4 tables.) 15 refs.

Results of field work July 15–Aug. 5, with the glaciologists B. E. Eriksson, and G. Norling, q.q.v., with camp in the firn region of Mikka (67°25′ N. 17°42′ E.) about 1,320 m. above sea level. Regular observations of temperature, humidity, wind, and clouds were made. Procedure is described, and data collected (wind direction and velocity at 100, 300, and 900 cm. above glacier surface, mean temperatures and frequency of temperatures at 50–150 cm.) are tabulated, graphed, and compared with similar records from nearby meteorological stations to determine local climatic deviations on the glacier. Observations on melt cups in the snow are described. Weather conditions on the glacier did not deviate significantly from those of the surrounding area during low pressure, overcast sky, and steep pressure gradients, while they differed greatly with gentle pressure gradients and a low degree of cloudiness. The melt cups observed in the firn region of Mikka glacier were oval in shape with their major axes parallel and aligned in rows down glacier. The snow between the rows of melt cups formed ridges, which were steeper on their lee than on their windward sides. On days with constant wind direction, the longer axes of the melt cups were oriented at a right angle to the wind, while on days with variable winds no general direction of the melt cups was observed. ***Copy seen:*** DGS.

54915. SJØSETH, H. Undersøkelser over frostherdighet hos engvekster. (Forskning og forsøk i landbruket, 1957. bd. 8, hefte 1, p. 77–98, illus., 12 tables.) 11 refs. *Also pub. as:* Norway. Rådet for jordbruksforsøk. (Melding, nr. 10.) Text in Norwegian. Summary in English. ***Title tr.:*** Studies on frost hardiness in meadow plants.

Describes laboratory experiments on cold resistance of meadow plants, mostly strains of red clover, and one field overwintering experiment. The tetraploid clover varieties showed less resistance than diploids, which included some strains originated in arctic Norway. Results of the clover experiments and some freezing tests of timothy and alfalfa are tabulated. ***Copy seen:*** DA.

SJÖSTRÖM, BJÖRN, *see* Haeger, K., *and others.* Electrocardiographic studies . . . *1957.* No. 51476.

SJÖSTRÖM, BJÖRN, *see* Haeger, K., *and* B. Sjöström. Procaine amide . . . ventricular fibrillation . . . *1957* No. 51477.

54916. SJÖSTRÖM, HARALD. Skogsfröproblemet i Norrland. (Skogen, *Stockholm,* June 1, 1951. årg. 38, nr. 6, p. 122–23, illus.) Text in Swedish. ***Title tr.:*** The tree seed problem in Norrland.

Natural regeneration of conifers is restricted in northern Sweden by the cold climate. Planting, which cannot be mechanized, is expensive; seeding is less so. Need for more, and better utilization of, seed, now in short supply, is stressed. Regulations for seed trees are assailed as too strict, and mechanized operations (seed extraction, cone sorting, and cleaning of seed) are suggested as feasible. ***Copy seen:*** DA.

SKABICHEVSKAĬA, T. P., *see* Zhuravlev, I. I., *and* T. P. Skabichevskaĭa. Patogennost' griba *Alternaria* . . . *1958.* No. 56212.

54917. SKALON, V. Okhotovedy. (Okhota i okhotnich'e khozĭaĭstvo, Sept. 1957. god 3, no. 9, p. 16–17.) Text in Russian. ***Title tr.:*** Experts in the hunting industry.

Discusses the problem of training hunting experts in the U.S.S.R.: the Moscow Higher School of Hunting Science (Moskovskie vysshie kursy okhotovedeniĭa), 1924–27; the Moscow Fur Institute (Moskovskiĭ pushno-mekhovoĭ institut) gives instruction; a Hunting Science section was organized in 1950 at Irkutsk University. The role of qualified hunting experts in development of the hunting industry is stressed; every district of

the far north should have an expert on hunting. ***Copy seen:*** DLC.

54918. SKARLAND, IVAR, 1899– , *and* C. J. KEIM. Archeological discoveries on the Denali Highway, Alaska. (Alaska. University. Anthropological papers, May 1958. v. 6, no. 2, p. 79–88, illus. on 5 plates.) 6 refs.

Describes two caribou killing grounds discovered in blowouts during the construction of the Denali Highway linking Mount McKinley National Park with the Richardson Highway. The Ratekin site, probably a caribou butchering ground located approx. 75 miles from Paxson, yielded various types of flaked scrapers, knives and projectile points. The Hosdy Ridge site, near Tangle Lakes, consisted mainly of refuse flakes and seems to have been a drive location used by migratory caribou hunters. No burins or retouched lamellar flakes were found in either site. Due to the blowouts' destruction of culture horizons only a vague dating of between 2,000 and 4,000 years old based on the patination of flint specimens is attempted. Resemblance is noted to material discovered in the Upper Susitna drainage area lying, as the two above-named sites, within the hereditary hunting grounds of the Ahtena Indians. ***Copy seen:*** DLC.

SKARLAND, IVAR, 1899– , *see also* MacNeish, R. S. Archaeological investigations . . . 1957. *1957*. No. 53030.

SKARLAND, IVAR, 1899– , *see also* Scott, R. F. Resource planning . . . *1957*. No. 54647.

54919. SKAVEN-HAUG, SVERRE. Jernbanens behov for torv til teleisolasjon. (Norsk myrselskap. Meddelelser, June 1956. årg. 54, nr. 3, p. 76–80, diagr.) Text in Norwegian. ***Title tr.:*** The railway's need of peat for frost insulation.

Where frost heaving is a construction problem in Norway, the railway has developed use of a road base of compressed sphagnum peat blocks or a combination of peat blocks and sleepers. Both methods are illustrated. Specific dimensions and other requirements are discussed. With mechanization, peat production could be improved and prices lowered, thereby meeting demands of the railway and other users, also increasing the value of the peat industry. ***Copy seen:*** DA.

54920. SKAVEN-HAUG, SVERRE. Torv i jernbanelinjen som botemiddel mot telehiving. (Teknisk tidskrift, Dec. 28, 1946. årg. 76, häfte 52, p. 1367–74, graphs, diagrs.) 3 refs. Text in Norwegian. ***Title tr.:*** Peat in railroad beds to remedy frost heaving.

The freezing depth in peat is less than in cinders and gravel, according to theoretical calculations and field observations in Norway; the Norwegian State Railways are to place peat in 200 km. of railroad beds to reduce frost heaving ***Copy seen:*** DLC

SKELTON, RALEIGH ASHLIN, *see* Naish, G. P. B., *and* R. A. Skelton. Explorers' ships, II. *1957*. No. 53486.

54921. SKEVIK, KAARE. Da rokkene surret hos overvintrerne på Hotellneset vinteren 1898/99. (Polarboken 1958, p. 121–27, port.) Text in Norwegian. ***Title tr.:*** When the spinning-wheels hummed among the wintering party at Hotellneset in the winter of 1898–99.

Recounts experiences of the first wintering party on Spitsbergen that included women (Hotellneset 78°10′ N. 15° 30′ E.), based on the memories of the last survivor, then the three-year-old daughter of two participants, and on details told her by her parents. It was a hunting expedition and all survived the winter. ***Copy seen:*** SPRI.

54922. SKINNER, HENRY, 1861–1926, *and* R. C. WILLIAMS. On the male genitalia of the Hesperiidae of North America, paper III. (American Entomological Society. Transactions, Mar. 1923. v. 49, p. 129–53, 44 illus.)

Contains an annotated list of 44 species of these lepidopters, with specific characters and data on distribution. *Carterocephalus palaemon* from Alaska is included. Papers I–II do not contain arctic material. ***Copy seen:*** DSI.

54923. SKINNER, HENRY, 1861–1926. Studies in the genus *Thanaos*. (American Entomological Society. Transactions, 1914. v. 40, p. 195–221, illus.)

The dusky-winged skipper moths are discussed and listed (29 species); one, *T. persius* occurs in Alaska.

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54924. SKINROOD, A. C. The effect of snow properties on vehicle trafficability in the Arctic. Wilmette, Ill., Feb. 1957. 16 p. 10 illus., 15 graphs. (U.S. Army. Corps of Engineers. Snow Ice

and Permafrost Research Establishment. Special report 22.) 5 refs.

Instrumentation, techniques, and results of tests carried out with modified weasels in the summer of 1955 as part of an 1,100-mile research expedition (Project Jello) in the Greenland icecap interior are given. Max. drawbar pull was measured together with meteorological conditions and conditions of the snow cover, including snow temperature, density, and depth of distortion due to the vehicle tracks. With this vehicle, the depth to which snow properties determine max. drawbar pull may vary 15–40 cm. No correlation was found between drawbar pull and average density to any given depth. A similar lack of correlation was found in the case of ram hardness numbers. Recommendations for future test programs are given.

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54925. SKOG, CALLE. Med vesslor i lappmarken; referat från SSF's 3:e vinterexkursjon. (Skogen, *Stockholm*, Apr. 1, 1952. årg. 39, nr. 4, p. 94–98, 102, illus.) Text in Swedish. ***Title tr.:*** With weasels in Lappmark; report of the third winter excursion of Svenska skogsvårdsföreningen.

Reports trip by weasel in Feb. 1952, of members of the Swedish Forestry Society to the Lycksele and Åsele area. They studied mechanized lumbering in the forests of a large operator, Mo och Domsjö. ***Copy seen:*** DA.

54926. *SKOGBRUKEREN.* Kystplanting i Troms; furuplantingen på Bjarkøy dør ut. (Skogbrukeren, Nov. 15, 1953. årg. 28, nr. 22, p. 335, illus.) Text in Norwegian. ***Title tr.:*** Coastal planting in Troms; pine plantings on Bjarkøy are dying out.

This island (69° N. 16°13′ E.) was planted extensively with pine in 1936, despite warnings by such experts as Opsahl, Ording, q.q.v. The cold summers and the mild winters of 1948 and 1949 killed the young pines. Larch, however, survived and flourished, probably because it sheds needles in the fall and is not attacked by fungus of the genus *Lephodermium.* ***Copy seen:*** DA.

54927. *SKOGBRUKEREN.* Skogplanting naer Nordkapp. (Skogbrukeren, Aug. 1, 1953. årg. 28, nr. 15, p. 219.) Text in Norwegian. ***Title tr.:*** Forest planting near Nordkapp.

Experimental planting of Siberian larch, pine, and Canadian spruce was done by K. Helstad in summer 1953 on Nordkyn Peninsula and at Mehamn southeast of Nordkapp (71°11′ N. 25° 40′ E.). Sheltered sites and first-class soil were chosen. ***Copy seen:*** DA.

54928. *SKOGEN,* *Oslo.* Fra Salten. (Skogen, *Oslo*, 1951. årg. 16, hefte 2, p. 19.) Text in Norwegian. ***Title tr.:*** From Salten.

Describes the property of the Salten Forest Society at Beiarn (67°20′ N. 14°40′ E.), purchased in 1919 for large-scale reforestation, demonstration and experimental work. When acquired, it was exclusively hardwood, but 1,100 decares of spruce have now been planted. ***Copy seen:*** DA.

54929. *SKOGEN,* *Oslo.* Vi må gjenreise skogen i Troms. (Skogen, *Oslo*, 1950. årg. 15, hefte 4, p. 52–53.) Text in Norwegian. ***Title tr.:*** We must reforest Troms.

Notes activities of the Troms Forest Society which, over 50 years, has planted several million conifers, with good results. Complete reforestation is possible in a comparatively short period if cooperation and support of the Society's work is forthcoming. ***Copy seen:*** DA.

54930. *SKOGEN,* *Stockholm.* Modern skogsvård hos Mo-Do. (Skogen, *Stockholm*, Sept. 1, 1953. årg. 40, nr. 9, p. 194–95, 206, illus.) Text in Swedish. ***Title tr.:*** Modern forest management by the Mo och Domsjö company.

Area cutting, cleaning-up after cutting (usually by burning), and artificial regeneration are carried out in this large lumbering company's forests in the Lycksele and Åsele areas of northern Sweden. Planting of pine is found more reliable than sowing, and requires less seed. Stands are thinned every ten years. Three nurseries are maintained for company forests. Workers are permanent and housing is provided.

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54931. *SKOGEN,* *Stockholm.* Norrbottens län. (Skogen, *Stockholm*, June 27, 1958. årg. 45, nr. 13, p. 378). Text in Swedish. ***Title tr.:*** Norbotten county.

Notes the county's request for state aid for economic development activities, particularly road construction. With an adequate road net, the forests could be 20% more productive, and could provide work for the unemployed, etc.

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54932. ***SKOGEN,*** *Stockholm.* Norrflärkeskolan; Mo och Domsjö AB:s skogsskola. (Skogen, *Stockholm,* Nov. 1, 1953. årg. 40, nr. 11, p. 236–37, illus.) Text in Swedish. ***Title tr.:*** The Norrflärke School; the Mo och Domsjö company's forestry school.

Describes school in northern Sweden for training foremen and factors (supervisors); theoretical and practical instruction is given, the winter training in the Lycksele lappmark. ***Copy seen:*** DA.

54933. ***SKOGEN,*** *Stockholm.* Norrlandsk skogsvård i dag. (Skogen, *Stockholm,* Oct. 15, 1954. årg. 41, nr. 20, p. 317.) Text in Swedish. ***Title tr.:*** Norrland forestry today.

A large-scale reforestation program is under way in Norrland to replace the virgin pine, now largely exploited and having regenerated. The program involves area cutting, burning, removal of birch, and planting. It is expected to double the present yield eventually. The state and large lumber companies have taken the lead, individual farmers also participate, although the program will not pay off during the lifetime of present owners. ***Copy seen:*** DA.

54934. ***SKOGEN,*** *Stockholm.* De Norrländska skogs- och flottningsarbetarnes förläggningsförhållanden. (Skogen, *Stockholm,* Nov. 1, 1954. årg. 41, nr. 21, p. 348.) Text in Swedish. ***Title tr.:*** Living quarters for forest and floating workers in Norrland.

Forest work in northern Sweden: cutting, log transport, forest cultivation and road construction is now on a year-round basis, and housing for permanent workers is essential. Permanent, transportable dwellings, also trailers are provided for road workers. With new roads, many forest workers commute to work, others use new or modernized forest stations or forest huts. Modern floating methods have altered the accommodation requirement for river men, but some houses, and rest stations are planned.

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54935. ***SKOGEN,*** *Stockholm.* Norrlands skogsbruk. (Skogen, *Stockholm,* Feb. 21, 1958. årg. 45, nr. 4, p. 95.) Text in Swedish. ***Title tr.:*** Norrland forestry.

Reviews forestry developments in this northern province of Sweden, on the 75th anniversary of the Norrlands skogsvårdsförbund (Society for Forest Cultivation), a major contributor to this development in recent years.

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54936. ***SKOGEN,*** *Stockholm.* Norrlandsrapsodi. (Skogen, *Stockholm,* Feb. 21, 1958. årg. 45, nr. 4, p. 104–105, illus.) Text in Swedish. ***Title tr.:*** Norrland rhapsody.

Illus. of Norrland forests and forest activities. ***Copy seen:*** DA.

54937. ***SKOGEN,*** *Stockholm.* Nya traktorkälkar. (Skogen, *Stockholm,* Dec. 15, 1953. årg. 40, nr. 12*, p. 146, illus.) Text in Swedish. ***Title tr.:*** New tractor sleds.

Description and illus. of two sleds developed by the Swedish State Waterfall Works for use with light, tracked tractors.

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54938. ***SKOGEN,*** *Stockholm.* Padjelanta vildmarksområde utan motstykke i hela Europa; förslag framlagt om områdets avsättning til nationalpark. (Skogen, *Stockholm,* Apr. 1, 1957. årg. 44, nr. 7, p. 204–205, illus., map.) Text in Swedish. ***Title tr.:*** Padjelanta wilderness region with no counterpart in all Europe; recommendations to make the area a national park.

Padjelanta in the Virihaure and Vastenjauna lakes region, in Lule Lappmark near the Norwegian border (approx. 67°30′ N. 16°30′ E.) is the largest wilderness area in Europe. The mountains and a flourishing vegetation make it the most scenic area in Sweden. Inhabited only by Lapps, it is still in its natural state. Its mountain birch, disappearing elsewhere in Sweden, as well as its virgin birch should be protected and the area made a national park.

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54939. ***SKOGEN,*** *Stockholm.* SDA:s bandforskning i Lycksele. (Skogen, *Stockholm,* Apr. 4, 1958. årg. 45, nr. 7, p. 212–14, illus.) Text in Swedish. ***Title tr.:*** SDA's tractor track research in Lycksele.

The experiment station operated by Föreningen skogsarbetens och kungl. domänstyrelsens arbetsstudieavdeling at Lycksele is carrying on research on the development of tractor belts for use over snow, especially snow-packed roads. Other projects include the development of equipment for simultaneously packing snow and propelling the tractor; adaptation of agricultural tractors to forestry;

and (in cooperation with the Defense Dept.) development of winter vehicles. ***Copy seen:*** DA.

54940. ***SKOGEN,*** *Stockholm.* Svårföryngrad skog i norre Sveriges inland; Skogstyrelsens förslag til gränsrevision. (Skogen, *Stockholm,* June 15, 1953. årg. 40, nr. 6*–7*, p. 74–75.) Text in Swedish. ***Title tr.:*** Hard-regenerative forests in the inland areas of northern Sweden; the Forest Commission's recommendations for change of borders.

Committee was appointed under the new forest conservation law to redefine forest areas as hard-regenerative or protective. Its recommendations for boundaries between regenerative and hard-regenerative areas in Norrland are outlined, as approved by the Forest Commission. ***Copy seen:*** DA.

SKOOG, RONALD O., *see* Lensink, C. J., *and others.* Food habits of marten in interior Alaska . . . *1955.* No. 52755.

54941. SKORIK, PETR ĵAKOVLEVICH. K voprosu o klassifikaĉii chukotsko-kamchatskikh ĵazykov. (Voprosy ĵazykoznaniĵa, Jan.–Feb. 1958. god 7, no. 1, p. 21–35, tables.) 8 refs. Text in Russian. ***Title tr.:*** Classification of Chukotka-Kamchatka languages.

The term "Paleoasiatic languages" is criticized as linguistically inexact; "Chukotka-Kamchatka languages" is proposed to designate four main vernaculars spoken by the aboriginal population of these peninsulas: Chukchi, Koryak, Kamchadal and Kerek. Their affinities and dissimilarities are discussed and their phonetics, morphology, agglutinative structure, syntax, lexical content and dialects compared. The dialect of the Alyutortsy, a Koryak tribe, is suggested as a separate, fifth language of this group. ***Copy seen:*** DLC.

54942. SKORIK, PETR ĵAKOVLEVICH. K voprosu o sostave fonem chukotskogo ĵazyka. (Akademiĵa nauk SSSR. Institut ĵazykoznaniĵa. Doklady i soobshcheniĵa, 1958. no. 11, p. 121–36.) 5 refs. Text in Russian. ***Title tr.:*** The problem of the composition of phonemes in the Chukchi language.

An analysis of the phonologic system of the Chukchi language reviewing and supplementing the findings of G. I. Mel'nikov (No. 36178). Particular attention is given to guttural occlusive sounds and diphthongs. This article is a shortened version of a paper read in 1953 at the session of the Institute's sector of the languages of the peoples of the North. ***Copy seen:*** DLC.

54943. SKORIK, PETR ĵAKOVLEVICH. K voprosu o sravenitel'nom izuchenii chukotsko-kamchatskikh ĵazykov. (Akademiĵa nauk SSSR. Izvestiĵa. Otdelenie literatury i ĵazyka. Nov.–Dec. 1958. t. 17, vyp, 6, p. 534–46.) 26 refs. Text in Russian. ***Title tr.:*** A comparative study of Chukotka-Kamchatka languages.

Analyzes and compares the phonetics, morphology, word building, grammatical structure and historical development of the five aboriginal languages of Chukotka and Kamchatka: Chukchi, Koryak, Alyutor, Kerek and Itel'men (Kamchadal). Kamchadal, distinct from the others in phonetics and grammar (i.e., absence of polysynthetic word building), had an independent development and was strongly influenced by a language as yet undetermined and now extinct. The phonetic systems of Kerek and Alyutor (two Koryak subgroups) are close to Eskimo. ***Copy seen:*** DLC.

SKORIK, PETR ĵAKOVLEVICH, *see also* Sunik, O. P. Soveshchanie po ĵazykam . . . *1953.* No. 55236.

54944. SKRABAL, R. J. Thirty-foot antenna for the DEW Line. (Bell laboratories record, Nov. 1957. v. 35, no. 11, p. 450–53, illus.)

Describes the design, testing and mounting of the 30-ft. parabolic reflector antenna. Weighing eight tons and mounted with the reflector center 25–75 ft. above the tower footings, the structure is designed for a deflection of not more than 0.5° when covered with three in. of ice and subjected to 125 mph. winds. Twenty sectors of 12-gauge steel plate are bolted to the ribs and to connecting angles to form the reflecting surface; all structural members are of galvanized steel. The antenna has a gain of about 35 db at frequencies between 755 and 985 mc. De-icing is done by electrical heating and by direct hot air from oil-fired space heaters within the enclosure. ***Copy seen:*** DLC.

SKRIBELAND, S., *see* Landmark, B., *and others.* Ionospheric h'f-observations . . . *1956.* No. 52640.

54945. SKRIPIN, G. V. O vklade radioaktivnykh ėmanaĉiĭ v nablĵudaemyĭ sutochnyĭ khod intensivnosti ionizaĉii ot

kosmicheskikh luchei. (Yakutsk. Universitet. Uchenye zapiski, 1957. vyp. 1, Seriia estestvennykh nauk, p. 29–32, tables.) 5 refs. Text in Russian. ***Title tr.:*** Influence of radioactive emanations on observation of the daily fluctuation of intensity of ionization caused by the cosmic rays.

Reports preliminary results of observations begun in the fall of 1953 at Yakutsk, using ionization chambers of iron 2.3 cm. thick covered with 12 cm. lead. The intensity of radioactive emanation seems to be affected by a daily fluctuation with an amplitude of $1.0 \pm 0.1\%$ reaching its maximum in night.

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54946. SKRIPTUNOVA, L. I. O raschete temperatury vody v Severnoi Atlantike v kholodnuiu chast' goda. (Meteorologiia i gidrologiia, Feb. 1958, no. 2, p. 17–23, tables, text map.) 9 refs. Text in Russian. ***Title tr.:*** Computation of water temperature in the North Atlantic during the cold period.

Methods for computing water temperature in relation to heat balance and salinity of the water are discussed on the basis of observations made by eight weather ships from 1951 to 1955. Four ships were stationed in a region of strong warm currents, one in a weak current and the other three at the boundary of warm and cold currents. About 40,000 readings were made and analyzed by correlation of observations from the nearest pair of ships. The effects of heat exchange between air and water and convectional heat transmission to deep water were studied, and a relationship was formulated between these factors (temperature of water and air, salinity of water, heat losses from surface water, etc.). It is concluded that: (1) water temperature during winter is dependent mainly upon heat exchange between water and air; (2) with known initial temperature distribution and vertical salinity, the water temperature can be computed using the heat balance at the water surface; (3) in the absence of known distribution of temperature and salinity the depth of convectional exchange can be determined approximately using the sum of heat losses at the ocean surface. Anomalies in water temperatures may be computed by air temperature anomalies; (4) the air temperature in some cases may be computed by empirical formulas.

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54947. SKROBOV, VASILIĬ DMITRIEVICH. Migratsiia loseĭ v tundru. (Okhota i okhotnich'e khoziaĭstvo, Apr. 1958. god 4, no. 4, p. 58.) Text in Russian. ***Title tr.:*** Migration of elk into the tundra.

Five to six years ago, no elk were encountered in the Nentsy National District, whereas now they occur in quantity throughout the entire area of the forest tundra to the shores of Barents Sea. The spring (1957) migration of elk northward in the Malozemel'skaya Tundra is noted.

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54948. SKROBOV, VASILIĬ DMITRIEVICH. Prodvizhenie zhivotnykh lesnoĭ zony v tundru. (Priroda, Nov. 1958. god 47, no. 11, p. 104–105.) 3 refs. Text in Russian. ***Title tr.:*** Advance of animals from the forest zone into the tundra.

Notes the ever increasing movement of elk into the Malozemel'skaya Tundra of Arkhangel'skaya Oblast', and their return into the forests in the fall. Brown bear, marten, foxes and other animals are reported from the tundra where they were not found some 50 years ago. Warming-up of the Arctic is considered as effecting this change.

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54949. SKROBOV, VASILIĬ DMITRIEVICH. Promysel beloĭ kuropatki v Nenetskom natsional'nom okruge. (Ratsionalizatsiia okhotnich'ego promysla, 1958, vyp. 7, p. 58–63, illus.) Text in Russian. ***Title tr.:*** Hunting ptarmigan in the Nentsy National District.

Ptarmigan occur in Bol'shezemel'skaya, Malozemel'skaya, Kanin and Timan tundras up to 79° N. Their numbers fluctuate greatly, with a maximum of a hundred pair to a thousand hectares (?) in spring and summer. Their winter migration from tundra to forest-tundra is discussed. The "Pechora" and "Kanin" methods of snaring, as used by hunters of the area, are described with technical details.

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54950. SKUNCKE, FOLKE. Renbeten och deras gradering. 1958. 204 p., illus., map, tables, 9 diagrs. in pocket. (Lappväsendet. Renforskningen. Meddelande, 4.) About 60 refs. Text in Swedish. ***Title tr.:*** Reindeer pastures and their grading.

Presents results of author's field investigations in north Sweden. Seasonal

fodder plants and their plant communities are established, and a large number of such communities in mountain and forest regions are described. In 18, sample areas are analyzed, and weight of their forage plants, green and dried, is given. Data on annual potential fodder plant production in various types of vegetation are tabulated and graphically presented. Relationship between forestry and reindeer husbandry is treated extensively. Need for certain further investigations is shown. The evaluation of pastures affected by water-power projects is dealt with from various points of view. A survey of mountain vegetation and of the more important ecological factors regulating or affecting the composition and distribution of this vegetation is contributed (p. 36–60) by Gustaf Sandberg. ***Copy seen:*** SPRI.

54951. SLADE, DAVID H. An unusual weather disturbance near Thule Air Base, Greenland. (American Meteorological Society. Bulletin, May 1958. v. 39, no. 5, p. 278–79, text map, diagr.)

Unusual, sharply defined cyclonic eddy, about 7 mi. in diameter, composed of spiral bands of clouds with a clear "eye" in the center similar to idealized plan of a hurricane, was noted July 9, 1956, over Baffin Bay southwest of Thule Air Force Base. The eddy extended to a height of 2,700 ft., above the top of fog which covered the area. Formation and rotation of eddy were not observed but its position remained unchanged for almost an hour. Similar local phenomena are frequently found along the Greenland coast; are difficult to predict.

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54952. SLASTNIKOV, GLEB SEMENOVICH, 1907–1941. Fauna Polychaeta Onezhskogo zaliva Belogo morîa. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîu Belogo morîa, 1957. vyp. 1, p. 411–27, illus. table.) 19 refs. Text in Russian. ***Title tr.:*** Polychaete fauna of the Onega Bay, White Sea.

Lists 92 species of these worms, 13 new to the area. Depth of occurrence, substrate, zoogeographic character, morphological or anatomical peculiarities, etc., are noted. A final section deals with the ecology of these forms and their distribution in the area.

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SLAT, BLANKA, *see* Šimonović, I., *and others.* Regeneration of hemoglobin in rats . . . *1958.* No. 54892.

54953. ***SLAVÎANE.*** Îakutskie almazy. (Slavîane, Feb. 1958, no. 2, p. 56, illus.) Text in Russian. ***Title tr.:*** Diamonds of Yakutia.

Note on the diamond mining, X-ray method of separation, and on checking and sorting diamonds in the laboratory at Nyurba. ***Copy seen:*** DLC.

54954. SLAVIN, S. V. K voprosu o metodakh i formakh upravleniîa profsessom sotsialisticheskogo osvoeniîa Severa SSSR. (Problemy Severa, 1958. vyp. 1, p. 229–43, map.) 5 refs. Text in Russian. ***Title tr.:*** Methods and forms of management in the socialist development of natural resources in the North of the U.S.S.R.

Natural conditions of the Soviet North, lack of means of transportation and scarcity of population, are such that specific organizations are required for its economic development and they combine utilization of natural resources with provision of transportation facilities. Among these organizations are: Transportation, Industry and Colonization Combine of the Murmansk Railroad, founded in 1923; Stock Company Komseveroput', organized in 1928 and absorbed in 1932 into Main Administration of the Northern Sea Route; Vorkuta Combine; Ukhta Combine; Kamchatka Stock Company (liquidated in 1943); Main Administration for Construction in the far North (Dal'stroĭ), etc. In all these organizations certain administrative powers have been vested for their territory and their functions involved combined development of industry and transportation. Their activities, interrelations, and modifications are briefly outlined. ***Copy seen:*** DLC.

54955. SLAVIN, S. V. O ponîatii "Sovetskiĭ Sever." (Problemy Severa, 1958. vyp. 2, p. 253–65, maps.) 15 refs. Text in Russian. ***Title tr.:*** Meaning of the term "The Soviet North."

In contrast with the legal term "Far North" (Kraĭniĭ Sever) which is repeatedly defined in decrees of 1931, 1932 and 1945, the term "Soviet North" (Sovetskiĭ Sever), widely used in literature, has no precise meaning. It should be applied, in the author's opinion, to the least inhabited and least developed areas.

Analysis of the actual geographic, climatic, and economic conditions and status of population shows that in this meaning the Soviet North represents territory of over 10 million km.², with southern limit beginning at approx. 62° N. in the west and gradually dropping southward to 50° N. in the Far East (maps p. 260 and 262).

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SLAVIN, S. V., *see also* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . ÎAkutskoĭ ASSR. *1958*. No. 49171.

54956. SLAVIN, V. A. K voprosu ob ispol'zovanii betona, tverdeûshchego na moroze. (Transportnoe stroitel'stvo, Feb. 1958. god 8, no. 2, p. 13–17, diagrs., tables.) Ref. Text in Russian. ***Title tr.:*** Problems of concrete hardening during freezing temperatures.

The effects of additives ($CaCl_2$ and NaCl) on concrete strength, and of various types of insulation covers on the curing process are reported. NaCl is recommended for concreting at temperatures above −15° C., $CaCl_2$ for lower temperatures in addition to pre-heating of aggregates. ***Copy seen:*** DLC.

54957. SLEPNEV, ÎU. S. Geokhimicheskie osobennosti lovchorrit-rinkolitovykh pegmatitov Khibinskogo shchelochnogo massiva. (Geokhimiîa, 1957, no. 5, p. 408–416, illus., tables.) 3 refs. Text in Russian. Summary in English. ***Title tr.:*** Geochemical features of lovchorrite-rinkolite pegmatites of the Khibiny alkali massif.

Presents results of geochemical investigation of mineral samples (40 lovchorrite, 22 rinkolite) from pegmatite veins. The main, secondary and accessory minerals are enumerated; their chemical analyses and quantitative mineralogic composition are presented. These pegmatites on comparison with average composition of the Khibiny massif and the earth's crust, are found 75 times richer in rare elements, approx. 290 times richer than the earth's crust in rare earths, and 90 times richer in niobium (tantalum). Rare earth elements, niobium (often replaced by tantalum), titanium and yttrium are treated in turn and data given. ***Copy seen:*** DLC.

54958. SLEPNEV, ÎU. S. Osobennosti rasprostraneniîa litiîa i rubidiîa v nekotorykh granitoidakh ÎAkutii. (Geokhimiîa, 1958, no. 2, p. 115–17, tables, diagr.) Text in Russian. Summary in English. ***Title tr.:*** Features of lithium and rubidium distribution in some granitoids of the Yakut A.S.S.R.

In the Arga-Ynnakh-Khayskiy massif granitoids, increase of the lithium and rubidium content is noted in case of transition from granites and adamellites to later rocks (alaskites); also in case of greisenization processes in the alaskites. Lithium content is increased also by kaolinization of the alaskites.

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54959. SLEPTSOV, M. M. Rasprostranenie kitoobraznykh v severozapadnoĭ chasti Tikhogo okeana. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 130–34, map.) Text in Russian ***Title tr.:*** Distribution of cetaceans in the northwestern Pacific.

Account of investigation conducted during 1948 and 1951–1954, with analysis of factors determining distribution and of developmental possibilities in hitherto unexploited areas. Areas of small and large forms were determined, as well as those not yet exploited. Species of commercial and noncommercial significance are distinguished. ***Copy seen:*** DLC.

SLEPTSOV-OĬUNSKIĬ, P. A., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Za sovetskuîu vlast' . . . *1957*. No. 49170.

54960. SLESSER, MALCOLM. The Scottish East Greenland expedition. (Scottish geographical magazine, Dec. 1958. v. 74, no. 3, p. 162.)

Notes a nine-man party, headed by author, in the Scoresby Land region during summer 1958: exploring and climbing the Staunings Alper, working on mammals, lichens, glaciology and ornithology. ***Copy seen:*** DGS.

SLESSERS, M. A., *see* U.S. Hydrographic Office. An evaluation of the "Morskoi Atlas" . . . *1958*. No. 55626.

54961. SLIJPER, E. J. Some remarks on gestation and birth in Cetacea and other aquatic mammals. (Hvalrådets skrifter. Scientific results of marine biological research, 1956. no. 41, p. 1–62, illus., tables.) about 150 refs.

A comprehensive study based on observations of live births in captive animals; on dissection of two common porpoises, one pregnant the other caught

during parturition, and on comparison with conditions in *Pinnipedia* and *Hippopotamus*. Consecutive sections deal with the two types of pregnancy and birth in mammals; the anatomical and microscopical structure of the cetacean uterine wall; the position of the fetus *in utero* and at birth of these animals; position of uterus and fetus in the abdominal cavity; difficulties in birth caused by the shape of the young; hypotheses as to the breathing stimulus; the umbilical cord, its size, structure and histology; gestation and birth in other aquatic mammals. The birth of a California sea lion is described in detail and illustrated with a series of photographs.

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54962. SLODKEVICH, V. S. Nekotorye itogi nauchnykh issledovaniĭ v Karel'skom filiale AN SSSR. (Akademiĭa nauk SSSR. Izvestiĭa vostochnykh filialov, 1957. no. 8, p. 112–16.) Text in Russian. ***Title tr.:*** Some results of scientific explorations in the Karelian Branch of the Academy of Sciences of the U.S.S.R.

Survey of the organization and activities of this branch, founded in 1945 as a base ("baza") and reorganized into a branch in 1949. Scientific studies of its institutions, including the White Sea Biological Station (Belomorskaĭa biologicheskaĭa stant͡siĭa, p. 115) are noted.

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SLODKEVICH, V. S., *see also* Polĭanichko, ĬA. I., *and others.* ĬUbileĭnaĭa . . . sessiĭa Karel'skogo . . . *1958.* No. 54055.

54963. SLOVITER, HENRY A. Viability of erythrocytes after freezing in polymer solutions. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 313.)

Report on the action of polyethylene glycols of various molecular weights upon erythrocytes submitted to freezing and thawing. *In vitro* and *in vivo* studies in the rabbit and man showed preservation of cellular viability of such material.

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SMALES, A. A., *see* Wager, L. R. Sulphides . . . Skaergaard . . . *1957* 55906.

SMALL, FRED A., *see* Bader, H., *and* F. A. Small. Sewage disposal at ice-cap . . . *1957.* No. 49472.

54964. SMALLWOOD, JOSEPH P. Quebec. (Precambrian, Feb. 1957. v. 30, no. 2, p. 40–45, 3 illus.)

Canadian iron ore production rose 40% in 1956: Iron Ore Co. of Canada hauled 12 million tons of high grade, direct-shipping ore from open pits at Schefferville, Knob Lake. Search for iron continues from northwest Ungava south to the Mistassini area. A discovery was made 50 mi. southwest of Sugluk; about 4 million tons are indicated in one deposit at Payne River; a new iron occurrence was discovered 40 mi. west of Diana Bay. Asbestos deposits were found near Schefferville.

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54965. SMAYDA, THEODORE J. Biogeographical studies of marine phytoplankton. (Oikos, 1958. v. 9, no. 2, p. 158–91, 7 illus., 2 tables.) 156 refs.

Contains data on the distribution of representative arctic, antarctic, tropical and cosmopolitan phytoplankton species, and on the accompanying temperature-salinity conditions. Both polar species, *Thalassiosira antarctica* and *T. hyalina* are stenothermal and stenohaline. *T. antarctica* is circumpolar. *T. hyalina* shows an eastern arctic tendency and has an irregular longitudinal distribution. The existence of bipolarity claimed for certain phytoplankton species is reconsidered. The different types of phytoplankton indicator species are discussed. The role of light, temperature, salinity, pollution, fertility and currents as factors of distribution is discussed.

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54966. SMAYDA, THEODORE J. Phytoplankton studies around Jan Mayen Island, March–Apr. 1955. (Nytt magasin for botanikk, 1958. v. 6, p. 75–96, 4 illus., 7 tables.) 33 refs.

Hydrographic conditions around Jan Mayen are sketched, and observations reported on surface plankton in waters around the island from mid-March through April. Comparative study was made of plankton of the Norwegian coastal waters. Biogeographical and taxonomical comments on the more important species are given. Additional evidence is available that the coccolithophorids *Crystallolithus hyalinus* and *Pontosphaera borealis* are identical.

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54967. SMED, JENS. Monthly anomalies of the surface temperature in areas

of the north North Atlantic in 1955. (International Council for the Study of the Sea. Annales biologiques, 1955, *pub.* 1957. v. 12, p. 10–11, illus., maps.)

Account of anomalies for each month and each 1°-square collected by the Danish Meteorological Institute from Danish and Icelandic ships. Comparisons with 1954 and yearly average of monthly anomalies for 1914–1950, are included.

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54968. SMED, JENS. Monthly anomalies of the surface temperature in areas of the northern North Atlantic. (International Council for the Study of the Sea. Annales biologiques, 1956, *pub.* 1958. v. 13, p. 10–11, tables, maps.)

Report based on data collected in 1956 from ships. Averages for the year are also included, and they amounted to 0.5° C. (the same as in 1955) with a tendency to higher temperatures in the center of the region and lower on the periphery. ***Copy seen:*** DI.

54969. SMELĬAKOV, ĬAROSLAV VASIL'EVICH. Molodye poėty Rossiĭskoĭ federat͡sii. (Druzhba narodov, Nov. 1958, no. 11, p. 64–72.) Text in Russian. ***Title tr.:*** Young poets of the Russian federation.

Includes poems by a Gold and a Vogul, Andreĭ Passar and Ivan Shestalov, translated into Russian by N. Starshinov.

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54970. SMIDT, E. L. B. Das Wattenmeer bei Skallingen, physiographisch-biologische Untersuchung eines Dänischen Tidengebiets, no. 3: the effects of ice winters on marine littoral faunas. København, Hagerups Forlag, 1944. 36 p. illus. tables, map. (Folia geographica Danica, t. 2, no. 3.) 25 refs. ***Title tr.:*** The Skalling shoals, physiographic and biological investigation of a Danish tidal region, no. 3, etc.

Contains information on the climate, hydrography and bottom conditions of this area; changes in composition of local fauna and the causes; the influence of ice winters (since 1929) upon the local fauna. The latter section deals also with problems of resistance to long periods of cold and the responses of the littoral fauna to cold. These include migration, digging down and regeneration. Sessile animals are subject to extinction due to freezing, or due to lack of O_2 under the ice cover or due to mechanical injury by ice. ***Copy seen:*** DLC.

54971. SMIDT, ERIK. Der kan fiskes mange torsk ved Østkysten. (Atuagagdliutit: Grønlandsposten, Nov. 25, 1958. Ukiut 98-iat, nr. 23, p. 8–9.) Text in Danish and Eskimo. ***Title tr.:*** Great quantities of cod can be caught off the east coast.

Notes results of summer 1957 investigations aboard the *Adolf Jensen* in the Angmagssalik District. The cod population proved large, the same years (1942, 1945, 1947 and 1950) dominating as on the west coast. Some details are given on fishing methods (the area is not suittable for trawl fishing). Cod fishing prospects are promising for August and September, when hunting is of small importance. The aims and possibilities of fisheries research in Greenland are briefly considered. ***Copy seen:*** DLC.

54972. SMIDT, ERIK. De grønlandske rejefelters naturhistorie. (Grønland, June 1957, nr. 6, p. 221–28, maps, diagr.) Text in Danish. ***Title tr.:*** The natural history of the Greenland prawning-grounds.

Contains a biological account of the deep-sea prawn, *Pandalus borealis* Kr., based on activities of the Grønlands Fiskeriundersøgelser (Greenland's Fisheries Investigations) off the west coast since 1946. The prawn usually lives at 200–500 m. depth and is caught at 300–400 m.; it requires an even, soft sea-bed, a high salt content (33–35°/₀₀) and a temperature preferably over 1° C. It changes sex from male to female at age 4–5 yrs. in Greenland. Details on spawning and feeding are given. The general fauna of the prawning-grounds is described. ***Copy seen:*** DLC.

54973. SMIDT, ERIK. Rejebestande og rejefiskeri ved Grønland. (Grønland, Aug. 1957, nr. 8, p. 281–89, table, diagrs.) Ref. Text in Danish. ***Title tr.:*** Prawn stocks and prawn fisheries off Greenland.

Contains a survey of the three areas where commercial prawn trawling is profitable. Disko Bay is best with water temperatures (cf. table) favorable and stable, and no risk of exhaustion of stocks. Off Holsteinsborg are two possible trawling grounds, but temperatures are less stable, and commercial fishing was suspended there in 1949 after most of the prawn stocks were winter-killed. The stocks have recuperated, but deterioration in climate entailing their depletion is a risk. The third area is in the

Julianehåb and Nanortalik districts, the most important being Tunugdliarfik Fjord (61° N. 45°30′ W.). Year-round fishing is possible here though profitable only in winter; but it cannot be appreciably extended here without risk of exhausting stocks. Greenland prawn fishing, started in 1935, is reviewed; 526 tons were caught in 1956 and landed at the Narssaq and Christianshåb canneries.

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54974. SMIDT, ERIK. Torskefiskeriet aftagende i nord, tiltagende i syd. (Atuagagdliutit: Grønlandsposten, Nov. 8, 1958. Ukiut 98-iat, nr. 22, p. 8–9, 17, tables.) Text in Danish and Eskimo. ***Title tr.:*** Cod fishing decreasing in the north, increasing in the south.

Survey of some general trends in this fishery off West Greenland. Investigations of the age distribution in the cod population show a reduction in the 1947 year class, previously very numerous; the 1950 year class is probably equally large by now; 1953 and 1957 will form the basis of the fisheries in the next few years. Some details are given on the cod migrations. Catches in 1956–1958 show that the cod is still increasing from Egedesminde (approx. 68°40′ N. 53° W.) southwards but decreasing in the north. ***Copy seen:*** DLC.

SMIDT, ERIK, *see also* Horsted, S. A., *and* E. Smidt. The deep sea prawn . . . Greenland waters. *1956.* No. 51818.

SMILEY, C. J., *see* Langenheim, R. L., *and others.* Cretaceous amber . . . *1957.* No. 52646.

SMIRENSKIĬ, ALEKSANDR ALEKSANDROVICH, *see* Korsakov, G. K., *and* A. A. Smirenskiĭ. Zarastaûshchie vodoemy . . . dlîa ondatrovodstva. *1956.* No. 52416.

54975. SMIRNOV, A. I. Nekotorye osobennosti biologii razmnozheniîa i razvitiîa lososevoĭ ryby nerki *Oncorhynchus nerka,* Walbaum. (Akademiîa nauk SSSR. Doklady, 1958. t. 123, no. 2, p. 371–74, illus. table.) 10 refs. Text in Russian. ***Title tr.:*** Some peculiarities in the biology of propagation and development of the salmon *Oncorhynchus nerka,* Walbaum.

Account of studies made during 1956–57 at a station located on Lake Dal'neye, Kamchatka. Data include amounts of milt ejaculates; nature and temperatures of spawning areas; incubation and temperature; hatching and early growth; effects of O_2 and temperature.

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54976. SMIRNOV, A. P. Nekotorye spornye voprosy finno-ugorskoĭ arkheologii. (Sovetskaîa arkheologiîa, 1957, no. 3, p. 20–30.) 38 refs. Text in Russian. ***Title tr.:*** Some controversial questions in Finno-Ugrian archeology.

Discusses, on the basis of recent Soviet archeological investigations, philological and ethnological theories and speculations on the origin and migration routes of Finno-Ugrian tribes in eastern Europe and western Siberia. The hypothesis of an Altay-Sayan origin and the possible formation of the Ostyaks and Voguls from Ugrian tribes migrating from the Yenisey to the mid Ob' region are mentioned.

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54977. SMIRNOV, A. V. K voprosu o rasselenii i kochevaniîakh plemen samoîadi; po russkim istoricheskim dokumentam xvii v. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiîa, Mar.–Apr. 1957. t. 89, vyp. 2, p. 137–41, map.) 9 refs. Text in Russian. ***Title tr.:*** The distribution and migration of Samoyed tribes according to Russian historical documents of the 17th century.

Nine Samoyed tribes were distinguished in the European part of U.S.S.R. in the 17th century. Their economic conditions, intertribal relations, taxes, etc., and areas of their seasonal migrations (cf. map) are summarized from study of Russian published documents and narratives of English sailors who visited Russian North. ***Copy seen:*** DLC.

SMIRNOV, G. I., *see* Bobrievich, A. P., *and others.* Muassanit v kimberlitakh . . . *1957.* No. 49784.

54978. SMIRNOV, I. V. Glubokoe okhlazhdenie semeni sel'skokhozîaĭstvennykh zhivotnykh. (Zhurnal obshcheĭ biologii, May–June 1950. t. 11, no. 3, p. 185–97, illus. tables.) 14 refs. Text in Russian. ***Title tr.:*** Deep freezing of semen of farm animals.

Account of experiments with semen of domestic animals cooled to various temperatures down to −196° C. In rabbits, 33–100% fertility was noted after insemination with material kept frozen for 32 days. Similar results were obtained with sheep and no adverse effects in either case. The results are referred to the teachings of Lysenko.

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54979. SMIRNOV, M. F. Geologicheskie i gornotekhnicheskie usloviia ėkspluatatsii mestorozhdeniia Noril'sk-I. (Gornyĭ zhurnal, June 1958, no. 6, p. 15–19, plan.) Text in Russian. ***Title tr.:*** Geological and mining conditions in exploiting the Noril'sk-I deposit.

The topography and geology of the deposits are described. Hydrological conditions were found complicated by uneven distribution of permafrost penetration to depths of 250–300 m. at temperatures of −7° C. Underground seepage water affects the stability of coal layers and ceilings in the mining chambers. Despite the permafrost, a slow leakage of methane was observed from small cracks in one mine. Methods of degasification through shafts and bore holes are discussed. ***Copy seen:*** DLC.

SMIRNOV, N. A., *see* Zlatoverkhovnikov, L. F., *and* N. A. Smirnov.

Nabliudeniia . . . deformatsiiami . . . morskikh portakh. *1958.* No. 56235.

54980. SMIRNOV, P. Pamiatnik norvezhskomu matrosu. (Ogonëk, Nov. 1958. god 36, no. 47, p. 32, illus.) Text in Russian. ***Title tr.:*** Memorial to a Norwegian sailor.

Photograph and note on the memorial to P. Tessem, a member of Amundsen's *Maud* expedition; the memorial was dedicated on Aug. 3 on the site of Tessem's death (in 1919) on the Kara Sea shore opposite Dikson Island.

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54981. SMIRNOV, VL. Iakutskie almazy. (Ogonëk, May 1956. god 34, no. 22, p. 6–8, illus.) Text in Russian. ***Title tr.:*** Diamonds of Yakutia.

Popular account of the discovery of diamonds in Yakutia, based partly on author's flight to the diamantiferous area; deals with the scarcity of diamonds in the U.S.S.R.; the search since 1947 on the Central Siberian plateau; first finds in the Nizhnyaya Tunguska basin in 1948; establishment of prospecting party at Lake D'yakhaa somewhere in northwest Yakutia, visited by the author. Story of the flyer Innokentiĭ Trofimovich Kunitsyn who perished during the search in 1948 is recounted. Photographs show settlement and camp, prospectors at work. ***Copy seen:*** DLC.

54982. SMIRNOVA, M. A. O pervykh nakhodkakh Roemeripora Kraiz v Sovetskoĭ Arktike. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, vyp. 6, 1957. p. 60–68, tables, 3 plates.) 3 refs. Text in Russian. ***Title tr.:*** The first finds of genus *Roemeripora* Kraiz in the Soviet Arctic.

Description of Tabulata collected by N. P. Golovanova and party in the northern island of Novaya Zemlya in 1955. From this collection of fossil corals the genus *Roemeripora* Kraiz especially was studied and four species are identified as new: *Roemeripora arctica, R. fenitima, R. golovanovi* and *R. terrae-novae.* Diagnosis, description, comparison, age and location and photograph are given for each. *R. tomensis* also is mentioned as discovered in 1956 by V. N. Dubatolov, in Devonian deposits of the Kuznetsk region. ***Copy seen:*** DGS.

SMIRNOVA, M. A., *see also* Zhizhina, M. S., *and* M. A. Smirnova.

Novye favozitidy . . . Taĭmyra. *1957.* No. 56201.

54983. SMIRNOVA, ZOIA NIKOLAEVNA, 1898– . K brioflore Iakutskoĭ ASSR. (Akademiia nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1956. t. 11, p. 228–35, 6 illus.) 18 refs. Text in Russian. ***Title tr.:*** A contribution to the bryological flora of Yakut A.S.S.R.

Contains an annotated list of 16 species of mosses collected by L. N. Tiulina in 1951, in the Aldan River basin.

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54984. SMIRNOVA, ZOIA NIKOLAEVNA, 1898– . *Lyellia* R. Br., novyĭ rod dlia brioflory SSSR. (Botanicheskiĭ zhurnal, June 1958; t. 43, no. 6, p. 850–55, 2 illus.) 32 refs. Text in Russian. ***Title tr.:*** *Lyellia* R. Br., a new genus to the bryoflora of the U.S.S.R.

Contains review of the moss genus *Lyellia* (*Philocrya*) and its known arctic distribution: in Greenland, Baffin Island (near the Arctic Circle) and northern Alaska (68°–69° N.). *L. aspera* is found in the Verkhoyansk Mts. (64° N. 137° E.); and it has been found a little farther south (63°30′ N. 137° E.) in association with *Ptilidium ciliare, Aulacomnium turgidum* var. *imbricatum, Drepanocladus uncinatus* and *Hylocomium splendens.*

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54985. SMIRNOVA, ZOIA NIKOLAEVNA, 1898– . *Scouleria rschewinii* Lindb. et Arn. vo flore mkhov SSSR.

(Akademiîa nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1956. t. 11, p. 210–19, 2 illus., text map.) 26 refs. Text in Russian. ***Title tr.:*** *Scouleria rschewinii* Lindb. et Arn. in the bryological flora of the U.S.S.R.

Contains a redescription of this moss from the specimens collected in the Anadyr region in northeastern Siberia, and data on its distribution (lower Yenisey, Lena basin, Chukotka). Ranges of North American species, including *S. aquatica* native to Alaska and Aleutian Islands, are discussed.

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54986. SMITH, AUDREY URSULA. Life at low temperatures. (Nature, London, Oct. 4, 1958. v. 182, no. 4640, p. 911–13.) 10 refs.

Report on joint session of sections Zoology and Physiology of the British Association held on Aug. 28, 1958. Insects, molluscs, semen and other mammalian cells, tissues and whole mammals are discussed as to their response to cooling and freezing. Hypothermia, supercooling, resuscitation, etc. are also noted. ***Copy seen:*** DNLM.

54987. SMITH, AUDREY URSULA. Problems in the resuscitation of mammals from body temperatures below 0° C. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 533–44, illus.) 21 refs.

A study of resuscitation of larger mammals, rabbits and galagos (small African primates) and of the causes of their death after recovery, which was found to be due to internal hemorrhages. Also an investigation of hemorrhages in the placenta and other organs of frozen hamsters followed by an analysis of cardiac action in hearts isolated from various animals in subzero hypothermia (hamster, rat, tortoise). The latter studies showed "that the heart was not the first organ to fail when intact mammals were frozen." ***Copy seen:*** DNLM.

SMITH, CARROLL NELSON, 1909–, *see* Altman, R. M., *and* C. N. Smith. Investigations . . . repellents . . . mosquitoes in Alaska, 1953. *1955.* No. 49265.

SMITH, CARROLL NELSON, 1909– , *see* Travis, B. V., *and* C. N. Smith. Mosquito repellents . . . *1951.* No. 55504.

54988. SMITH, CHARLES H. Mapping for the Mid-Canada Line. (Photogrammetric engineering, Mar. 1957. v. 23, no. 1, p. 161–65, diagrs., port.)

The Mid-Canada Line, part of the North American Radar Early Warning System, is constructed by Canada. Siting of the radar station required a strip of 1:50,000 mapping, 15–25 mi. wide, extending across the continent at roughly the 55th parallel of latitude. The mapping was carried out by the Army Survey Establishment with assistance of other Canadian Government mapping agencies. Standard instruments and conventional methods were used: multiplex for plotting from photography up to 20,000 ft. altitudes, and Kelsh and Wild autograph equipment up to 35,000 ft. The total job resulted in 125 sheets measuring 22 x 29 in. at the required scale and 25 ft. contours. Total area mapped amounted to 38,625 sq. mi. The maps are considered adequate for any purpose requiring maps of this scale. ***Copy seen:*** DLC.

54989. SMITH, DONALD A., *and* **K. C. FISHER.** The distribution, orientation, and activities of the varying lemming in a gradient of temperature. (Canadian journal of zoology, Aug. 1956. no. 4, p. 243–61, illus., tables.) 14 refs.

Normal lemmings with furred soles did not select a portion when placed in a temperature gradient tube, but when their soles were clipped they chose a zone of 28°–35° C. This indicates that temperature selection through the soles is normally interfered with by the fur. Location and frequency of non-locomotor activities in normal animals in the tube suggest temperature perception even when temperature selection does not occur. Orientation was not pronounced except when selecting temperature.

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54990. SMITH, DONALD A., *and* **J. B. FOSTER.** Notes on the small mammals of Churchill, Manitoba. (Journal of mammalogy, Feb. 1957. v. 38, no. 1, p. 98–115, illus., tables, map.) 29 refs.

A morphological and ecological study of 15 small mammals, three of them hitherto not recorded from Churchill. Field investigations conducted during 1951–52 and 1954–55 are reported regarding abundance, breeding, habitat, food, etc. Year-to-year changes in numbers are noted and the role of avian predators in this fluctuation assessed. The species new for Churchill are: *Sorex palustris, Mustela rixosa* and *Mus musculus.*

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SMITH, DONN L., *see* Erickson, B. R., *and others.* Effect of environmental temperature in traumatic shock. *1957.* No. 50771.

54991. SMITH, ERNEST CHALMERS, 1912– . Anther color in willows. (American midland naturalist, Sept. 1945. v. 34, no. 2, p. 440–44.)

Contains observations on anther color (in the field and herbaria) of various willows, including some native to Alaska: *Salix arctica,* anthers almost black; *S. barclayi,* unopened anthers dark gray to almost black; *S. pulchra, S. reticulata, S. sitchensis* and *S. stolonifera,* anthers of all black. A distinctively dark color in the unopened anthers when dried suggests an original red in freshly collected specimens. Only when such correlations are established for various colors, can anther color be used effectively in the identification of herbarium specimens. Red anthers appear to be more common in species of high altitudes and high latitudes, and more pronounced in specimens exposed to strong direct light.

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54992. SMITH, ERNEST KETCHAM, *Jr.,* *and* R. W. KNECHT. Some implications of slant $-E_s$. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 2, *pub.* 1957, p. 195–204, graphs.) 12 refs.

The arctic-type phenomenon of slant $-E_s$ is discussed, and examples are shown of its occurrence at College, and its seasonal occurrence at Pt. Barrow, College, and Anchorage in Alaska. Possible mechanisms for the phenomenon are described with the so-called reflected back scatter or single-scatter favored. The slant $-E_s$ trace in an ionogram is by definition that part which commences at a virtual height of 120 km. and a frequency of 4.8 mc. and then traverses the record diagonally with a slight upward curvature to 400 km. ***Copy seen:*** DLC.

54993. SMITH, ERNEST KETCHAM, *Jr.* Worldwide occurrence of sporadic E. Washington, D.C., U.S. Govt. Print. Off., Mar. 15, 1957. viii, 278 p., tables, graph, diagrs., maps. (U.S. National Bureau of Standards. Circular, 582.) 113 refs.

An extensive compilation of data on high-frequency (above 5 mc./s.) vertical-incidence, and very high frequency oblique-incidence sporadic E propagation is examined on a geographical basis, using long-term averages of recent (1948–54) observations; HF data were compiled from ionosonde observations at about one hundred locations (15 within the auroral zone), VHF data from monitored field strength measurements, amateur and TV-listener reports, etc. Sporadic Es in the auroral zone are attributed to the influence of solar corpuscles, either directly or through E-region currents; in the temperate zone, the phenomenon is ascribed to a terrestrial energy source. ***Copy seen:*** DI.

SMITH, G. M. R., *see* Gamble, H. J., *and others.* Effect of temperature . . . degeneration of nerve fibers. *1957.* No. 51070.

54994. SMITH, GORDON S. Gray seals of the Farnes. (Nature magazine, Aug.–Sept. 1955. v. 48, no. 7, p. 370–71, illus.)

Account of protection measures which raised the number of gray seal on these isles (off the east coast of England) about twenty-fold; migration, growth and age criteria, etc. are included.

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54995. SMITH, JOHN BERNARD, 1858–1912. New noctuids for 1903, no. 4, with notes on certain described species. (American Entomological Society. Transactions, 1903. v. 29, no. 3, p. 191–224.)

Thirty-nine species are described, of which 33 are new to science; *Pachnobia roosta* n. sp. from Nushagak, Alaska, is included. ***Copy seen:*** DA.

SMITH, KEITH A., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

54996. SMITH, LUCY WRIGHT. Studies of North American Plecoptera; Pteroarcinae and Perlodini. (American Entomological Society. Transactions, Dec. 1917. v. 43, no. 4, p. 433–89, 5 illus., plates 29–34.)

Contains a key to these two families of stone flies, keys to the species (males, females, and nymphs), descriptions of 11 new species and redescriptions of 13 others, old and recognized; synonyms, morphological notes and data on distribution, are supplied. *Pteronarcys dorsata* (Labrador, Hudson Bay), *P. proteus* (Mackenzie District) and *P. biloba* (Hudson Bay), are included.

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54997. SMITH, MARIAN WESLEY, 1907– . The cultural development of

the Northwest Coast. (Southwestern journal of anthropology, Autumn 1956. v. 12, no. 3, p. 272–94, map, charts.) 43 refs.

An attempt to reconstruct the history of the Northwest Coast by correlating archeological and ethnographic material. A common arctic and/or subarctic stratum encompassing the Asiatic and American North Pacific rim is suggested as base for subsequent arctic (Eskimo and Aleut) and northwest American (including the northern northwest coast) cultures (cf. No. 39600). Arctic climaxes are compared with parallel developments in the Columbia-Fraser area and arctic influences, with a radiocarbon date of approx. 2500 years ago, traced as far south as Vancouver Island. This paper is criticized and author's assumption for an arctic origin of the northwestern culture questioned by Wayne Suttles in: *The "Middle Fraser" and "Foothill" cultures: a criticism*, pub. in same journal summer 1957, v. 13, no. 2, p. 156–83.

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54998. SMITH, PREBEN V., 1916– . Aeterbedøvelse halvanden meter fra en gloende kakkelovn. (Atuagagdliutit: Grønlandsposten, May 9, 1957. Ukiut 97-iat, nr. 9, p. 10–13.) Text in Danish and Eskimo. ***Title tr.:*** Administering ether one and a half meters from a glowing stove.

Describes the new hospital opened at Holsteinsborg, West Greenland, in 1957: 32 beds, modern and well equipped. A similar but somewhat smaller hospital was opened at Angmagssalik, East Greenland, in 1956. Greenland hospitals, past and present, are discussed here, and illus. of those at Holsteinsborg are given in the Aug. 29, 1957 issue (p. 12–14) of the same journal. ***Copy seen:*** DLC.

54999. SMITH, PREBEN V., 1916– . Invalideproblemet i Grønland; en medicinsk-social analyse. (Ugeskrift for laeger, Aug. 14, 1958. årg. 120, no. 33, p. 1100–1107, tables.) 7 refs. Text in Danish. ***Title tr.:*** The invalid problem in Greenland; a medico-social analysis.

A study based on questionnaires sent to district medical officers and covering 80% of the populace. The list of causes of 60% of all invalidism is led by polio, followed by mental defects, congenital malformations, TB of bones and joints, and defective vision (with 63% blind). Data are presented according to age, sex, degree of disability, social status, living standard, etc. Institutions and sanatoria giving invalid care are discussed. A prognosis (good) is offered.

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SMITH, R. F., *see* Usinger, R. L., *and* R. F. Smith. Arctic amber. *1957.* No. 55674.

55000. SMITH, R. L., *and others.* Mechanical properties of high-purity iron-carbon alloys at low temperatures. (*In:* U.S. National Bureau of Standards. Circular, May 7, 1952. no. 520, p. 153–79, illus., tables, graphs.) *Other authors:* G. A. Moore *and* R. M. Brick.

Natural stress-strain data obtained over the temperature range +23° to −185° C. on four specimens with 0.05–0.49% carbon, having microstructures with ASTM no. 4–5 ferrite grain size and pearlite of spacing equivalent to normalized steels, were analyzed. Yield points and flow stresses were found to increase with increase of carbon content and with decrease in temperature, as did fracture stresses, until at around −150° C., loss of ductility becomes pronounced and the fracture stress dropped to a considerably lower "unworked" value at −185° C. The transition temperature, based on a selected value of energy to fracture increased, but insignificantly, with carbon content. Increasing carbon content resulted in a marked decrease in total strain and energy absorbed to fracture. Comparison of data for the examined alloys with those for low-aluminum high-purity ferrites indicates that carbon reduces the ductility of iron at all temperatures in the range investigated.—From author's abstract. ***Copy seen:*** DI.

55001. SMITH, ROBERT EMRIE, 1913– , *and* **A. S. FAIRHURST.** Cellular mechanisms of cold adaptation in the rat. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 151.)

Summary of investigations of respiration in liver preparations from cold-adapted and normal rats. It is concluded "that the increased heat production of the cold-adapted mammal is a direct function of an altered utilization of the energy derived from oxidative metabolism." ***Copy seen:*** DNLM.

55002. SMITH, ROBERT EMRIE, 1913– . Hepatic $Q^{N}_{O_2}$ and mitochondrial number of cold-adapted rats. (Federa-

tion proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 121.)

Contrary to the findings of others, liver tissue of rats living at an environmental temperature of 2° C. on a high protein diet showed no increase in the amount or number of mitochondria. Neither were there differences observed in other physical or chemical cell components studied. Respiration measurements likewise failed to show a significant difference in $Q_{O_2}^{N}$ between cold-adapted and control series. The possible causes for these unexpected results are discussed.

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55003. SMITH, ROBERT EMRIE, 1913– , *and* A. S. FAIRHURST. A mechanism of cellular thermogenesis in cold-adaptation. (National Academy of Sciences. Proceedings, July 1958. v. 44, no. 7, p. 705–711, illus., tables.) 31 refs.

Account of investigation of mitochondria from liver homogenates of adult male rats adapted to a temperature of 2° ± 1° C. during a minimum of 45 days, with controls kept at room temperature. Oxygen utilization and P/O ratios of the mitochondrial systems showed a marked reduction in the cold-adapted material, as compared with the controls.

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SMITH, WALDO E., *see* American Geophysical Union. Annotated bibliography on hydrology . . . and sedimentation . . . *1958.* No. 49278.

SMITHERMAN, L. A., *see* Beigbeder, P. A., *and others.* Greenland op. 1955–56. *1957.* No. 49611.

55004. SMOLÎAK, A. V. Material'naîa kul'tura ul'cheĭ i nekotorye voprosy ikh ėtnogeneza. (Sovetskaîa ėtnografiîa, 1957, no. 1, p. 90–105, illus., tables.) Approx. 40 refs. Text in Russian. ***Title tr.:*** Material culture of the Ul'chi and some problems of their ethnogeny.

Reviews existing theories on the racial origin and linguistic affiliation of the Ul'chi, a Tungus group inhabiting the lower Amur River region. Their winter and summer houses (floor plan given) and huts, clothing, transportation, etc., are discussed. Their terminology as well as specific items of their material culture are compared with those of other Far Eastern peoples, among them the Evenki (Tungus), Nanaĭ (Golds), and Nivkhi (Gilyaks); their close historical ties with other Manchurian tribes are stressed.

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55005. SMOLÎAK, A. V. Materialy k kharakteristike sotsialisticheskoĭ kul'tury i byta korennogo naseleniîa Chukotskogo raĭona. (Akademiîa nauk SSSR. Institut ėtnografii. Trudy, 1957. nov. ser. t. 35, Sibirskiĭ ėtnograficheskiĭ sbornik, pt. 2, p. 3–37, diagrs.) Text in Russian. ***Title tr.:*** Materials for the analysis of socialist culture and living conditions of the indigenous population of the Chukotskiy District.

The collectivization of Chukotka, started in 1928–1930, was completed by 1952 with the creation of 18 kolkhozes. The present-day economy, based primarily on reindeer herding and seamammal hunting, is illustrated by a detailed account with statistical data (1953–54) of a Chukchi kolkhoz near Lorino (65°30′ N. 171°43′ W.) and a Chukchi-Eskimo collective farm near Chaplino (64°25′ N. 172°15° W.). Reindeer herding, summer and winter pastures and camps, herding routes, food supplies for herders, draught reindeer and dogs are described. Trade, shops, fairs and feasts, production of fur, leather and bone goods are noted. Fishing, whaling, sealing, and hunting of sea and land furbearing animals (walrus, bearded seal, polar fox, ermine, etc.) are dealt with. The main income sources of the two collective farms and the payments in cash and kind to kolkhoz members are analyzed. Housing (floor plans given), furnishings, schooling of Chukchis and Eskimos (including adult education), technical training, hospitals, and recreational activities are discussed.

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55006. SMOLÎAK, A. V. Ob odnom drevnem tipe zhilishcha na severo-vostoke Azii. (Akademiîa nauk SSSR. Muzeĭ antropologii i ėtnografii. Sbornik, 1957. t. 17, p. 5–21, illus., diagrs.) 16 refs. Text in Russian. ***Title tr.:*** An ancient house type in northeast Asia.

Discusses the two predominant house types of the settled coastal Chukchis and Eskimos: the above-ground îaranga and the semi-subterranean house. Both were permanent dwellings used, respectively, in summer or winter. The coastal îaranga differs in shape and construction from the temporary, conic, hut-like îaranga of the nomad reindeer-herding Chukchis; it shows affinities to Aleut

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houses and to dwellings of the lower Amur region and Sakhalin Island. It was a rectangular, hexagonal or oval-shaped building covered with hides, its sloping roof resting on one, or several parallel beams. The different construction techniques of the walls (of boards or field stones) and of the wooden frame of these two house types on the Chukotka littoral are described and diagrammed. The assumption that coastal Chukchis were nomads or semi-nomads seems refuted by the permanent character of their dwellings and the continuous existence of settlements already mentioned on 17th and 18th century maps: Lorino, Uelen, etc. ***Copy seen:*** DLC.

SMOLÎÂK, A. V., *see also* Gantśkaîa, O. A. Sessii . . . issledovaniĭ 1957 g. *1958*. No. 51080.

55007. SMOLIN, P. P. Sostav i genezis glin Timptonskogo raĭona ÎÂkutii. (Akademiîa nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Trudy, 1957. vyp. 10, p. 92–98, illus., tables.) 6 refs. Text in Russian. ***Title tr.:*** Composition and genesis of clays in the Timpton District, Yakutia.

Presents results of investigation of two lenses of clays, found near the confluence of the Timpton with the Aldan (approx. 57° N. 176° E.). Four cross-sections are presented and the morphologic conditions and variety of the clays are described. Microscopic, chemical, thermal, granulometric analyses are outlined. These clays are considered post-Jurassic in age; their practical importance is limited. ***Copy seen:*** DLC.

SMORODINOV, MIKHAIL IL'ICH, *see* Veĭnblat, Z. S., *and* M. I. Smorodinov. Merzlotnaîa zavesa . . . vodoslivnoĭ plotiny . . . *1957*. No. 55776.

55008. SNEGOV, SERGEĬ. V polîarnoĭ nochi. (Novyĭ mir, Apr.–July 1957, no. 4, p. 32–74; no. 5, p. 21–97; no. 6, p. 34–103; no. 7, p. 114–61.) Text in Russian. ***Title tr.:*** In polar night.

A novel dealing with the construction of a new industrial settlement and metallurgical plant above the Arctic Circle during World War II. Though all place-names are fictitious, the Dudinka-Noril'sk area is indicated by mention of neighboring nomad tribes as Nentsy, Nganasans, Dolgans, Tungus, also of a polar branch line railroad. Working conditions with hardships of daily life in the arctic winter and difficulties of supply, etc. intensified by the war, are described. ***Copy seen:*** DLC.

55009. SNODGRASS, JAMES MARION, 1908– , *and* J. H. CAWLEY, *Jr.* Bathythermometer telemeters ocean data. (Electronics, May 1, 1957. v. 30, no. 5, p. 142–45, illus., diagrs., graphs.)

Describes a two-unit transistorized system which, when lowered from the research vessel, plots temperature (0.05° C. accuracy) against depth (±0.25% accuracy). Depth (pressure) is measured with a vibrating-wire transducer (vibrotron), consisting of a wire placed in a fixed magnetic field and connected to a diaphragm, variation in pressure causing change of the vibration frequency (and generated voltage). 6014A transistors in a Wien-bridge oscillator circuit measure the temperature. Oscillator unit and transistor amplifier are encapsulated separately in five-in. stainless steel tubes; outputs are fed to deck instrumentation through a single-wire polyethylene-insulated cable. Signals are passed via a broad-band amplifier and separated by a high-pass and a low-pass filter before they are fed to the recording unit. ***Copy seen:*** DLC.

SNOW, DAVID, *see* Vaurie, C. Systematic notes on palearctic birds . . . 27 . . . 30 . . . *1957*. No. 55762.

55010. SNYDER, GEORGE LEONARD, 1927– , *and* G. D. FRASER. Intrusive layered lava pods and pillow lavas, Unalaska Island, Aleutian Islands. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2. p. 1646.) Abstract of a paper presented at the Society meeting in St. Louis, Nov. 6–8, 1958.

Describes intrusives into wet semiconsolidated muds during Miocene time in the form of pillow averaging 5–10 ft. diam. and layered lava pods up to 600 ft. thick. ***Copy seen:*** DGS.

55011. SNYDER, GEORGE LEONARD, 1927– . Ocean floor structures, northeastern Rat Islands, Alaska. (*In:* U.S. Geological Survey. Investigations of Alaskan volcanoes. Bulletin, 1957. no. 1028–G, p. 161–67, 4 maps incl. 1 fold.) 5 refs.

Map (scale 1:125,000) of submarine topography near northeastern Rat Islands, just west of the 180° meridian

in the Aleutians, covers area 51°45′–52°10′ N. 180°–177°45′ E.; has 100-ft. contour interval above and below sea level, and shows caldera lakes and faults or fissures. Ocean floor contains many volcanic, sedimentary and tectonic structures, and erosional features. Number of soundings per sq. statute mi. (summarized on a text map) range from a minimum of 3–15 to a maximum of 200–300. Text identifies and describes seven types of bottom topographic features. The 35-mile long Prokhoda Scarp, between Little Sitkin and Semisopochnoi Islands, appears to be connected with a fault system on Little Sitkin (51°55′ N. 178°30′ E.). Maximum relief of the scarp is more than 1250 ft.; the west half of the ridge and scarp is apparently displaced half a mile south; considerable vertical displacement is also evident.
Copy seen: DGS.

55012. SNYDER, LESTER LYNNE, 1894– . Arctic birds of Canada. Illustrations by T. M. Shortt. Toronto, University of Toronto Press, 1957. 10, 310 p., illus., maps. about 90 refs.

A comprehensive and informative work simple in style, in consideration of the non-specialist; well and richly illustrated, with numerous maps indicating breeding areas and range, the text aimed "primarily on recognition." Following an introductory part (p. 3–18) on the geographic scope of the work, the nature of arctic birds, list of place names, and leads (with keys) to identification, the avifauna is described in taxonomic order. Descriptions of individual species include common and native names; distribution, general and seasonal; habitat; characteristics of adult and young in the field and "in the hand." Comparisons are made with related forms; growth, migration, breeding areas, etc., are indicated. Occasional visitors from the sub-Arctic, species doubtfully or erroneously reported from the Arctic, etc., are dealt with in an appendix. For reasons explained, Labrador is excluded. A short glossary explains the technical terms.
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55013. SNYDER, LESTER LYNNE, 1894– , *and* E. D. LAPWORTH. A comparative study of adults of two Canadian races of red-wings. (Canadian field-naturalist, Oct.–Dec. 1953. v. 67, no. 4, p. 143–47, illus., 2 tables.) 8 refs.

Contains data of size variation of *Agelaius phoeniceus arctolegus* and *A. p. phoeniceus*, and a discussion of these two races based on specimens from Ontario west of James Bay. A boundary is indicated between them extending from Lake Superior to the tip of James Bay.
Copy seen: DA.

55014. SNYDER, LESTER LYNNE, 1894– . On eastern Empidonaces with particular reference to variation in *E. traillii*. Toronto, 1953. 26 p. 4 illus., 2 tables. (Toronto. Royal Ontario Museum of Zoology and Paleontology. Contributions, no. 35.) 42 refs.

Contains a critical study of the systematic status of *Empidonax traillii* and its variation in North America, based on specimens of this small flycatcher from various parts of Canada and United States, including three from southern Yukon and one from northern Manitoba. The name *E. t. traillii*, it is concluded, should be retained for the southern population (fig. 4), and *E. t. alnorum* be applied to the northern birds across Canada, from the northeastern United States to Alaska, including the Canadian prairies. ***Copy seen:*** DSI.

55015. SNYDER, LESTER LYNNE, 1894– . A revision of the sharp-tailed grouse with a description of a new race. Toronto, Univ. of Toronto Press, 1935. 9 p. text map, table. (Toronto. Royal Ontario Museum of Zoology. Occasional papers, no. 2.)

Contains descriptions and a table of measurements of six races of sharp-tailed grouse. *Pediocetes phasianellus kennicottii*, native to Alaska, Yukon and Mackenzie regions, and *P. p. phasianellus*, ranging from northeastern Manitoba through northern Ontario to the James Bay watershed of Ungava, are included. ***Copy seen:*** DSI–M.

55016. SNYDER, LESTER LYNNE, 1894– , *and* H. G. LUMSDEN. Variation in *Anas cyanoptera*. Toronto, 1951. 18 p. 3 illus., 2 tables. (Toronto. Royal Ontario Museum of Zoology. Occasional papers, no. 10.) 10 refs.

Contains a discussion of the systematic position of the cinnamon teal and its variation, based on the investigation of 144 specimens representing populations throughout most of the species range in North and South America. Certain morphological differences are correlated with geographic and ecological zones. Five races are recognized, three of which are newly described, two from Colombia

and the third, *A. c. septentrionalium* n. ssp., from the whole of the North American segment of the range; it occurs sporadically and in winter time as far north as Alaska. ***Copy seen:*** DSI.

SNYDER, LESTER LYNNE, 1894– , *see also* Fleming, J. H., *and* L. L. Snyder. On *Melospiza melodia . . . 1939.* No. 50924.

55017. SOBEL, HARRY, *and others.* Influence of morphine on urinary corticoid excretion by guinea pigs following exposure to cold and administration of Pitressin. (American journal of physiology, Oct. 1958. v. 195, no. 1, p. 147–49, table.) 9 refs. *Other authors:* S. Schapiro *and* J. Marmorston.

Single doses of morphine much impaired the increased excretion of corticoids produced by cold exposure, but not that caused by Pitressin. Multiple doses of morphine reduced basal corticoid excretion and apparently increased the responsiveness to cold. ***Copy seen:*** DNLM.

SOBOLEV, V. S., *editor, see* U.S.S.R. Ministerstvo geologii i okhrany nedr SSSR. Almazy Sibiri. *1957.* No. 55592.

SOBOLEVA, V. I., *see* Murskiĭ, L. I, *and* V. I. Soboleva. Vosstanovlenie . . . nervnoĭ deîatel'nosti . . . *1957.* No. 53467.

SOBOLEVA, V. I., *see* Negovskiĭ, V. A., *and* V. I. Soboleva. Dinamika ugasaniîa . . . *1956.* No. 53526.

SOBOLEVSKAÎA, R. F., *see* Pogrebiſskiĭ, ÎU. E. Rezul'taty uvîazochno-revizionnykh rabot . . . *1957.* No. 54031.

SOBOLEVSKIĬ, K. A., *see* Pozdnîakova, Z. V. Izuchenie . . . prirodnykh bogatstv Sibiri . . . *1957.* No. 54123.

55018. SOCHAVA, VIKTOR BORISOVICH. Glavneĭshie dostizheniîa v oblasti kartografii rastitel'nosti SSSR za 40 let. (Vsesoîuznoe geograficheskoe obshchestvo. Izvestiîa, Mar.–Apr. 1958. t. 90. vyp. 2, p. 109–117.) 28 refs. Text in Russian. ***Title tr.:*** Main achievements in vegetation cartography in the U.S.S.R. during the last 40 years.

Review of vegetation maps, with outline of map types, principal data, scales, authors' names, and institutions which prepared them. For the far North, two are noted: maps of the vegetation of Komi A.S.S.R. at scale 1:100,000 by ÎU. P. ÎUdin; and E. G. Chernov's geobotanical map of the Murman area, 1:1,000,000. The Ministry of Agriculture is in process of publishing maps at scale 1:100,000 and 1:200,000 and sheets for Molozemel'skaya and Bol'shezemel'skaya tundras, and Yamal, Taymyr and Chukotka peninsulas have already been issued. More extensive data are given on a geobotanical map of 1:4,000,000, edited by E. M. Lavrenko and V. B. Sochava. A much needed vegetation map for the entire U.S.S.R. is in preparation on a scale of 1:2,000,000.

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55019. SOCHAVA, VIKTOR BORISOVICH. Taĭga na severo-vostoke Srednei Sibirskogo ploskogor'îa. (Botanicheskiĭ zhurnal, Sept. 1957. t. 42, no. 9, p. 1408–415, 2 illus.) 10 refs. Text in Russian. ***Title tr.:*** The taiga in the northeastern part of the Central Siberian tableland.

Contains a geobotanical study of this large region (ca. 650,000 km.^{2}) with predominance of *Larix daurica;* it differs considerably from the taiga region east of the Lena River. The vegetation on watersheds and river valleys, on the Olenek-Vilyuy plateau, are characterized from the viewpoint of the history of its development. The earlier dark coniferous taiga was replaced by a deciduous taiga during the glaciation era; and its commonest representative now is the relict species, *Picea obovata.* The present-day taiga includes both elements of the more southerly vegetation of the tableland, and tundra components from the northern Khatanga-Anabar area. Thin forest vegetation covers almost all this region, its most striking feature. The ground cover consists of moss and mosslichen associations. ***Copy seen:*** DLC.

SOCHAVA, VIKTOR BORISOVICH, *see also* Lavrenko, E. M., *and* V. B. Sochava. Pamîati . . . Poplavskoĭ. *1957.* No. 52685.

SOCHAVA, VIKTOR BORISOVICH, *see also* Pozdnîakova, Z. V. Izuchenie . . . prirodnykh bogatstv Sibiri . . . *1957.* No. 54123.

55020. SOCIETÀ GEOGRAFICA ITALIANA. Notizie breve. (Società geografica italiana, Bolletino, June–Aug. 1956. ser. 8, v. 9, fasc. 6–8, p. 366–68.) Text in Italian. ***Title tr.:*** Brief notes.

Includes note on attempt to introduce reindeer to Kerguelen Island (Indian Ocean): two pairs were flown from Lap-

land in 1955. Reindeer introduced to South Georgia (Southern Atlantic Ocean) in 1911 now number several hundreds.
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55021. SOCIETAS PRO FAUNA ET FLORA FENNICA. Fauna fennica. Helsingforsiae, 1947–1956. Two works so far pub. in this new monographic series, are described in this Bibliography under the authors' names, viz.:

LINDBERG, HÅKAN. Verzeichnis der ostfennoskandischen Homoptera Cicadina.

HACKMAN, W. The Scatophagitae (Dipt.) of eastern Fennoscandia.
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SOCOL, HARVEY, *see* Campbell, J., *and others*. Effect . . . cold . . . coenzyme A . . . liver . . . *1958*. No. 50056.

55022. *SØFART.* Ishavsfart, et dansk speciale. (Søfart, Jan. 1957. årg. 8, nr. 1, p. 32–33, illus.) Text in Danish. ***Title tr.:*** Polar navigation, a Danish specialty.

Notes the J. Lauritzen fleet of ice-strengthened vessels used in the Finland and Greenland trade and on polar research cruises; also a small motor ship of another company, the *Oluf Sven*, mother-ship for a British antarctic expedition, with foredeck converted to a hangar deck for aircraft. Establishment of a transit harbor on West Greenland, for transshipment of Canadian ore is mentioned. ***Copy seen:*** DLC.

55023. SØLVER, CARL V. Eskimo maps from Greenland. (Archaeology, Autumn 1957. v. 10, no. 3, p. 188–90, illus., map.) Refs. in text.

English translation by Ch. Kampen of an article in *Vikingen*, Nov. 1954, itself a shortened version of No. 42591.
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55024. SØRENSEN, HENNING, *and* **V. BUCHWALD.** Redegørelse for undersøgelser af radioaktive grønlandske mineraler og bjergarter. (Dansk geologisk forening. Meddelelser, Jan. 1958. bd. 13, hefte 6, p. 545–50, illus., table.) 5 refs. Text in Danish. ***Title tr.:*** Summary of investigations of radioactive minerals and rocks of Greenland.

Rocks and radioactive mineral traces from several parts of Greenland are described and comparisons made with Canadian, Kola Peninsula, and other deposits. The description of mineral occurrence and relationships includes mention of some 20 minerals of which 15 are noted from Greenland. No important discoveries are reported. Discussion of the auto-radiographic method explains photographic determination of the nature and localization of radioactive minerals in rocks by the use of special photographic emulsions which are affected by α and β particles from thin sections of the rocks samples. ***Copy seen:*** DGS.

55025. SØRENSEN, JANUS. Marinen på vagttjeneste i de grønlandske farvande. (Søfart, July 1957. årg. 8, no. 4, p. 22–24, illus.) Text in Danish. ***Title tr.:*** The Navy on guard duty in Greenland waters.

Outlines task of Grønlands kommando: on patrol for foreign trawlers fishing illegally; its salvage service; ice observations, etc. Two cutters, two motor boats and an airplane are at its disposal.
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55026. SØRENSEN, LARS NORMANN. Svalbard, eventyrlandet i Arktis. (Trondheim.) Noregs laerarmållag, 1957. 39 p. illus. Text in Norwegian. ***Title tr.:*** Svalbard, land of adventure in the Arctic.

Sketch of the history and the natural resources of Vestspitsbergen with stress on its geology and coal; the island's discovery during search for the Northeast Passage; early whaling and later walrus hunting and fishing; Norway's long connection with the archipelago, its acquisition and settlement. The recording of climatic data, plant and animal life, living conditions, and the physical geography generally are outlined. Differences in climate, snow conditions and human occupation of the several parts of the island group are clarified. The Tertiary coal is suitable for coking, and plans are underway to make coke. ***Copy seen:*** DLC.

55027. SØRENSEN, NILS ANDREAS, 1909– . Gjevilvasskammene, nunatakker i Trollheimens midte? (Naturen, 1949. årg. 73, nr. 3, p. 65–81, 4 illus., 2 text maps.) 17 refs. Text in Norwegian. ***Title tr.:*** The Gjevil crests, nunataks in central Trollheim?

The possibility of ice-free nunataks during the glacial period in the mountains southwest of Trondheim is discussed. On the summits of Midtre and Hemre Gjevil crests are small areas with bedrock of variable hardness, residual soil of probable interglacial age, and steep slopes, whose surroundings support the belief that these areas re-

mained ice-free. Arctic indicator plant varieties in the vicinity include *Carex glacialis, Arenaria norvegica, Euphrasia lapponica,* and *Arabis petraea.*
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SØRENSEN, T., *see* Jørgensen, C. A., *and others.* The flowering plants of Greenland . . . *1958.* No. 52075.

55028. SOFRONOV, V. U nas v Magadane. (Smena, June 1958. god 35, no. 11, p. 2–3, illus.) Text in Russian. ***Title tr.:*** In our Magadan.

Sketches development of the town and province: its port on Nagayeva Bay, road connections, amenities of the town, etc., and appeal to the Soviet youth to come to Magadan. ***Copy seen:*** DLC.

SOJKA, STANISŁAW, *see* Perzyna, T., *and others.* Wpływ hipotermii . . . *1958.* No. 53943.

55029. SOKOL'NIKOV, N. M. Osobennosti ledotermicheskogo rezhima v glubokom vodokhranilishche. (Gidrotekhnicheskoe stroitel'stvo, July 1957. god 26, no. 7, p. 25–29, table, diagr., graphs.) Text in Russian. ***Title tr.:*** Specific thermal conditions in a frozen deep-water reservoir.

Temperature and density variation at different depths of the water reservoir on the Irtysh River was studied under winter (frozen) conditions (−20° to −40° C.), and with continuous flow through the head and tail water channels ("b'ef"). The thermal processes in deep-water reservoirs (lakes) are discussed with reference to active mixing in the upper layers (above 30 m.) and less active in the lower layers of higher temperatures.
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55030. SOKOLOV, A. S. O pitanii Ladozhskogo tiulenia i tselesoobraznosti ego promysla. (Rybnoe khoziaĭstvo, Oct. 1958. god 34, no. 10, p. 25–27, tables.) Text in Russian. ***Title tr.:*** The diet of the Ladoga seal and usefulness of its exploitation.

Report on stomach examination and direct observations in the zoo. Amount of fishes consumed was found to be small and not necessarily limited to commercial species. Considering that this seal has not been utilized for 15 years, the author suggests its commercial exploitation to counterbalance losses among commercial fishes. ***Copy seen:*** DLC.

SOKOLOV, AL., *see* Lomonosov, M. V. Proėkt Lomonosova i ėkspeditsiia Chichagova. *1854.* No. 52907.

55031. SOKOLOV, ALEKSANDR ALEKSEEVICH. Sovershenstvovat' metody dobychi torfa. (Mekhanizatsiia trudoemkikh i tiazhelykh rabot, Jan. 1958. god 12, no. 1, p. 25–28, illus.) Text in Russian. ***Title tr.:*** To perfect methods of peat production.

Reviews various types of peat milling machines, combines for turning over, and collection of dried bricks. Production was increased 40–50% with the use of air suction in the mechanical collection of peat bricks: dry peat crumbs (3–5% moisture) are drawn from the field surface into the collector. This pneumatic arrangement reduces production cost by about 20%. Other combines are described and illustrated: excavators (for peat, lumber waste), turning machines, collectors, etc. ***Copy seen:*** DLC.

SOKOLOV, ALEKSANDR ALEKSEEVICH, *see also* Evseev, V. N., *and* A. A. Sokolov. Dobycha torfa na toplivo . . . *1958.* No. 50815.

55032. SOKOLOV, N. Po Angare; ocherk. (Ural, 1957, no. 4(37), p. 132–59.) Text in Russian. ***Title tr.:*** On the Angara River, a sketch.

Account of motion picture party's 1853 km. motor-boat trip down the Angara River from Lake Baykal to Yeniseysk in June (1956?): landscape work on hydroelectric stations, rapids, the towns of Angarsk, Bratsk, Kezhma, etc.
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55033. SOKOLOV, N. I. Barkhatovskiĭ karst. (Voprosy geografii, 1957, sbornik 40, p. 191–200.) 35 refs. Text in Russian. ***Title tr.:*** The Barkhatovo karst.

Outlines the results of investigation of the tectonics, stratigraphy, and development of relief of the karst formation near this village in the Angara basin between Usol'ye-Sibirskoye and the Osa River mouth (approx. 53° N. 103°30′ E.). Lithological characteristics, tectonics, morphology and features of the karst development are outlined; comparisons are made with similar formations in the Bol'shezemel'skaya Tundra, the northern edge of the Siberian platform, and other groups. ***Copy seen:*** DLC.

55034. SOKOLOV,N.N. Gistologicheskiĭ analiz polovogo tsikla tundrovogo pestsa. (Zoologicheskiĭ zhurnal, July 1957. t. 36,

vyp. 7, p. 1076–1083, illus. tables.) 5 refs. Text in Russian. Summary in English. ***Title tr.:*** Histological analysis of the sexual cycle in the arctic fox of the tundra.

A histological study, the first of its kind, for this species. Growth of spermatocytes was found to begin in January (in adult males even in February) with all stages in the epididymis in March. In the ovaries no stages near to oestrus were found from January till April 10. Mating began by the end of April or early May. ***Copy seen:*** DLC.

55035. SOKOLOV, N. O. Zadachi dal'neĭshego izucheniîa Karel'skoĭ berezy. (Akademiîa nauk SSSR. Karel'skiĭ i Kol'skiĭ filialy. Izvestiîa, 1958, no. 3, p. 96–102.) 15 refs. Text in Russian. ***Title tr.:*** Objectives in further study of Karelian birch.

In spite of some uncertainties of classification, the "Karelian" birch is now regarded as a specific form of European white birch, and the author suggests it be designated: *Betula verrucosa* Erhr., *forma carelica* Soc. Its wood is notable for its beautiful grain, caused by admixture of "stony" cells, and it is excellent material for carving and ornamentation. Over fifty natural stands of this birch are known in Karelia. Results of its first experimental cultivation are reported; further studies are required to open the way for its mass cultivation and industrial utilization. ***Copy seen:*** DLC.

SOKOLOV, P. V., *see* Mosevich, N. A., *and* P. V. Sokolov. Gidrokhimicheskaîa kharakteristika . . . *1939.* No. 53413.

SOKOLOV, V. A., *see* Kraſs, K. O., *and others.* Professor . . . Borisov. *1958.* No. 52470.

55036. SOKOLOV, V. N. Geologicheskoe stroenie severnoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiîa Sovetskoĭ Arktiki, 1957, p. 105–132.) Text in Russian. ***Title tr.:*** Geological structure of the northern part of the west Siberian lowland.

Outlines the stratigraphy, tectonics and mineral resources of this region, which extends from the Northern Ural eastward to Yenisey Bay (65°–87° E.) and north of the Arctic Circle; it includes the Gydan, Yamal, Tazovskiy Peninsulas and nearby islands: Litke, Belyy, Shokal'skogo, Vil'kitskogo, Oleniy, Sibiryakova, and others. Recent investigations of the region are reviewed, including the field survey and geologic mapping mostly carried out by Institute of Geology of the Arctic, on which this paper is based. Jurassic, Cretaceous, Tertiary, and Quaternary systems and their series are outlined. The tectonics is of a preliminary character. Of the useful minerals, oil in the Ust'-Yeniseysk region, coal, kaolin, diatomites, peat and various construction materials are noted.

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55037. SOKOLOV, V. N., *and* **G. A. ZNACHKO-ÎAVORSKIĬ.** Novye dannye po geologii Gydanskogo poluostrova. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informaſsionnyĭ biûlleten', 1957, vyp. 6, p. 4–10.) Text in Russian. ***Title tr.:*** New data on the geology of the Gydan Peninsula.

Reports field investigations in the western Gydan to provide geologic mapping at the scale 1: 1,500,000. General observations are outlined, and lithologic, stratigraphic descriptions given for 20 outcrops of sand lenses found in the Sabuto-Yakha River region and in upper reaches of the Levaya Yaru-Yakha and Nyaday-Pyncha. Peculiar ranges of hills, 20–25 m. high, observed in 15 different localities are described and divided into three types. Interglacial deposits, glacial boulders are characterized. ***Copy seen:*** DGS.

55038. SOKOLOV, V. N. Rezul'taty poiskov i razvedki nefti i gaza v Ust'-Eniseĭskom raĭone. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki, Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958, p. 108–119, tables, map.) 12 refs. Text in Russian. ***Title tr.:*** The results of prospecting and exploration for oil and gas in the Ust'-Yenisey district.

Presents a comprehensive account of the survey for oil and gas in the area 68°–72° N. 80°–87° E. since 1935. The institutions involved, various types of survey, cost (in all about 200 million rubles), etc. are reported; 145 core drillings and 15 deep-bore test wells have been made. Eight sections have been examined: the Malaya Kheta and Tochinsk structure, Dolganskiye lakes region, Bol'shaya and Malaya Kheta interfluve, Bol'shaya Layda region and M. Kheta-Yenisey interfluve, the lower course of the Sukhaya Dudinka River, lower Yakovleva, Kazantsevskaya area, and Cape Sopochnaya

Karga. Geologic structure of Ust'-Yenisey region is reviewed, occurrence of gas on the surface and oil in deep cores is reported. Quantities, properties and analyses of samples, ground water are summarized, and some data given. The gas and oil volumes at present are not large enough to warrant production, but this region is considered a most promising area where, in Mesozoic and Paleozoic deposits, oil potentialities are certain. ***Copy seen:*** DGS.

55039. SOKOLOV, V. N. Tektonicheskoe raĭonirovanie severa Zapadno-Sibirskoĭ nizmennosti. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958, p. 75–94, map.) 11 refs. Text in Russian. ***Title tr.:*** The tectonic division of the northern West Siberian lowland.

Presents map and explanation of a regional tectonic division worked out by the author together with D. V. Levin and S. M. Krŭkov from a week's exploration of the area approx. 66°–74° N. 62°–88° E. Recent studies, geologic mapping, magnetic and gravity surveys were used to define its tectonic history. The predominant Precambrian, Paleozoic, Mesozoic and Cenozoic formations were primarily tectonically deformed by orogenic phases of the Hercynian and Alpine periods. Magnetic anomalies were used to identify various synclines and anticlines which are briefly characterized. Occurrence of intensive recent tectonic movements is recognized in three regions and outlined. Best prospects for oil are around Ust'-Yeniseyskiy Port.

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55040. SOKOLOV, VASILIĬ ANDREEVICH. Geokhimicheskie i radiometricheskie metody poiskov i razvedki mestorozhdeniĭ. (Akademiĭa nauk SSSR. Vestnik, July 1958. god 28, no. 7, p. 125–26.) Text in Russian. ***Title tr.:*** Geochemical and radiometric methods of search and prospecting deposits.

Account of a conference held Apr. 21–26, 1958, at the Academy of Sciences' Dept. of Geological and Geographical Sciences; includes summaries of papers by A. I͡A. Krems and others on experimental use of geochemical methods in prospecting natural gas in the Timan-Pechora area, and by I. A. Petersil'e on using the same method in search for natural gas in intrusive formations of Kola Peninsula. ***Copy seen:*** DLC.

55041. SOKOLOVA, E. Materialy k gidrologii Bab'ego morʹi͡a. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa moreĭ SSSR, 1934. vyp. 20, p. 33–42, illus., tables.) 9 refs. Text in Russian. Summary in German. ***Title tr.:*** Materials to the hydrology of Bab'ye More.

A study of a relict sea, located on the Karelian shore of Kandalaksha Bay. Its location (north west side of Velikiy Island, approx. 66°34′ N. 33°20′ E.), tides, temperature and salinity with depth, air temperatures, wind, etc., are reported. From investigations in Sept.–Oct. 1932, Bab'ye More seemed to be connected with the White Sea through two narrow channels offering some access to tides. ***Copy seen:*** DLC.

55042. SOKOLOVA, M. N. Pitanie nekotorykh plotoi͡adnykh bespozvonochnykh glubokovodnogo bentosa dal'nevostochnykh moreĭ i severo-zapadnoĭ chasti Tikhogo okeana. (Akademiĭa nauk SSSR. Institut okeanologii. Trudy 1957. t. 20, p. 279–301, tables.) 16 refs. Text in Russian. ***Title tr.:*** The food of some carnivorous benthic deep-sea invertebrates of the Far-Eastern seas and the Northwest Pacific.

A study based on examination of stomach contents. Decapods, asteroids and ophiuroids of the Bering Sea, northwestern Pacific and Sea of Okhotsk, from depths to 4,130 m. were investigated. The forms found in the stomachs and their frequency are listed. The general characteristics of these bottom feeders are discussed. ***Copy seen:*** DLC.

55043. SOKOLOVA, M. N. Pitanie nekotorykh vidov dal'nevostochnykh Crangonidae. (Akademiĭa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 23, p. 269–85, illus., tables.) 7 refs. Text in Russian. ***Title tr.:*** Nutrition of some Far-Eastern species of Crangonidae.

An investigation based on stomach content analyses of these crustaceans. Material collected by the R/V *Vitiaz'* from the Bering Sea was examined in the first place, with that from the Okhotsk Sea and the Northwest Pacific following. The analysis goes down to species consumed, according to stations, by different species of Crangonidae. Crustacea, molluscs and worms made up the bulk of food in general. ***Copy seen:*** DLC.

SOKOLOVA, MARIÏA NIKOLAEVNA, *see also* Putsillo, V. G., *and others.* Nefti i bitumy Sibiri. *1958.* No. 54176.

55044. SOKOLOVA, N. IU. Fauna litorali ostrovov Kandalakshskogo gosudarstvennogo zapovednika. (Vsesoiuznoe gidrobiologicheskoe obshchestvo. Trudy, 1957. t. 8, p. 100–118, illus., tables, map.) 7 refs. Text in Russian. ***Title tr.:*** Littoral fauna of the islands of the Kandalaksha State Preserve.

A study of the intertidal zone in six of the two dozen or more small islands of this White Sea area preserve, based on three summers' (1946–1948) work. The average biomass of animals (worms, arthropods, molluscs, echinoderms) and plants (five) is tabulated. Qualitative distribution of the more common forms, ecological zonation, profiles through zones are presented and general aspects discussed. ***Copy seen:*** DLC.

55045. SOKOLOVA, Z. P. K istorii zhilishcha obskikh ugrov. (Sovetskaia ėtnografiia, 1957. no. 2, p. 88–105, illus.) Approx. 70 refs. Text in Russian. ***Title tr.:*** Contributions to the history of dwellings of the Ob' Ugrians.

Analysis of the historical development of Ostyak and Vogul house types based primarily on the work of U. T. Sirelius (No. 26227), the Kama archeological expedition of Molotov (Perm') University and the West Siberian expedition of the Institute of the History of Material Culture. Two basic house types, typical for both peoples, are distinguished: the frame hut and house of the semi-subterranean and above-ground varieties and the log cabin. While log cabins were probably introduced into western Siberia by the Zyryans and Russians in the 17th century, traces of frame-reinforced house pits were found in archeological sites of the third millennium B.C. The shape (round, conical, rectangular), building technique and materials (poles, logs, blocks), roofing (bark, branches, sod), size and position (sunken, above ground), use (temporary, permanent), etc., of the frame dwellings are described. The log cabins were used mainly as summer shelters; different types of log construction are sketched. ***Copy seen:*** DLC.

SOKOLOVA, Z. P., *see also* Gantskaia, O. A. Sessii . . . issledovanii 1957 g. *1958.* No. 51080.

55046. SOKOLOVSKAIA, ALEKSANDRA PAVLOVNA, 1905– . Pyl'tsa rastenii Arktiki. (Rastitel'nost' Krainego Severa SSSR i ee osvoenie, 1958. vyp. 3, p. 245–92, illus., tables.) 13 refs. Text in Russian. ***Title tr.:*** The pollen of arctic plants.

Describes pollen of 213 species from 28 typical families of flowering plants. The samples in author's collections from Kolguyev Island, the Khibiny Mts. of Kola Peninsula, and the Tiksi Bay region in Yakutia were supplemented from B. A. Tikhomirov's herbarium collected on the Taymyr Peninsula. Erdtman's acetolysis method was used and microscopic studies made. Morphological data on shape, size and structure of the pollen grains are presented for each species and illustrated by drawings on 24 plates. The general index at the end of the volume includes the plants mentioned in this paper.
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55047. SOKOLOVSKAIA, ALEKSANDRA PAVLOVNA, 1905– . Sootnoshenie mezhdu chislom khromosom i velichinoi pyl'tsevykh zeren u arkticheskikh vidov Ranunculaceae i Saxifragaceae. (Botanicheskii zhurnal, Aug. 1958. t. 43, no. 8, p. 1146–55, 5 tables.) 13 refs. Text in Russian. ***Title tr.:*** On the correlation between the chromosome number and pollen grain size in arctic species of Ranunculaceae and Saxifragaceae.

Study of material collected from Tiksi Bay, Kolguyev Island, and Khibiny in Kola Peninsula, its cytology, morphology, palynology and size of the pollen grains. Descriptions and microscopical measurements are given for 18 of the saxifrage and 22 of the crowfoot family. Related species with different chromosome numbers were observed to belong to the autopolyploids and have pollen grains of different size. Polyploid species with higher chromosome numbers have, as a rule, larger pollen grains than the diploid species. ***Copy seen:*** DLC.

55048. SOKOLOVSKAIA, ALEKSANDRA PAVLOVNA, 1905– . Velichina pyl'tsevykh zeren i chisla khromosom u nekotorykh arkticheskikh vidov zlakov. (Botanicheskii zhurnal, Nov.–Dec. 1955. t. 40, no. 6, p. 850–53, 22 illus., table.) 19 refs. Text in Russian. ***Title tr.:*** The size of pollen grains and the chromosome numbers of some species of arctic grasses.

Contains tabulated data on chromosome numbers and diameters of pollen grains and pores of 35 grasses, of which 21 were

collected in various arctic localities: Khibiny, Kolguyev Island, Tiksi Bight and Taymyr Peninsula. The arctic species are characterized by a high number of chromosomes (polyploids) and large size of pollen grains.

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55049. SOLBERG, PAUL, *and* **O. BRÅDLIE.** Nitrat- og ammoniuminnhold i dyrket jord med- og uten plantevekst; orienterende undersøkelser. (Forskning og forsøk i landbruket, 1957. bd. 8, hefte 5, p. 329–63, tables, graphs.) 2 refs. *Also pub. as* Norway. Statens forsøksgard Løken. Melding nr. 37. Text in Norwegian. Summary in English. ***Title tr.:*** Content of nitrate and ammonia in cultivated soil with and without plant growth; preliminary investigations.

Comparative experiments were made in southern Norway and Troms (69.5° N.) on plots of organic and mineral soils during the growing season. Soil conditions, added fertilizers, and unassimilated organic matter are described. Nitrate content of soil without plant growth reached late spring and fall peaks. The fall peak was absent in soils with plant growth. In Troms it stayed as high as in southern locations, even with lower temperatures. Except for a bogland experiment and soon after fertilizing with sulphuric ammonia, very little ammonia was found. Graphs and tabulated data are included for individual plots.

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SOLINAS, A., *see* De Maria, A., *and* A. Solinas. L'emodinamica nella bradicardia sperimentale . . . *1957*. No. 50487.

55050. SOLLI, SVEIN. Tømmerkjøring med hest. (Tidsskrift for skogbruk, 1956. årg. 64, hefte 3, p. 149–76, illus.) Text in Norwegian. ***Title tr.*** Use of horses for transportation of logs.

Outlines methods and equipment used for log transport in various parts of Norway. Implements for hauling logs in snow are described and illus.

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SOLNTSEV, N. A., *see* Saushkin, IU. G., *and* N. A. Solntsev. Sorokaletniĭ put' . . . *1957*. No. 54565.

55051. SOLODOV, N. A. O raspredelenii redkikh ėlementov v mineralakh redkometal'nykh granitnykh pegmatitov. (Geokhimiia, 1958, no. 8, p. 749–56, tables.) 5 refs. Text in Russian. Summary in English. ***Title tr.:*** On the distribution of rare elements in minerals of rare-metal granite pegmatites.

Presents the results of spectral and chemical investigations of content of Li, Rb, Cs, Ta, and Nb (Kola Peninsula) and Be (Mongolian Altay). Tested minerals are listed. Dispersion of rare elements in minerals depends on: chemical properties of rare-element crystals, their concentration, chemical character of the medium, and favorable crystal structures. The average content of tantalum and niobium does not exceed 0.0003%, lithium 0.018%, caesium 0.107%, and rubidium 0.64%. ***Copy seen:*** DLC.

SOLODOVNIKOVA, L. F., *see* Brand, V. É., *and* L. F. Solodovnikova. Proektirovanie . . . domov iz kamyshitovykh paneleĭ . . . *1957*. No. 49883.

55052. SOLOMINA, R. V. Nekotorye novye vidy iz nizhnepermskikh otlozheniĭ Paĭ-Khoia. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, vyp. 6, 1957. p. 69–83, illus., tables, 3 plates.) 11 refs. Text in Russian. ***Title tr.:*** Some new species from the Lower Permian deposits of Pay-Khoy.

Presents a new species of brachiopod fauna and its stratigraphical position from Lower Permian deposits of the Pay-Khoy Mts. of Yugor Peninsula, based on the author and V. I. Ustritskiĭ's investigation during recent years. The brachiopod material is now in the F. N. Chernyshev Central Geological Museum. Nine species identified by the writer are described and their measurements, variability, comparison, location and distribution given. Their stratigraphic importance for subdivision of Lower Permian deposits is stressed.

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SOLOMON, DAVID HARRIS, *see* Knigge, K. M., *and others*. Role of pituitary . . . thyroid responses of cold . . . *1957*. No. 52337.

SOLOMON, DAVID M., *see* Knigge, K. M., *and* D. M. Solomon. Response of hamster thyroid to cold exposure . . . *1958*. No. 52336.

SOLONENKO, V. P., *see* Puchkov, S. V., *and others*. Novoe sil'noe zemletriasenie . . . *1958*. No. 54165.

55053. SOLOTCHIN, I. Molochnyĭ skot na Kraĭnem Severe. (Sel'skoe khozi͡aĭstvo Sibiri, 1957, no. 12, p. 89–90, table.) Text in Russian. ***Title tr.:*** Dairy cattle in the far North.

Reports successful breeding of dairy cattle by the Dudinka, Noril'sk and Kureyka state farms in Krasnoyarsk Province: selection of bulls and cows, results of crossing Siberian with European breeds, etc. The average annual yield of milk per cow amounted in 1956 to 3,616 kg. at the Noril'sk farm, 3,714 kg. in Dudinka and 3,480 kg. in Kureyka.

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SOLOV'EV, A. I., *see* Gershanovich, G. L., *and others.* Opyt zimneĭ ėkspluatat͡sii betononasosov. *1957.* No. 51164.

SOMERVELL, W. L., *Jr., see* George, J. J., *and others.* An empirical method . . . cyclones. *1958.* No. 51143.

SOMERVELL, W. L., *Jr., see* U.S. Navy, Weather Research Facility. Normal 500 mb charts . . . *1957.* No. 55652.

55054. SOMMER, MAX. Geologie von Lyells Land, NE-Grönland. København, C. A. Reitzel, 1957. 157 p. illus., plates, maps incl. 4 fold., profiles incl. 2 fold., diagrs. (Meddelelser om Grønland, bd. 155, nr. 2.) 49 refs. Text in German. Summary in English. ***Title tr.:*** Geology of Lyells Land, northeast Greenland.

Discusses stratigraphy and tectonics of part of the Caledonian mountain chain of East Greenland, on the Lyells Land peninsula (72°40′ N. 25°30′ E.). This area, investigated by the author during the Danish Expedition to East Greenland led by L. Koch, contains gneisses of the central metamorphic complex in the west, and sediments of the Eleonore Bay and tillite formations in the east. The sedimentary sequence is described in detail, also the tectonic features including the E–W depression, the N–S folds and faults, the NW–SE striking tension faults, the Narhvalsund depression, the eastern marginal flexure, and the major fault parallel to it.

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55055. SOMMER, MAX. Geologische Untersuchungen in den praekambrischen Sedimenten: zwischen Grandjeans Fjord und Bessels Fjord, 75°–76° N. Br., in NE-Grönland. København, C. A. Reitzel, 1957. 54 p. illus., plates, maps, profiles, diagrs. (Meddelelser om Grønland, bd. 160, nr. 2.) 20 refs. Text in German. Summary in English. ***Title tr.:*** Geological investigations of the Precambrian sediments: between Grandjean Fjord and Bessel Fjord, 75°–76° N. lat., in northeast Greenland.

Describes stratigraphy and tectonics of sediments extending northwest from the southernmost part of Hochstetters Forland to the interior of Bessel Fjord, as investigated during the Danish East Greenland Expedition led by L. Koch. The sediments belong to the Eleonore Bay formation, and are assumed to be preserved in a NW–SE directed graben. In many places, they are intruded by granites probably related to the late- to post-orogenic granites of the Caledonian areas further south. Two main directions of tectonic axes have been distinguished: an older system running NNE–SSW, and a younger directed NW–SE. It is assumed that most of the tectonic features result from the Caledonian orogeny. In southern Hochstetters Forland, faults believed to be of Caledonian origin were reactivated in Mesozoic or post-Mesozoic times.

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55056. SOMMERMAN, KATHRYN MARTHA, 1915– . Two new species of Alaskan *Prosimulium*, with notes on closely related species, Diptera, Simulidae. (Entomological Society of Washington. Proceedings, Oct. 1958. v. 60, no. 5, p. 193–202, 32 illus.) 4 refs.

Describes two black-flies, *Prosimulium frohnei* n. sp. from a small trickle near the road to Eklutna Lake, July 26, 1956, and *P. perspicuum* n. sp. from Eagle River, a glacial stream, 13.5 miles north of Anchorage, Aug. 1957. *P. travisi* is also found in the vicinity of Anchorage.

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55057. SOMOV, MIKHAIL MIKHAĬLOVICH. 376 dneĭ na dreĭfuſuſshcheĭ l'dine. (*In:* Burkhanov, V. F. Cherez okean na dreĭfuſuſshchikh l'dakh, 1957, p. 101–137, illus.) Text in Russian. ***Title tr.:*** 376 days on a drifting ice floe.

The main events of the drifting station North Pole-2, during its 2,600 km. drift in 1950–1951, are recounted by its head: the purpose and preparation of the expedition, personnel (16), and equipment; setting-up of the station on Apr. 1, 1950, at 76°10′ N. 193° E.; Shaposhnikov's round arctic tents type 1 and 2 (Kruglai͡a arkticheskai͡a palatka Shaposhnikova, KAPSh-1, KAPSh-2); gas heating and radio communication; safety

measures in case of ice cracking, etc.; visits of polar bears and arctic foxes; etc. The party's difficulties are described: struggle with melt-water pools in summer; fire in the radio station; unsuccessful attempt to drop supplies in October when cracks appeared on the landing strip; pressure and cracking of ice in winter, destruction of radio station on Feb. 4, and transfer of the camp to another site; evacuation on April 11, 1951; re-discovery of the camp in 1954; scientific results of the work.

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SOMOV, MIKHAIL MIKHAÏLOVICH, *see also* Zenkevich, L. A. Deĭatel'nost' . . . *1958*. No. 56186.

SONIN, M. ÎA, *see* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . ÎAkutskoĭ ASSR. *1958*. No. 49171.

55058. SONINA, M. A. Pribrezhnyĭ promysel na Murmane v 1953 i 1954 gg. (Akademiîa nauk SSSR. Murmanskaîa biologicheskaîa stantsiîa. Trudy, 1957. t. 3, p. 159–68, illus., table.) Text in Russian. ***Title tr.:*** Coastal fishery on the Murman in 1953 and 1954.

Contains information and data on total catches and their species composition, number and types of vessels, size composition of catches according to months, age composition of yields, oceanographic factors affecting catches and size composition, etc.

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55059. SONINA, M. A. Treska Belogo moriîa. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk*. Materialy po kompleksnomu izucheniîu Belogo moriîa, 1957. vyp. 1, p. 230–42, illus. tables.) 11 refs. Text in Russian. ***Title tr.:*** The White Sea cod.

Study aimed to ascertain the stock of cod in this sea. Earlier literature, taxonomy, size, growth and weight, sex composition, and food are treated in turn. Cod fisheries (fishing methods, grounds and seasons, catches) and reserves are discussed. ***Copy seen:*** DLC.

55060. SOPER, JAMES H., *and* **R. SATHYANARAYANA.** *Isoëtes* in eastern Canada. (American fern journal, July–Sept. 1958. v. 48, no. 3, p. 97–102, illus.) 5 refs.

Attempt is made to provide a simple key to the species of this genus of herbs (quillwort). Four distinguished by spore markings, occur in eastern Canada, including *I. muricata* native to Labrador and James Bay, and *I. macrospora* in Labrador. ***Copy seen:*** DA.

55061. SOPER, JOSEPH DEWEY, 1893– . Notes on wildfowl of Slave River delta and vicinity, Northwest Territories. (Canadian field-naturalist, Apr.–June 1957. v. 71, no. 2, p. 74–81.) 7 refs.

Contains notes on physical characteristics of the region (61°15′ N.) and its waterfowl population, and an annotated list of 39 species, with remarks on phenology, frequency and local distribution. ***Copy seen:*** DA.

55062. SOROKOV, D. S. Stratigrafiîa triasovykh otlozheniĭ TSentral'nogo sektora Sovetskoĭ Arktiki. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Neftegazonosnost' severa Sibiri, 1958, p. 36–43.) Text in Russian. ***Title tr.:*** Stratigraphy of the Triassic deposits in the central zone of the Soviet Arctic.

The zone comprises the lower Yenisey-Lena area: east Taymyr, the Anabar-Khatanga interfluve, the Lena-Olenek region, Kharaulakh Range, Kotel'nyy in the New Siberian Islands, etc. The Triassic system is represented by Lower, Middle and Upper series and consists of marine and lagoon-continental deposits. Their thickness, lithologic and paleontologic characteristics are outlined.

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55063. SOSEDKO, A. F. *d.* **1958?,** *and* **V. V. GORDIENKO.** Évkriptit iz pegmatita severnoĭ chasti Kol'skogo poluostrova. (Akademiîa nauk SSSR. Doklady, Sept. 1, 1957. t. 116, no. 1, p. 135–36, table.) 6 refs. Text in Russian. ***Title tr.:*** Eucriptite from the pegmatite of the northern part of Kola Peninsula.

Contains results of microscopical, optical and chemical (table) analyses of eucriptite and albite aggregate found in spodumene of pegmatite veins near Leshaya. The aggregate is white, greyish, light-brown, yellowish, cream or bluish in color, with oily luster and conchoidal fracture; its hardness is 4.5–5, specific gravity 2.627 ± 0.001 for the white variety, and 2.642 ± 0.002 for the cream. The chemical content of the Kola eucriptite is close to that from Harding in

New Mexico (table). This aggregate of eucriptite and albite is closely connected with pegmatite formation, not the result of some later processes.

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SOSEDKO, A. F., *d.* **1958?,** *see also* Borovik-Romanova, T. F., *and others.* Ob otnoshenii soderzhaniĭ kaliîâ k rubidiîû . . . *1958.* No. 49854.

SOSEDKO, A. F., *d.* **1958?,** *see also* Borovik-Romanova, T. F., *and* A. F. Sosedko. Soderzhanie redkikh shchelocheĭ . . . *1957.* No. 49855.

55064. SOSNIN, A. Neskol'ko sovetov promyslvym kapitanam. (*In:* Na promyslakh v Barenfsovom more, 1956, p. 90–99.) Text in Russian. ***Title tr.:*** Some advice to fishing-boat skippers.

A veteran navigator and skipper offers advice on how to prevent reduction of catch when changing course, how to remove stones from the trawl while fishing and how to secure the biggest possible catch. Changing the fishing grounds, differences in yield between day and night, effects of weather and bottom on catches and nets, etc. are also discussed. ***Copy seen:*** DLC.

SOTAVALTA, OLAVI, *see* Euranto, E., *and others.* Perhoshavainnot . . . *1957.* No. 50802.

SOULE, HERBERT D., *see* Stulberg, C. S., *and others.* Preservation of human . . . cell strains at low temperatures. *1958.* No. 55208.

55065. SOUTH, FRANK E., *Jr.* Rates of oxygen consumption and glycolysis of ventricle and brain slices, obtained from hibernating and non-hibernating mammals, as function of temperature. (Physiological zoölogy, Jan. 1958. v. 31, no. 1, p. 6–15, illus., tables.) 14 refs.

The "heat of activation" of O_2-consumption by ventricle slices of non-hibernating hamsters was about two-thirds of that calculated for rats, while slices from hibernating hamsters and torpid bats amounted to about one half that of rats. Corresponding values for brain slices showed only slight differences. The perimeters were determined for a temperature range of 5° to 43° C.

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SOUTHWARD, G. MORRIS, *see* International Pacific Halibut Commission. Regulation and investigation . . . Pacific halibut fishery in 1956. *1957.* No. 51944.

55066. SOVALOV, IONA GEORGIEVICH, *Editor.* Sbornyĭ zhelezobeton; spravochnoe posobie dlîâ stroitelîâ. Moskva, Gos. izd-vo literatury po stroitel'stvu i arkhitekture, 1956. 437 p. illus., tables, diagrs. 129 refs. Text in Russian. ***Title tr.:*** Sectional ferro-concrete; a handbook for builders.

Contains information on prefabricated concrete sections, their preparation, composition, treatment, transportation and methods of assembly at the site. Special requirements for frost-resistant materials are presented in chap. 3 (p. 112–51); various additives and plasticizers are described to increase the frost- and corrosion-resistant properties. Data are tabulated (p. 128–30, 145–47) on ingredients (furnace slags, pumice, agglomerates, coal slags, etc.) affecting the porosity and air-retention properties required in heat-insulating concretes. Information concerning temperature conditions for winter mixing and transportation of concrete are given in chap. 4 (p. 170–71, 180). Construction of casting molds, with steam and electric heating arrangements, is described (p. 230–80).

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55067. ***SOVETSKAÎA MUZYKA.*** V neskol'ko strok. (Sovetskaîâ muzyka, Dec. 1958. god 22, no. 12, p. 150–51.) Text in Russian. ***Title tr.:*** In a few lines.

Notes the publication in Arkhangel'sk of a collection of folk songs from the White Sea, Pinega and Mezen' districts. Preparatory classes for nationals of the far North et al. have been instituted at the Krasnoyarsk school for music.

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55068. ***SOVETSKAÎA ZHENSHCHINA.*** Geolog iz Îakutii. (Sovetskaîâ zhenshchina, Sept. 1957, no. 9, p. 38–39, illus.) Text in Russian. ***Title tr.:*** A geologist from Yakutia.

Sketch of a Yakut girl geologist from Nyurba, a village on the Vilyuy River. The discovery of the diamond pipe "Trubka Mira" and the rich coal basin in that area, and her participation in the exploration of the Lena River coal basin are mentioned. ***Copy seen:*** DLC.

55069. ***SOVETSKAÎA ZHENSHCHINA.*** Pervyĭ v mire. (Sovetskaîâ zhenshchina Mar. 1958, no. 3, p. 20, port.)

Text in Russian. ***Title tr.:*** First in the world.

Deals with the atomic ice-breaker, *Lenin*, and one of its leading women construction engineers. Some approximate data are given on the ice-breaker's cruising range, number of compartments, etc. ***Copy seen:*** DLC.

55070. ***SOVETSKIĬ MORI͡AK.*** Na strazhe morskikh granit͡s. (Sovetskiĭ mori͡ak, July 1957. god 17, no. 13, p. 2–3, illus.) Text in Russian. ***Title tr.:*** Guarding the sea boundaries.

Sketch of Soviet naval activities illustrated with photographs of vessels and naval installations in various parts of the U.S.S.R.; note on a submarine operating in the North under command of Captain R. Érlikh is included.

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55071. ***SOVETSKIĬ MORI͡AK.*** Severnomu flotu 25 let. (Sovetskiĭ mori͡ak, July 1958. god 18, no. 14, p. 1+, illus., ports., col. plates.) Text in Russian. ***Title tr.:*** 25th anniversary of the Northern Fleet.

Presents a set of articles, notes and illus. on the history, personnel and achievements of the Soviet Northern Fleet founded in 1933 and operating in Barents Sea. Six outstanding sailors, Admiral A. Chabanenko (commander) and S. Averchuk are featured. Bombing from aircraft and other aspects of personnel training for naval operations, search for unexploded bombs on the sea bottom, activities of the Fleet newspaper, *Na strazhe Zapoli͡ar'i͡a*, and theater, etc. are dealt with. ***Copy seen:*** DLC.

55072. ***SOVETSKIĬ MORI͡AK.*** Za poli͡arnym krugom. (Sovetskiĭ mori͡ak, Aug. 1956. god 16, no. 15, 3 col. plates between p. 12 and 13.) Text in Russian. ***Title tr.:*** Beyond the Arctic Circle.

Colored photographs and brief notes on activities of the Soviet torpedo-boats in arctic areas (northern shores of Kola Peninsula?). ***Copy seen:*** DLC.

55073. ***SOVETSKIĬ SOI͡UZ.*** Atomnyĭ ledokol spushchen na vodu. (Sovetskiĭ soi͡uz, 1958, no. 1 (95), p. 3, illus.) Text in Russian. ***Title tr.:*** The atomic ice-breaker has been launched.

Photo of the 16,000 t., 44,000 h.p. *Lenin* to be used as research vessel and as pilot for ships along the North Sea Route. Powered by an atomic reactor, she is expected to have a top speed of 18 knots in open water and to break through ice six-ft. thick.

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55074. ***SOVETSKIĬ SOI͡UZ.*** Chelovek ozhil! (Sovetskiĭ soi͡uz, 1957, no. 7 (89), p. 20, illus.) Text in Russian. ***Title tr.:*** A man brought back to life.

Popular account of revival of a man exposed for 18 hrs. to −40° C. Methods used to raise body temperature from 22.5° C. are described: induced retardation of metabolic processes, artificial respiration, immersion in water of 34° C. rising to 38° C. Consciousness returned during the second week but speech had to be relearned. ***Copy seen:*** DLC.

55075. ***SOVETSKIĬ SOI͡UZ.*** Gorod nauki. (Sovetskiĭ soi͡uz, 1958, no. 12 (106), p. 32, illus.) Text in Russian. ***Title tr.:*** City of science.

Describes the city, still unnamed, under construction on the shore of the artificial Ob' Sea. It is to house the scientific staff, institutes and affiliated institutions of the Siberian Section (otdel) of the Academy of Sciences, U.S.S.R.; a population of some 35,000 is expected. The Section (M. A. Lavrent'ev, president) is to be responsible for research connected with problems of the Siberian economy. Several of its leading members are mentioned. ***Copy seen:*** DLC.

55076. ***SOVETSKIĬ SOI͡UZ.*** Kogda vidi͡at skvoz' zemli͡u. (Sovetskiĭ soi͡uz, 1957, no. 4, (86), p. 8–10, illus.) Text in Russian. ***Title tr.:*** Looking below the earth's surface.

Interview with P. I͡A. Antropov, Minister of Geology and Mineral Conservation, including comment on the Tungusska (86°–116° E. 56°–70° N.) and Lena coal basins, whose potential is said to exceed the present coal output of all U.S.S.R. ***Copy seen:*** DLC.

55077. ***SOVETSKIĬ SOI͡UZ.*** Kosmicheskiĭ termometr. (Sovetskiĭ soi͡uz, 1957, no. 6 (88), p. 31, illus.) Text in Russian. ***Title tr.:*** Cosmic thermometer.

Note and photos on four spectrally pure platinum thermometers built by Prof. Strelkov and associates. Of great stability and sensitivity, their temperature range is −182.97° to −263° C.

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55078. ***SOVETSKIĬ SOI͡UZ.*** Moskva-Los Anzhelos; k dvadt͡satiletii͡u pereleta cherez Severnyĭ poli͡us. (Sovetskiĭ soi͡uz,

1957, no. 7 (89), p. 12–13, illus., map.) Text in Russian. ***Title tr.:*** Moscow-Los Angeles; the 20th anniversary of the flight across the North Pole.

Photographs with notes commemorating Valeriĭ Chkalov's first non-stop flight from Moscow across the North Pole to the United States in June 1937, and that of Gromov, Ĭ͡Umashev and Danilin, Moscow-Los Angeles, July 1937, with excerpts from newspapers of the time. ***Copy seen:*** DLC.

55079. ***SOVETSKIĬ SOĬ͡UZ.*** Tak spressovyvaetsi͡a rasstoi͡anie. (Sovetskiĭ soĭ͡uz, 1958, no. 6 (100), p. 16, illus.) Text in Russian. ***Title tr.:*** Distance is thus compressed.

Notes the newly established air-connection Moscow-Petropavlovsk-Kamchatskiy by turbojet liner Tu–104 in 10–12 flight-hours. Kamchatka's area now under cultivation (10,000 hectares) and children at school (34,000) are compared with those of tsarist days: 15 ha, 400 students.

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55080. ***SOVETSKIĬ SOĬ͡UZ.*** Tvorchestvo i͡akutskogo naroda. (Sovetskiĭ soĭ͡uz, 1958, no. 1 (95), p. 37, illus.) Text in Russian. ***Title tr.:*** Creative art of the Yakut people.

Notes the arrival in Moscow of Yakut men of letters and artists on the occasion of the 325th anniversary of Yakutia's incorporation into the Russian state. Photo shows a scene from the Yakut opera "N'urgun Bootur."

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55081. ***SOVETSKIĬ SOĬ͡UZ.*** V neskol'ko strok. (Sovetskiĭ soĭ͡uz, 1958, no. 1 (95), p. 35.) Text in Russian. ***Title tr.:*** Short notices.

Includes report that the wintering party on drifting station North Pole-6 was able to pick up regular telecasts from Vladivostok over 5,000 km. away. Members of the Soviet scientific expedition aboard the *Lena* have succeeded in reaching the central region of the Nansen Rise, natural boundary between the Arctic Ocean and the Greenland Sea. Depth soundings exceeded 3,500 m. Bottom sediments yielded microfauna of Atlantic origin supposed to have penetrated into arctic waters through a deep-sea channel discovered by this expedition.

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55082. ***SOVETSKIĬ SOĬ͡UZ.*** Vpervye v Vostochnom polusharii. (Sovetskiĭ soĭ͡uz, 1957, no. 1 (83), p. 36, illus.) Text in Russian. ***Title tr.:*** First find in the Eastern Hemisphere.

Note on discovery in the Pinega River basin (Arkhangel'skaya Oblast') of remains of several caseids, Permian mammal-like reptiles of the Pelycosauria. Photograph shows well-preserved head of reptile. Find was made by geologist M. Plotnikov of Arkhangel'sk, and further excavations are to be conducted by an expedition of the Paleontological Institute of the Academy of Sciences, U.S.S.R. ***Copy seen:*** DLC.

55083. ***SOVETSKIĬ SOĬ͡UZ.*** Zhizn' v Arktike; t͡sifry i fakty. (Sovetskiĭ soĭ͡uz, 1957, no. 6 (88), p. 34–35, illus., map.) Text in Russian. ***Title tr.:*** Life in the Arctic; figures and facts.

Photographs and notes on Soviet achievements in the Arctic: education of native peoples, the Floating Marine Institute 1921, the Northern Sea Route, drifting stations, Lomonosov Range, etc., mineral developments and their centers of Noril'sk, Ukhta; fertilizer and lumber industries, cereal and vegetable culture, fur trade and fisheries, sealing, etc. ***Copy seen:*** DLC.

55084. ***SOVETSKIĬ SOĬ͡UZ.*** Zimoĭ na Angare. (Sovetskiĭ soĭ͡uz, 1957, no. 3 (85), p. 20–21, illus. incl. col. on covers.) Text in Russian. ***Title tr.:*** Winter on the Angara.

Photographs and brief sketch of the Irkutsk hydroelectric station and its problems: the river does not freeze even at −40 to −50° C. and has high floods in the fall and winter; station has inside spillways and openings. Built on gravel-sandy ground, the dam has a central core of argillaceous soil with two rows of metal rabbeted piles, reducing use of reinforced concrete, hence costs. The concrete is cast in electrically or steam-heated sheds. The station's total power is rated at 660,000 kw., with an annual output of 4.5 billion kw. hrs.

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SPACKMAN, WILLIAM, *Jr., see* Dutcher, R. R., *and others.* Petrographic . . . coals . . . Arctic Slope . . . *1957.* No. 50663.

55085. SPANGENBERG, B. Zveri i ptit͡sy, dobycha kotorykh zapreshchena. (Okhota i okhotnich'e khozi͡aĭstvo, June 1957, no. 6, p. 14–16, illus.) Text in

Russian. ***Title tr.:*** Animals and birds, of which catch is prohibited.

Brief characterization of nine mammals and nine birds, including sea otter, beaver, polar bear, whooping swan and owl. ***Copy seen:*** DLC.

55086. SPANGENBERG, EVGENIĬ PAVLOVICH, *and* **V. V. LEONOVICH.** Ékologiîa ptiţs-khishchnikov poluostrova Kanin. (Moskva. Universitet. Uchenye zapiski, 1958. vyp. 197, Ornitologiîa, p. 49–60.) 6 refs. Text in Russian. ***Title tr.:*** The ecology of the predatory birds of Kanin Peninsula.

Reports observations of a dozen birds in the eastern coastal areas of White Sea (Mezenskaya Bay), in 1955–57, a period of growing scarcity of lemmings and other small rodents. Peregrine and gyrfalcon, sea eagle, pigeon hawk, rough-legged hawk, short-eared and snowy owls, crows, gulls and skuas were studied; their occurrence, nesting habits, food, effects of the rodent scarcity, and influence of these predators on ptarmigan and other birds of the surrounding areas are discussed. ***Copy seen:*** DLC.

55087. SPANGENBERG, EVGENIĬ PAVLOVICH, *and* **V. V. LEONOVICH.** Novye svedeniîa po geograficheskomu rasprostraneniîu i biologii ptiţs na vostochnom poberezh'e Belogo moriîa. (Problemy Severa, 1958. vyp. 2, p. 194–202, tables, map.) 9 refs. Text in Russian. ***Title tr.:*** New information on the geographic distribution and biology of birds on the east coast of the White Sea.

Report on field work conducted during the spring of 1955 and 1956 (65°–67° N.), with introductory notes on earlier work and nature of area. Of 120 species observed, only those (16) with new geographic distribution or biological data are dealt with. The latter include nesting, eggs (size and weight), behavior, etc. ***Copy seen:*** DLC.

55088. SPANGENBERG, EVGENIĬ PAVLOVICH, *and* **V. V. LEONOVICH.** Vliîanie deîatel'nosti cheloveka na ptiţs vostochnogo poberezh'îa Belogo moriîa. (Moskovskoe obshchestvo ispytateleĭ prirody. Biûlieten', n. ser., otd. biol., Sept.–Oct. 1958. v. 63, no. 5, p. 31–36.) Text in Russian. Summary in English. ***Title tr.:*** The influence of human activity on the birds of the eastern shore of the White Sea.

Economic activities in the Arkhangel'sk area generally, are responsible in part for the northward spread of various bird species. Of these *Corvus corax* and *Falco gyrfalco* have settled throughout the tundra including Cape Kanin; *Passer domesticus, P. montanus* and *Alauda arvensis* have penetrated as far as Shoyna (68° N.) and *Sturnus vulgaris* and *Emberiza citrinella* as far as Nes'. *Corvus corne* and *Pica pica* have begun wintering in the tundra near the village of Chizha (67° N.). ***Copy seen:*** DLC.

SPANO, A. F., *see* Bender, T. A., *and others.* Bibliography . . . climate of Greenland. *1957.* No. 49646.

SPAULDING, ALBERT CLANTON, 1914– , *see* Harp, E. Arctic. *1957.* No. 51594.

55089. SPECIAL LIBRARIES ASSOCIATION. GEOGRAPHY AND MAP DIVISION. Bulletin, Dec. 1958. no. 34, p. 2–13.

Contains an editorial and notes on mapping of Alaska, account of library and map collections in Alaska by Jeannette Stewart, references (129) on mapping of Alaska, by G. R. Dalphin, and a selected list of (45) recent and standard maps of Alaska by C. W. Buffum and G. R. Dalphin. ***Copy seen:*** DLC.

SPENCER, R., *see* Tait, G. M. American-ringed turnstone . . . Portugal. *1957.* No. 55318.

55090. SPENCER, ROBERT FRANCIS, 1917– . Eskimo polyandry and social organization. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958, p. 539–44.) 29 refs.

Discusses various kinds of polyandry (fraternal, kinsmen, non-kin partnership, etc.) and its causes, especially female infanticide. True (permanent) polyandry based on economic cooperation and the practice of short-term wife-lending are differentiated, and Eskimo polyandry adjudged the latter. This apparent polyandry is fairly common among the Netsilik, known to the Copper, other Central and North-Alaskan Eskimos; it is rare in Greenland. ***Copy seen:*** DSI.

SPIERS, J. MURRAY, *see* Bishop, Y., *and others.* Index . . . publications . . . Fisheries Research Board of Canada, 1901–1954. *1957.* No. 49742.

SPIESMAN, IRWIN G., *see* Dowling, H. F., *and others.* Transmission of the common cold . . . *1958.* No. 50616.

55091. SPINNANGR, FINN. Some remarks on precipitation measurements at sea. Oslo, H. Aschehoug, 1958. p. 123–42, 4 text maps, 5 tables. (Norway. Meteorologiske institutt. Meteorologiske annaler, bd. 4, nr. 7.) 4 refs.

Compares precipitation measurements at Thorshavn in the Faeroe Islands with those on Ocean Weather Station M (66° N. 02° E.). Differences in exposure of gauges are noted. The synoptic situation is described, with maps, on ten dates in 1955–1956, emphasizing smaller amount caught at Station M, one-fifth to one-third that caught at Torshavn and other land stations. Station M measurements probably represent about half the actual amounts at that point. Precipitation measurements at an ocean weather station, are of doubtful value; those on a moving ship, of little value except to climatology. ***Copy seen:*** DWB.

55092. SPIRO, N. S., *and* **N. S. BONDAREVA.** O vlagopogloshchaûshcheĭ sposobnosti ugleĭ Tungusskogo basseĭna v raĭone rek Kureĭki i Gorbiiachin. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958, vyp. 9, p. 56–62, tables, diagrs.) 6 refs. Text in Russian. ***Title tr.:*** Moisture-absorbing capacities of Tungusska basin coal in the Kureyka and Gorbiyachin River region.

Results of tests on coal of high moisture content are tabulated and diagrammed. Data are presented for several samples tested at 105° C. and 18° C. Humic acid and oxygen content were also checked and data are given. The coal is grouped as hard or anthracitic according to its moisture absorption, which is studied and compared in the two groups. The reason for a natural tendency to absorb moisture was not determined.

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55093. SPIRO, N. S., *and* **M. V. GOGOLEVA.** Ob opredelenii mineral'nogo sostava glinistykh porod. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 67, Sbornik stateĭ po geologii Arktiki, vyp 7, p. 218–24, illus., 4 tables.) Text in Russian. ***Title tr.:*** On determination of the mineral composition of argillaceous rocks.

Presents results of an experiment by a new combined method. The rocks were colored with an acid fluid (containing a color indicator) and then titrated with hydrochloric acid benzidine. The results (checked by other known methods) are presented in tables and graphs.

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SPITLER, A. Q., *see* Mardoian, M. G., *and others.* Winterization of construction equipment . . . *1957.* No. 53128.

55094. SPIT͡SYN, V. Khozîain ledîanykh prostorov. (Sovetskiĭ morîak, Sept. 1958. god 18, no. 17, p. 14, illus.) Text in Russian. ***Title tr.:*** The master of the icy spaces.

Sketch of Leonid I͡Urkovskiĭ, a sailor who became a dog driver at the Cape Chelyuskin polar station; dog training, hazards of dog-sledding, I͡Urkovskiĭ's service at drifting station North Pole-7, etc. ***Copy seen:*** DLC.

55095. SPIZHARSKIĬ, T. N. O vozraste vulkanogennykh obrazovaniĭ Sibirskoĭ platformy. (Leningrad. Vsesoi͡uznyĭ geologicheskiĭ institut. Materialy, nov. seriîa, 1955. vyp. 7, Materialy po geologii Sibirskoĭ platformy, p. 133–40.) 7 refs. Text in Russian. ***Title tr.:*** On the age of volcanogenic formations of the Siberian platform.

In opposing the stratigraphic division and age determination made by S. V. Obruchev in 1917 and 1924 concerning volcanogenic strata developed in the Tungusska syncline and distributed in the Podkamennaya Tunguska and Angara basins and other areas, the author evaluates recent literature and presents his own considerations on this matter. Tufaceous and effusive formations are discussed and their lithology, faunal and floral characteristics described. It is concluded that these volcanogenic formations are not of the same age, and are not series of other formations as assumed by Obruchev, but are of different age and are separate formations.

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55096. SPIZHARSKIĬ, T. N. Stratigrafiîa i fat͡siĭ osadochno-vulkanogennogo pokrova Sibirskoĭ platformy. (Sovetskaîa geologiîa, Dec. 1958. god 1, no. 12, p. 99–114.) 21 refs. Text in Russian. Summary in English. ***Title tr.:*** Stratigraphy and facies of the sedimentary volcanic cover of the Siberian platform.

Six tectonic periods are distinguished in the development of the Siberian platform cover, overlying predominantly Archean and Proterozoic rocks; and the stratigraphy and distribution of sedimentary and volcanic formations are

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outlined. All of the later geologic systems are represented in development of the cover materials. Most complete are Sinian, Cambrian and Ordovician deposits and in less degree Silurian, Devonian, Carboniferous, Permian, Triassic, Jurassic and Cretaceous. Paleogene and Neogene have only limited distribution. The accumulations are chiefly carbonates from Sinian to Lower Carboniferous, and terrigenous after the beginning of the Permian. Signs of oil are noted in Cambrian, Permian, Triassic and Jurassic sediments.

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55097. SPOTTS, ALICE MARIAL. The violets of Colorado. (Madroño, Jan. 1939. v. 5, no. 1, p. 16–27.)

Contains a key and descriptions of 18 species and subspecies, with synonyms and distribution in North America. *Viola palustris* (Labrador and Alaska) and *V. biflora* and *V. adunca*, both recorded in Alaska, are included.

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55098. SPRAGUE, RODERICK, 1901– . Check list of diseases of grasses and cereals in Alaska. (Plant disease reporter, supplement 232, May 30, 1955, 9 p.) 5 refs.

A list of some 300 diseases reported from the Territory in the past three years. Only parasitic fungi and associated forms are listed together with the locality of the find. Some saprophytic ascomycetes are excluded. ***Copy seen:*** DA.

55099. SPRAGUE, RODERICK, 1901– . Diseases of cereals and grasses in North America (fungi, except smuts and rusts). New York, Ronald Press Co., 1950. xvi, 538 p. 81 illus. Approx. 2,000 refs.

Manual of parasitic fungi causing fungous diseases of the grass family. The species (384) are listed alphabetically under the four classes: Phycomycetes, Ascomycetes, Basidiomycetes, and Fungi Imperfecti. A large number of species incidental to those known to occur in North America are discussed as well. Technical description, including disease symptoms, host range by states or provinces, world distribution and citations of the important literature, is given for each fungus. Some species, native to Alaska, northern Canada and Greenland are included. Indices of fungi and cereal and grass hosts are appended.

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55100. SPRAGUE, RODERICK, 1901– . Some leafspot fungi on western Gramineae, VIII–IX. (Mycologia, Mar.–Apr., Nov.–Dec. 1955. v. 47, no. 2, p. 249–62, illus.; no 6, p. 835–45, illus.) 37 refs. *Pub. also as:* Scientific Papers no. 1305 and no. 1381 (Project no. 449), Washington Agricultural Experiment Stations, Pullman.

Contains (in pt. VIII) a description of *Leptosphaeria muirensis* n. sp. on *Poa annua*, collected in 1952 on Muir Island in Glacier Bay National Monument, and at Auke Village; also critical notes with data on host plants and distribution of about 30 other fungi living on grasses in Southeast Alaska. Part IX deals with a collection of fungi from Glacier National Park, Montana, but is based partly on "herbarium fragments from some phanerogamic sheets from the far North." A description of *Ovularia pusilla* emended, native to Alaska, and additional host data (*Calamagrostis nutkaensis*) for *Mastigosporium rubricosum* (Thum Bay, Alaska) are included. Pt. VII, X: No. 48153–48154. ***Copy seen:*** DA.

55101. SPRAVOCHNIK DLIÂ POSTUPAIŬSHCHIKH V SREDNIE SPETSIAL'NYE UCHEBNYE ZAVEDENIIÂ. Tekhnikumy, uchilishcha, shkoly v 1956 g. Moskva, Sovetskaiâ nauka, 1956. 499 p. Text in Tussian. ***Title tr.:*** Handbook for students entering secondary schools of specialized training; technical and other schools, 1956.

Technical, agricultural, medical, pedagogical and other special schools in the U.S.S.R. are listed by union republics and provinces, with name, address and specialty of each. Schools in arctic and subarctic areas are listed under the northern provinces: Krasnoyarsk Province (p. 59–65) includes the Mining-Metallurgical School in Noril'sk, Evenki Medical School in Tura, and Pedagogical School in Igarka; Khabarovsk Province (p. 71–74) includes Medical and Pedagogical Schools in Petropavlovsk-in-Kamchatka; Arkhangel'sk Province (p. 78–81) has 18 special schools in Arkhangel'sk and a Pedagogical School at Nar'yan-Mar; Magadan Province (p. 165–66), includes Mining-Geological and Pedagogical Schools in Magadan and Medical and Pedagogical Schools in Anadyr'; Murmansk Province (p. 195) has a Ministry of Fisheries Marine School and Pedagogical School in Murmansk, a Mining-Chemical School in

Kirovsk and a Mining-Metallurgical School in Monchegorsk; Tyumen' Province (p. 252–54) includes Zoo-veterinary, Medical, Pedagogical and Cultural-Educational Schools in Salekhard, also Medical and Pedagogical Schools in Khanty-Mansiysk; Yakut A.S.S.R. (p. 303–304), has 11 special schools in Yakutsk and a Pedagogical School at Vilyuysk. The Leningrad Arctic School of the Naval Ministry (Leningradskoe arkticheskoe uchilishche Ministerstva morskogo flota) is mentioned, and its four specialties listed (p. 156) as ship power installations, oceanology, aerology, radio communication and electro-radionavigation. ***Copy seen:*** DLC.

55102. SPRULES, WILLIAM MEMBERRY, 1916– . The "prairie ice jigger." (Polar record, May 1957. v. 8, no. 56, p. 441–44, diagr.)

Describes a simple but ingenious apparatus used in Canada to facilitate the setting of gill nets beneath the ice. Its construction and operation are explained, a few recent improvements noted. First built about 1912, its use has spread into the North with commercial and research fisheries. ***Copy seen:*** DLC.

55103. SPURR, GERALD B., *and others.* Influence of body temperature on cardiac sensitivity to potassium. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 155.) *Other authors:* G. Barlow, H. Lambert, *and* R. L. Bowe.

Report on normo- , hypo- and hyperthermic dogs injected with a 11.2% KCl solution. Both experimental groups showed reduced plasma volume. Plasma K in cooled animals did not change significantly, but did so after KCl injection. ***Copy seen:*** DNLM.

55104. SPURR, GERALD B., *and others.* Shivering, oxygen consumption and body temperatures in acute exposure of men to two different cold environments. (Journal of applied physiology, July 1957. v. 11, no. 1, p. 58–64, illus., tables.) 10 refs. *Other authors:* B. K. Hutt *and* S. M. Horvath.

A study of skin and rectal temperatures, O_2-consumption, respiratory minute volume, CO_2-production, respiratory quotient and shivering in nude men during and after sudden exposure to 10° and −3° C. Responses in the two groups are compared and discussed. It is concluded that shivering offered greater protection to the body heat content in the colder environment.

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SPURR, GERALD B., *see also* Barlow, G., *and others.* Circulating . . . 17-hydroxycorticosteroid . . . hypothermia. *1958.* No. 49546.

55105. SQUIRES, H. J. Decapod Crustacea of the *Calanus* Expeditions in Ungava Bay, 1947 to 1950; "Calanus" series no. 11. (Canadian journal of zoology, June 1957. v. 35, no. 3, p. 463–94, illus., tables.) 20 refs.

Synopsis of 17 species taken, four of them new for this area, with keys and notes on method and location of catch, temperature, salinity and depth; geographic distribution and, for some, morphology. Size and maturity, eggs, spawning and hatching are also discussed. The decapod fauna was found to be similar to that of shallow waters west of Greenland, with some forms of Pacific origin.

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55106. SREDINSKIĬ, S. N. Nablîudaĭutsîa li serebristye oblaka v Arktike? (Priroda, Mar. 1958. god 47, no. 3, p. 74–75.) 2 refs. Text in Russian. ***Title tr.:*** Are noctilucent clouds observed in the Arctic?

Conditions in the Arctic optimal for appearance of these clouds are noted. Paucity of references to them is attributed to their frequent interpretation as auroras; Nansen's observations on these clouds are mentioned.

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55107. STAHL, PIERRE. Seismische Messungen der französischen Polarexpedition in Grönland und Island. (Zeitschrift für Geophysik, 1953. Jahrg. 19, Sonderband, p. 68–75, diagrs.) Text in German. ***Title tr.:*** Seismic measurements made by the French Polar Expedition to Greenland and Iceland.

Describes procedure and presents results of ice-thickness investigations carried out during Expéditions polaires françaises, Expédition arctique, 1948–1951. Charges placed 1.5–2 m. above the ice surface gave the best seismograms. Reflexion-, refraction-, and velocity recordings were made. Ice thicknesses of 800–3300 m. were measured from a 20-km. marginal distance inland. A mean velocity of 2,210 m./sec. was determined in the upper 42 m. of firn at Eismitte and a maximum of 4,000 m./sec. Values of 1,770–1,790

m./sec. were found for the mean velocity of the Rayleigh wave in ice and 1,600 m./sec. in firn.

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55108. STANIŪKOVICH, KIRILL VLADIMIROVICH. Perspektivy ispol'zovaniîa zhivorodîashchego grechishnika dlîa rastenievodcheskogo osvoeniîa vysokogoriĭ i tundr. (Botanicheskiĭ zhurnal, May–June 1952. t. 37, no. 3, p. 377.) Text in Russian. ***Title tr.:*** Prospective use of viviparous "grechishnik" for the agricultural development of highlands and tundras.

Discusses the possibility of cultivating this plant, growing wild in the North and probably related to buckwheat. Its roots and bulbils are edible, the latter: 30.2% sucrose, 8.1% starch, 6.35% hemicellulose, albumin and fat in undetermined quantities. ***Copy seen:*** DLC.

55109. STANKA, VLADAS, 1884– . Institutions of the U.S.S.R. active in arctic research and development. Washington, D.C., Arctic Institute of North America, 1958. 100 p. tables. Refs.

Lists Soviet institutions located in or concerned with the Soviet Arctic and far North, as covered by the *Arctic Bibliography*. Name, location, data on foundation, publications and (if available) some supplementary information are given for 388 institutions, chiefly scientific research institutes, in four sections: central institutions for the Arctic, central institutions with branches for the North, local organizations, other institutions. Organizations for the peoples of the North (National Districts), collective and state farms (fragmentary data), and polar stations are listed additionally. Alphabetic and subject indexes are appended.

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55110. STANKEVICH, E. F. Ob otnositel'nom znachenii vechnoĭ merzloty i rastitel'nosti v obrazovanii rel'efa ravninnykh tundr. (Vsesoîuznoe geograficheskoe obshchestvo. Izvestiîa, Mar.–Apr. 1958. t. 90, vyp. 2, p. 178–80.) 17 refs. Text in Russian. ***Title tr.:*** On the relative roles of permanently frozen ground and vegetation in the formation of tundra plain relief.

The assumption (as expressed by A. G. Grigor'ev, No. 6214) that permafrost retards normal relief development on the watersheds of the Bol'shezemel'skaya Tundra is challenged. The major role in soil and relief conservation is attributed to the vegetation cover. Characteristics of this tundra relief are analyzed: the surface is older than its relief development indicates; the existence of a closed plant cover has acted as a brake on the erosional processes; a widespread blanket of turf acts to sustain the existing relief; the length of summer and its precipitation are insufficient to allow development of erosion. The frozen ground itself has no influence on conservation of relief. An evaluation of the literature on the problem is included. ***Copy seen:*** DLC.

STANKO, S. A., *see* Dadykin, V. P., *and others*. Ob usvoenii sveta . . . Tiksi. *1957*. No. 50410.

55111. STANLEY, DONALD R. Modern communities in the North. (Western miner and oil review, Dec. 1958. v. 31, no. 12, p. 35–37, illus.)

Reviews stage of development of Yellowknife, Inuvik, Fort Smith, and Hay River; and discusses aspects of their future expansion and improvement, in particular the financial responsibility (municipal vs. federal) for water and sewage systems. ***Copy seen:*** DGS.

STANLEY, GLENN M., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

55112. STANOVOV, A. Za polîarnym krugom. (Sovetskaîa zhenshchina, Feb. 1957, no. 2, p. 24–25, illus.) Text in Russian. ***Title tr.:*** Beyond the polar circle.

Recounts visit to a collective farm in the Lovozero district on Kola Peninsula. Its dairy (120 cows) and fur (mink, blue fox) farms, reindeer economy (20,000) and hot-house vegetables are mentioned. ***Copy seen:*** DLC.

55113. STANWELL-FLETCHER, THEODORA MORRIS (COPE), 1906– . Clear lands and icy seas; a voyage to the Eastern Arctic. N. Y., Dodd, Mead, 1958. 264 p. plates, map in end papers. 12 refs.

Popular description of author's trip on the Hudson's Bay Company's ship *Rupertsland* from Montreal to Churchill, with brief stops at ports en route: anecdotes of shipboard life and impressions of the people, landscape, wildlife, etc. ***Copy seen:*** DLC.

55114. STAPF, OTTO, 1857–1933. *Cypripedium manchuricum virescens.*

(Curtis's botanical magazine, 1927. v. 152, [4] p., plate 9117.)

Contains a description and notes on cultivation of this native of southeastern Siberia (Ussuri region), spreading to the Okhotsk Sea and occurring sporadically in Kamchatka. ***Copy seen:*** DLC.

55115. STARK, CHARLES RATHBONE, 1885– . The Bering Sea Eagle. Caldwell, Idaho, Caxton Printers, 1957. 170 p. illus.

Describes the exploits of Harry L. Blunt, employed by the Pacific International Airways in Anchorage from the early 1920's. Regular mail flights were made along the Yukon and Kuskokwim Rivers, and chartered flights to any point in Alaska, many of the latter in hitherto unexplored and unmapped areas. The exploration in 1931 is described of the active volcano Aniakchak on Alaska Peninsula by Father B. R. Hubbard, whom Blunt piloted; account is given of a government inspection flight to Eskimo villages, several rescue flights, mercy flights, etc. ***Copy seen:*** DLC.

STARKMAN, E. S., *see* Schrock, V. E., *and* E. S. Starkman. Thermal conductivity of aircraft . . . lubricants . . . *1957.* No. 54627.

55116. STARKOV, A. Na Tikhom okeane. (Ogonëk, Sept. 1958. god 36, no. 39, p. 14–19, illus., col. plates.) Text in Russian. ***Title tr.:*** On the Pacific.

Sketch of a journalist's trip to the Commander Islands, Kamchatka and Sakhalin: Nikol'skoye and the fur seal rookeries on Bering Island; the volcanological station at Klyuchi and its work; hot springs in the Pauzheta River basin and their development possibilities; the explosion of Volcano Bezymyannyy on Mar. 30, 1956, as told by G. E. Bogoâvlenskaâ-Gushchenko.

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55117. STARODUBTSEV, N. I. O kompleksnom osvoenii prirodnykh bogatstv Tûmenskoĭ oblasti na baze razvitiâ énergetiki. (Akademiâ nauk SSSR. Sibirskoe otdelenie. Izvestiâ, 1958, no. 5, p. 3–11, map.) Text in Russian. ***Title tr.:*** Full utilization of the natural resources of Tyumen' Province based on development of its power resources.

Reviews the considerable resources of Tyumen' Province, including Yamal-Nenets and Khanty-Mansi National Districts in the north: four deposits with over 500 million tons of coal, 739 deposits with 155 million cu. m. of peat, forests with 30–40 million cu. m. annual timber increase, iron ore, natural gas, etc. Development of these resources requires improved transportation and power plants, till now almost totally lacking. Three centers of power engineering are suggested (cf. map): the Salekhard area based on coal from Vorkuta, the Berezovo area in the Severnaya Sos'va basin based on local coal deposits, and the Tyumen' area based on local peat deposits. Engineering, industrial and economic aspects of setting up these centers are discussed. Hydroelectric plants on the Ob and other rivers are to be expected later.

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STAROSTIN, A. M., *see* Kafanova, M. Kak sozdavalas' karta. *1957.* No. 52124.

STARR, M. P., *Jr.*, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

55118. STAUNTON, JACK, *and* **S. ROSANOFF.** Water for our far North outposts. (Engineering news-record, Mar. 1958. v. 160, no. 13, p. 39–40, illus.)

Describes water supply system in use at defense outposts along the Newfoundland, Labrador, and Baffin Island coasts. Water is pumped from heated pumphouses at the lakes, through electrically heated pipelines on the surface, to enclosed storage tanks at the campsite. The operation, including shut-off and draining of pipes when storage tanks are filled, is automatic.

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55119. STAVNITSER, MIKHAIL FROMOVICH. Na Shpitsbergeni. Kyïv, Radâns'ka shkola, 1957. 218 p. illus., maps (1 fold.). Refs. Text in Ukrainian. ***Title tr.:*** On Spitsbergen. Revised and enlarged from No. 16712.

The author worked for several years in the Soviet coal mines and interjects notes on his journey (by railroad from Leningrad to Murmansk and thence by ship) to Vestspitsbergen and his work there, between sketches of the geography, history, geology, biology and economics of Karelia, Kola Peninsula, Barents Sea and Spitsbergen. Russian expansion in the North, discovery of Spitsbergen by Pomors, dispute over its sovereignty, its present legal status, and situation during the World War II are reviewed.

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55120. STAVSETH, REIDAR, 1907– . På nordnorsk kjøl; Vesteraalens dampskibsselskab gjennom 75 år, 1881–1956. Stokmarknes, Vesteraalens dampskibsselskab, 1956. 363 p. 144 illus. Refs. Text in Norwegian. ***Title tr.:*** On a north Norwegian keel; Vesteraalen Steamship Company during 75 years, 1881–1956.

Jubilee publication presenting an historical review of the Company, together with a survey of the development of sea communications in northern Norway. Conditions along the coast in the 19th century, especially the fishing industry, are described. Local facilities for shipping and travel and a postal service were in urgent demand and a steamship company was formed in 1881 by individual subscription in the Vesteraalen region. This company has remained the chief communications system of northern Norway extending to Spitsbergen. Outstanding individuals and their parts in the company's activities are treated in detail. Administration, finances, company ships, pertinent national laws and economic conditions are outlined; and the development of shipping facilities along the coast are traced chronologically. Appended are data on the 48 vessels in service since 1865 and on some 70 individuals whose leadership is honored. Photographs of vessels, harbors, etc., are included. ***Copy seen:*** DLC.

STEAD, EUGENE A., *see* Wallace, J. M., *and* E. A. Stead. Spontaneous pressure elevations in small veins . . . norepinephrine and cold. *1957.* No. 55927.

55121. STEBAEV, I. V. Rol' pochvennykh bespozvonochnykh v razvitii mikroflory pochv subarktiki, na primere lichinok Tipulidae, Diptera. (Akademiîa nauk SSSR. Doklady, 1958. t. 122, no. 4, p. 720–22, table.) 18 refs. Text in Russian. ***Title tr.:*** The role of soil invertebrates in the development of the microflora of subarctic soils, exemplified by larval Tipulidae, Diptera.

The microbial content of insect excrements and of tundra soils containing them were studied by the writer in the Salekhard region, and by L. S. Kozlovskiĭ in Bol'shezemel'skaya Tundra. The excreta were found to be centers stimulating microbial activity in the soil; the upper layer of soil, containing invertebrates, also held over 90% of all bacteria. ***Copy seen:*** DLC.

55122. STEBBINS, GEORGE LEDYARD, 1906– . Notes on some systematic relationships in the genus *Paeonia.* (California. University. Publications in botany, May 1939. v. 19, no. 7, p. 245–66, 13 illus.) 24 refs.

Contains some morphological and cytological data, keys and notes on the species of the subgenus *Paeon,* including *Paeonia anomala* based on specimens from Ponoy, Russian Lapland. ***Copy seen:*** DLC.

STEELE, J. H., *see* McIntyre, A. D., *and* J. H. Steele. Hydro-biological survey . . . 1955. *1957.* No. 53014.

55123. STEEN, JON. Climatic adaptation in some small northern birds. (Ecology, Oct. 1958. v. 39, no. 4, p. 625–29, illus., table.) 18 refs.

A study of O_2-consumption and body temperature in six species of small, northern birds throughout the night and at ambient temperatures of +25° to −25° C. Newly caught birds were unable to maintain their body temperature but when kept at −10° C. for about a week maintained a normal heat balance even during very cold nights.

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55124. STEEN, JON. Food intake and oxygen consumption in pigeons at low temperatures. (Acta physiologica scandinavica, 1957. v. 39, fasc. 1, p. 22–26, illus.) 8 refs.

Report on experiments with pigeons kept for 2–4 weeks in ambient temperatures of +18°, −10° and −18° C. It was observed that O_2-consumption and food intake in cold below the birds' critical temperature were closely proportional to the body-to-air gradient.

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55125. STEEN, JON, *and* **P. S. ENGER.** Muscular heat production in pigeons during exposure to cold. (American journal of physiology, Oct. 1957. v. 191, no. 1, p. 157–58, illus.) 10 refs.

At −22° C. the pectoral muscles were 1.5–2 degrees warmer than the abdomen (they are equally warm at room temperature). In the cold, the pectorals showed a considerable electrical activity, suggesting elevated heat production.

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STEEN, JON, *see also* Scholander, P. F., *and others.* Cold adaptation . . . aborigines. *1958.* No. 54619.

STEEN, JON, *see also* Scholander, P. F., *and others.* Critical temperature in Lapps. *1957.* No. 54620.

55126. STEENKEN, WILLEM FREDERIK. Geology and petrology of the region south of Russånes, Saltdal, Norway. Amsterdam, 1957. 120 p., illus., diagrs., maps incl. 1 fold. (Amsterdam. Universiteit. Geologisch Instituut. Mededeling no. 244.) Summary in Dutch.

Describes the topography, surface geology, and lithologic characteristics of the bedrock in an inland area (66°50′–66°55′ N. 15°04′–15°24′ E.) of north Norway. Rocks, ranging in age from Archean to Silurian, lacking fossils, were analyzed lithologically to reconstruct the stratigraphic history. Many rock samples are described in detail. Tectonics and metamorphism are summarized for the area, believed to have been a marginal zone of the Caledonian geosyncline; and comparisons are made with features of similar geologic nature elsewhere in Scandinavia and in East Greenland. In reviewing the glacial features it is noted that an erratic boulder on the highest local summit indicates that nunataks did not exist here throughout the glacial period. ***Copy seen:*** DGS.

55127. STEENSEN, ROBERT STEEN, 1898.– . Den nordlige søvej; en studie over Nordostpassagen. (Tidsskrift for søvaesen, Oct.–Dec. 1954. årg. 125, p. 385–412, 433–67, 481–505; Jan.–Dec. 1955, årg. 126, p. 21–39, 49–67, 97–108, 145–65, 199–219, 241–52, 273–92, 321–50, 465–77, 513–28; Jan.–Dec. 1956, årg. 127, p. 26–30, 73–80, 97–104, 145–63, 209–221, 273–88, 321–45, 353–72, 417–45, 481–501, 529–71, illus., maps, diagrs., tables.) 24 refs. Text in Danish. ***Title tr.:*** The Northern Sea Route; a study of the Northeast Passage.

Study comprising 26 articles in consecutive issues of this journal, based on the general literature (English, American, French, German, Russian, Scandinavian) and on German Naval documents from World War II; most information and tabulations are adjusted to Jan. 1, 1957; maps in various projections are presented, some specially drawn (by J. Lumbye). A geographical and historical survey with review of expeditions 1553–1931, also of Russian achievements (from 1932) in opening the Route are presented in the first five articles. Subsequently, in turn: questions of sovereignty over arctic land, their background and settlement, are outlined; an ethnographical survey is given; climate, natural conditions, and landscape are described; magnetic conditions, tides, currents, ice conditions, North Siberian rivers and canals, railways and roads, harbors, coastal defences and resources, administration and organization, distances, are dealt with; ice prognosis, ships and icebreakers, ice navigation, air navigation are discussed. Naval events (in particular 1940–44), and developments of the Russian arctic fleet are treated in some detail (Aug.–Oct. 1956: årg. 127, p. 321 *et seq.*). The Arctic's military significance is discussed; development of the arctic submarine is reviewed, and problems of submarine navigation outlined.

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55128. STEERE, WILLIAM CAMPBELL, 1907– . *Barbula* in North America north of Mexico. (Torrey Botanical Club. Bulletin, Feb. 1939. v. 66, no. 2, p. 93–119.) 23 refs. *Pub. also as:* Papers from the Dept. of Botany and the Herbarium of the University of Michigan, no. 674.

Contains a revised list of 68 species of this moss genus, with synonyms, critical notes and distributional data. *B. johansenii* (type locality: Murray Point, Victoria Island, Northwest Territories, 68°40′ N.), *B. rigens* (Alaska), and *B. treleasei* (Juneau, Alaska), are included.

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55129. STEERE, WILLIAM CAMPBELL, 1907– . *Bryoxiphium norvegicum,* the sword moss, as a preglacial and interglacial relic. (Ecology, 1937, v. 18, p. 346–58, text map.) 27 refs.

Reviews finds of this moss in various parts of North America, Iceland and Greenland, where it was collected July 1932 by S. Ånstad near Myggbukta (73°29′ N. 21°34′ W.). Its substrates and ecology, taxonomy, geographic distribution are described. Its distribution is considered in relation to past glaciation; the significance of this moss for floristic research is discussed. ***Copy seen:*** DI.

55130. STEERE, WILLIAM CAMPBELL, 1907– . The discovery of *Oreas martiana* in arctic Alaska; a genus new to North America. (Bryologist, June 1958. v. 61, no. 2, p. 119–24, illus.) 12 refs.

This monotypic genus hitherto reported from high mountains of Eurasia was found by the author on black humus at about 3000 ft. altitude in the Brooks Range,

approx. 69°22′ N. 145°03′ W., in July 1952. Differences in morphology and habitus from the Old-World form, morphology and anatomy, substrate, etc. are described. ***Copy seen:*** DA.

STEERE, WILLIAM CAMPBELL, 1907– , *see also* Schuster, R. M., *and* W. C. Steere. *Hygrolejeunea alaskana* sp. n. . . . *1958*. No. 54634.

55131. STEFANOVICH, ARSENIĬ NIKOLAEVICH. Ledokoly. Moskva, Izd-vo "Morskoĭ transport," 1958. 99 p. illus., diagrs., tables. Text in Russian. ***Title tr.:*** Ice-breakers.

Reviews the development of ice-breakers and ships with reinforced hulls from the primitive type of whale boat to the early ice-breakers, the *Fram* and *Makarov*, to diesel-electric ships, and finally to the atomic ice-breaker. General ice conditions encountered by ice-breakers, ice-breaking methods, effects of drift ice pressure and low temperatures are outlined. Basic construction and reinforcement of the hull, arrangements of decks and quarters, types and operation of main and auxiliary machinery and equipment, and protection of the rudder and propellers are treated in detail. Navigation through ice fields and ships rescue operations are briefly outlined with illus. Specific characteristics are described (with basic data) of recent Soviet and foreign ice-breakers, also transports with reinforced hulls (U.S.S.R., United States, Canada, Sweden, Denmark, Finland and Argentina). Basic tabulated data for 21 ships are appended. ***Copy seen:*** DLC.

55132. STEFANOVICH, ARSENIĬ NIKOLAEVICH. Ot "Ermaka" do atomnogo ledokola. Leningrad, O-vo rasprostraneniîa politicheskikh i nauchnykh znaniĭ RSFSR, 1958. 37 p. illus. Text in Russian. ***Title tr.:*** From the *Ermak* to the atomic ice-breaker.

Outlines development, construction and service of Russian ice-breakers, from the first small ones used by the Russian merchant Britnev in the 1860's. S. O. Makarov's *Ermak* (p. 10–11) and other pre-Revolutionary ice-breakers are sketched; the part played by ice-breakers in the Kara Sea expeditions and development of the Northern Sea Route is described. Principles of ice navigation, ice-breaking by ships, and ice-breaker construction (p. 18–32) are discussed. The recent series of Soviet ice-breakers includes the *Kapitan Belousov*, *Kap. Voronin* and *Kap. Melekhov* built in Finland, and the diesel-electric *Lena*, *Eniseĭ*, *Ob'*, and *Angara* built in Holland. Construction of the atomic-powered *Lenin*, her specifications, equipment, accommodations are described, and her superiority over other types of ice-breaker is stressed (p. 34–37). Other countries' ice-breakers are briefly noted.

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55133. STEFANSSON, EVELYN (SCHWARTZ) BAIRD, 1913– . A bibliographical exploration of Alaska. (Dartmouth College library bulletin, April 1958. v. 1, no. 3, p. 55–64.)

Comments on some 20–30 publications and their authors; and on use of bibliographies, government documents, etc. ***Copy seen:*** CaMAI.

55134. STEFÁNSSON, UNNSTEINN. Hydrographic conditions north and east of Iceland 1956. (International Council for the Study of the Sea. Annales biologiques 1956, *pub.* 1958. v. 13, p. 29–32, illus., maps.)

Account of investigations conducted from May 20 to June 17. Temperature and salinity at various depths, ice conditions and water masses are recorded and compared with those of the previous year. The amount of polar water in the area was much less than normally observed. ***Copy seen:*** DI.

55135. STEFÁNSSON, UNNSTEINN. Hydrographic conditions north and northeast of Iceland 1955. (International Council for the Study of the Sea. Annales biologiques 1955, *pub.* 1957. v. 12, p. 28–33, illus., maps.)

Reports observations of the M/S *Aegir* made during the summer 1955, with some coastal areas studied in winter and spring. Temperature and salinity at various depths, ice limit, inorganic phosphates and phytoplankton were investigated. Conditions are discussed in general terms and compared with those of 1954.

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55136. STEFÁNSSON, VALTYR. Islands skog. (Skogbrukeren, July 15, 1954. årg. 29, nr. 14, p. 215–216.) Text in Norwegian. ***Title tr.:*** Iceland's forests.

The almost complete absence of trees in Iceland, a handicap for centuries, has been attributed to climatic conditions. Certain trees can grow there, however,

and an intensive forestation program is in progress. Seed of Sitka spruce (imported from Alaska), of pine (from North Norway) and larch (from Siberia) have been planted. Forest planting is done chiefly by volunteers, and the existing poor-quality birch is kept to provide shelter for the new seedlings. ***Copy seen:*** DA.

55137. STEFANSSON, VILHJALMUR, 1879– . Eskimo longevity in northern Alaska. (Science, Jan. 3, 1958. v. 127, no. 3288, p. 16–19.) Refs. in text.

A discussion of conditions during the period of early contacts with white man, latter half of the 19th century. Earliest records, a few recent ones, and John Murdoch's observations at Pt. Barrow (No. 11883) are cited as to Eskimo health and disease, age at marriage and first child-birth, food, dwellings, home life, contacts with white man, etc. "Informed guessers" agree that "extreme longevity was not unknown" in pre-white, and transitional times. ***Copy seen:*** DLC.

55138. STEFANSSON, VILHJALMUR, 1879– . Man's meat. (Gourmet, Jan. 1958. v. 18, no. 1, p. 10–11, 21–24, illus.)

Discusses the food habits of the Coronation Gulf, Mackenzie delta and North Alaskan Eskimos, stressing their predilection for raw or lightly cooked caribou bone marrow. The craving for fats in a red meat diet that lacks sugar and starches, the Eskimos' preference for the tougher fatty parts of mature caribou, and their rejection of sugar and seasoning are described from author's experience.

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55139. STEFANSSON, VILHJALMUR, 1879– . Pemmican. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, 1951. (n.s.) v. 3, no. 4, p. 241–51, illus.) 6 refs.

Contains information on the origin and early use of pemmican, primitive manufacture, keeping qualities, pemmican variants, meals from pemmican, reasons for explorers' preference, palatability, dietary value, suitability for tropical use, etc. ***Copy seen:*** DNLM.

55140. STEFFENSEN, H. C. Ishavskibe. (Ingeniøren 1951. årg. 60, nr. 42, p. 699–704, illus.) Text in Danish. ***Title tr.:*** Arctic vessels.

Ice conditions in northeast Greenland waters are described based on observations made during a voyage to Danmarkshavn, Daneborg, Ella Ø, and Scoresbysund in 1950. Ships operating in these waters and those under construction are described. ***Copy seen:*** DLC.

55141. STEGGOS, JONAS ERIKSSON, 1873–1957. Lapska sånger; texter och melodier från svenska Lappland. Fonografiskt upptagna av Landsmåls-och Folkminnesarkivet i Uppsala, I: Jonas Eriksson Steggos sånger. Text edited by Harald Grundström. Musical transcription by A. O. Väisänen. Lundequistska Bokhandeln, Uppsala; Einar Munksgaard, København, 1958. 88 p. (Sweden. Landsmåls- och Folkminnesarkivet i Uppsala. Skrifter, Ser. C:2.) Text in Lappish, Swedish and German. ***Title tr.:*** Lappish songs. Texts and melodies from Swedish Lapland. Phonographically recorded by the Archives for Dialect and Folklore Research at Uppsala, I: Jonas Eriksson Steggo's songs.

Contains text and music of songs written by Jonas Eriksson Steggo (1873–1957), a nomadic Lapp from Arjeplog. The songs constitute a continuous autobiographical text. ***Copy seen:*** SPRI.

55142. STEHLI, FRANCIS GREENOUGH, 1924– . Possible Permian climatic zonation and its implications. (American journal of science, Nov. 1957. v. 255, no. 9, p. 607–618, 5 text maps, table.) 10 refs.

"A sharp boundary to the apparent ranges of a number of Permian marine invertebrates [brachiopods and fusulinids] occurs between 50° and 60° N . . . The boundary is believed to be temperature controlled and probably to represent the position of the interface between the Permian subtropical and temperate marine temperature belts. The faunal boundary parallels the earth's present equator and, if truly caused by temperature, precludes the possibility of changes in the position of the poles with respect to the major land masses of the Northern Hemisphere. Also precluded is the possibility that the crust or mantle has shifted its position relative to the core. The data are not in accord with data derived from remanent magnetism of rocks."—*Author's summary.* Maps show major areas with outcropping marine Permian rocks (including Arctic and sub-Arctic) and world distribution of the invertebrates. ***Copy seen:*** DGS.

STEIN, B., *see* Umbronn, H., *and* B. Stein. Liste der von Dr. F. Boas gesammelten Pflanzen. *1890.* No. 55585.

55143. STEIN, KAI S., 1906– , *and* S. Aa. BERNHARDT. Dronning Ingrids sanatorium i Godthåb. (Grønland, Feb. 1957. nr. 2, p. 41–56, illus., tables.) Text in Danish. ***Title tr.:*** Dronning Ingrids sanatorium at Godthåb.

Describes in detail this West Greenland sanatorium opened in 1954, its equipment, organization, etc. It has 211 beds; some statistics of patients treated and running costs for 1955 are included.

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55144. STEIN, KAI S., 1906– , *and* S. Aa. BERNHARDT. Røntgenskibet "Misigssut." (Grønland, Mar. 1957. nr. 3, p. 81–86, illus., tables.) Text in Danish. ***Title tr.:*** The X-ray ship *Misigssut.*

Describes this 200-ton vessel built in 1955, and work carried out: 24,327 individuals on the west Greenland coast were examined Aug. 1955–Oct. 1956; eight percent of the population were found with tuberculosis; three percent were new cases. All cases are under treatment.

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55145. STEIN, S. W., *and others.* The effects of adrenergic and adrenolytic agents on the appearance of cardiac arrhythmias during experimental hypothermia. Fort Knox, Ky., 1958. 2, 18 p. illus., tables. (U.S. Army. Medical Research Laboratory. Report no. 350.) 52 refs. *Other authors:* D. H. Kazen *and* R. L. Torblaa.

Noradrenaline was found to delay the fall in blood pressure of dogs, observed below a body temperature of 24° C. Adrenaline had a similar, but less striking effect. Phentolamine, an adrenolytic agent was without effect on the course of arrhythmias. ***Copy seen:*** DNLM.

55146. STEINBACHER, GEORG. Mörder des Meeres. (Orion, Jan. 1958. Jahrg. 13, Heft 1, p. 17–22, illus.) Text in German. ***Title tr.:*** Murderers of the sea.

Popular, well illustrated account of the killer whale with information on body shape and size, color, modes of attack (seals, man), dentition, geographic distribution, propagation, intelligence, etc.

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STEINFELD, J. L., *see* Chaplin, H., *and others.* Storage of red cells at sub-zero temperatures . . . *1957.* No. 50163.

STEJER, FRANCIS ADRIEN, 1916– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

55147. STEKLOV, IŪRIĬ MIKHAĬLOVICH. Kak ia bezhal iz ssylki. (Novyĭ mir, Mar. 1958. god 34, no. 3, p. 177–90.) Text in Russian. ***Title tr.:*** How I escaped from exile.

Memoirs of life in Yakutsk 1896–99 as a Marxist political exile and escape to Austria. Introductory note about the author by G. Krzhizhanovskiĭ.

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55148. STENBORG, THORSTEN. Morfologiska studier i Kvikkjokkdeltat. (Geographica, 1957. nr. 31, p. 166–90, illus., maps, diagr.) 14 refs. Text in Swedish. Summary in English. ***Title tr.:*** Morphological studies in the Kvikkjokk delta.

Attempt has been made to reconstruct the origin and development of this delta, a two sq. mi. area (approx. 67° N. 17°40′ E.) in north Sweden, studied by the author in summer 1954. It was formed by two rivers, the Kamajokk and the Tarraädno, and has an irregular structure in its inner parts. The delta was rapidly fixed by vegetation, moraine and erosion-resisting accumulations and has changed very little; its outer part is more regularly formed. The delta is described, its channels, levées, lagoons, more complex parts and special formations, some of the latter are mapped. ***Copy seen:*** SPRI.

55149. STENGERT, KRZYSZTOF, *and others.* Zmiany składu krwi i poziomu cukru we krwi u psów oziębianych. (Polski tygodnik lekarski, May 6, 1957. rok 12, no. 19, p. 701–704, illus.) 18 refs. Text in Polish. Summary in English. *Other authors:* K. Bentke *and* W. Jurczyk. ***Title tr.:*** Changes in blood composition and blood sugar levels in chilled dogs.

Account of investigation into respiration and pulse rate, the number of leucocytes and platelets, coagulation and bleeding times and blood sugar levels in dogs made hypothermic to 21° C. Decrease in rate of pulse and respiration in coagulation time and number of leucocytes was noted, with an increase in bleeding time, number of platelets and sugar levels. ***Copy seen:*** DNLM.

STENGERT, KRZYSZTOF, *see also* Bentke, K., *and others.* Badania czynnościowe nerek . . . *1957.* No. 49657.

STENINA, T. A., *see* Polyntseva, O. A., *and others.* Obshchie usloviia pochvoobrazovaniia. *1958.* No. 54068.

STENINA, T. A., *see* Polyntseva, O. A., *and others.* Opisanie pochv. *1958.* No. 54069.

55150. ŠTĚPÁNEK, VLADIMIR. Změny na skeletu u omrzlých. (Československá rentgenologie, Mar. 1958. v. 12, no. 1, p. 21–23, illus.) 6 refs. Text in Czech. Summary in English. ***Title tr.:*** Skeletal changes in frostbite.

A discussion of these changes with four case reports of severe (3–4 degree) frostbite. Porosis, osteolysis, sclerosis and atrophy were noted in the frozen extremities, with occasional growth defects, exostoses, etc. ***Copy seen:*** DNLM.

55151. STEPANOV, D. I. Betonirovanie pokrytiia na merzlom grunte. (Transportnoe stroitel'stvo, Apr. 1957. god 7, no. 4, p. 20–21, graphs, diagrs.) 2 refs. Text in Russian. ***Title tr.:*** Concrete covering on frozen ground.

Describes method of laying a special cover of frost-resistant concrete on frozen ground around a water reservoir. At air temperature of −20° C., the frozen ground was covered with a 10 cm. layer of dry sand, a 10 cm. gravel layer and a prefabricated reinforced concrete plate (25 cm. thick). Space between plates was filled with a concrete mass made of portland cement, sand and gravel mixed with 15% NaCl dissolved in water preheated to 40° C. The whole job was covered with a 15 cm. layer of sawdust. The temperatures of air, plate, concrete and ground were recorded during 30 days and the depth of freezing and conductivity of the insulating layer were computed, with equation given. Samples of concrete taken months later were tested and found of satisfactory quality.

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55152. STEPANOV, DMITRIĬ LEONIDOVICH. O novom iaruse permskoĭ sistemy Arktiki. (Leningrad. Universitet. Vestnik, 1957. god 12, no. 24, p. 20–24.) 10 refs. Text in Russian. Summary in English. ***Title tr.:*** A new Permian stage in the Arctic.

Bio-stratigraphic characteristics of Permian strata (200–400 m. thick) lying between Artinskian and Kazanian stages in Svalbard as studied by the author, are discussed and compared with strata of the same age occurring in East Greenland, on Kanin Peninsula, in the Vorkuta formations of the Pechora basin, etc. The Svalbard layers are the richest paleontologically and best preserved representatives of the stage, so the author suggests it be called "Svalbardian" leaving other names (Kungurian, Ufimian, etc.) for local formations.

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STEPANOV, DMITRIĬ LEONIDOVICH, *see also* Mironova, M. G., *and* D. L. Stepanov. O vozraste mergelistogo gorizonta . . . Pechorskogo basseĭna. *1957.* No. 53320.

55153. STEPANOV, N. N. Pervaia russkaia ėkspeditsiia na Okhotskom poberezh'e v xvii veke. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Sept.–Oct. 1958. t. 90, vyp. 5, p. 438–52.) 33 refs. Text in Russian. ***Title tr.:*** The first Russian expedition to the coast of the Sea of Okhotsk in the 17th century.

Ivan IU. Moskvitin's expedition of Sept. 1638–Aug. 1642 is discussed in an attempt to clarify details of its route, time of departure, explorations, return, etc. on the basis of two documents of Moskvitin himself (text given) and other sources. Rivers, Tungus settlements, etc. reported by Moskvitin are identified, and the old and present names correlated. The first Russian settlement on the Okhotsk coast is said to be Ul'. ***Copy seen:*** DLC.

STEPANOV, N. N., *see also* Akademiia nauk SSSR. IAkutskiĭ filial. Istoriia IAkutskoĭ ASSR, t. 2 . . . 1630–1917. *1957.* No. 49168.

55154. STEPANOV, V. N. Kompleksnaia tipizatsiia gidrologicheskogo rezhima moria. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 33–40.) 5 refs. Text in Russian. ***Title tr.:*** A multipurpose typing of hydrological conditions of the sea.

Describes a method of systematizing observational data, devised by the author and used in the Arctic Institute's investigations of Soviet seas. In contrast with the descriptive method, used only at the beginning of the study, and the statistical method, which operates with mean values, the new method aims to outline the actual conditions of the basic hydrological factors (ice conditions, water temperature, salinity and color at various depths, water circulation, weather conditions, etc.) typical for each season. Study of the transitions of these seasonal types from one to another must follow with consideration of climatic conditions peculiar to the Arctic where summer and

fall are short (1–1.5 months), spring 4–4.5, and the winter period 5–7 months. Scientific value of results obtained by this method and their application to forecasting are stressed.

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55155. STEPANOVA, M. V. Iz istorii ėtnograficheskogo izucheniĭa b. russkikh vladeniĭ v Amerike. (Sovetskaĭa ėtnografiĭa, 1947, no. 3, p. 140–44.) 4 refs. Text in Russian. ***Title tr.:*** Notes on the history of ethnographic study of former Russian possessions in America.

Reviews contributions to the study of the Tlingits, Alaskan Eskimos and Aleuts by 19th century Russian seafarers, traders, employees of the Russian-American Co. and scientists, stressing the importance of work of K. T. Khlebnikov, I. E. Veniaminov, and L. A. Zagoskin. The little use made of Russian source material in current American publications on Alaska, is criticized.

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55156. STEPANOVA, NINA A. On the lowest temperatures on earth. (U.S. Weather Bureau. Monthly weather review, Jan. 1958. v. 86, no. 1, p. 6–10, text map, 3 tables.) 33 refs.

Compares absolute minima at four places in: Yukon Territory at 646 m. elevation (−81° F.), Greenland, 2,993 m. (−84.6° F.), Oymyakon, 800 m. (−89.9° F.), and the South Polar Plateau, 2,800 m. (−102.1° F.). Includes corrections and adjustments of readings. Comment by R. S. Quiroz, q.v.

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55157. STEPANOVA, V. S. Biologicheskie pokazateli techeniĭ v severnoĭ chasti Beringova i ûzhnoĭ chasti Chukotskogo moreĭ. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa moreĭ SSSR, 1937. vyp. 25, p. 175–216, illus., tables, maps.) 73 refs. Text in Russian. Summary in German. ***Title tr.:*** Biological indicators of currents in the northern Bering and southern Chukchi Seas.

Account of investigation on zooplankton conducted on the trawler *Dal'nevostochnik* in 1932 to a depth of 141 m. with most hauls not exceeding 50 m. in depth. A considerable difference in this fauna was noted as between the eastern and western coasts of both seas. The eastern, American side, showed largely neritic forms of the northern Pacific and Atlantic; the western side had predominantly oceanic forms of Pacific, Atlantic, Arctic, tropic and Antarctic origin. The differences between the two seas were small, the Bering Strait proving no barrier to faunistic exchange. Three new species of the genus *Tintinopsis* and seven varieties are recorded.

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55158. STEPHENSEN, KNUD, 1882- . Sveriges pycnogonider. Göteborg, Elanders boktr., 1936. 56 p. illus. (Göteborgs k. vetenskaps- och vitterhetssamhälle. Handlingar, 5. följden, ser. B, bd. 4, no. 14.) 36 refs. Text in Swedish. ***Title tr.:*** Pycnogonids of Sweden.

Study of material in Norwegian and Swedish museums served as basis for this report on sea spiders. External and internal structure, mode of life, and identification keys are presented. Six families are represented in Sweden, and 13 species are known in the far North. Descriptions are given and locations cited.

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STEPHENSON, T. A., *see* Carlgren, O. H. A survey . . . Actiniaria . . . *1949.* No. 50128.

55159. STERLIGOV, BORIS VASIL'EVICH. Brosok cherez okean. (Ogonëk, Sept. 1957. god 35, no. 39, p. 26, map.) Text in Russian. ***Title tr.:*** Hop across the ocean.

Interview with B. V. Sterligov, navigator and radio-operator of the *ANT-4* during the first Soviet flight from Moscow to America in 1929. Piloted by S. A. Shestakov and F. E. Bolotov, airplane left Moscow on Aug. 23 and flew across Siberia to Petropavlovsk-in-Kamchatka, Attu in the Aleutians, San Francisco and New York (Nov. 1) covering 21, 242 km. in 70 days, average speed about 150 km./hr. The main events of this flight are recalled and its achievements compared with the Moscow-New York flight of a *Tu-104* in Sept. 1957.

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STERLING, F. T., *see* Wells, R. R., *and others.* Beneficiation of iron-copper ores . . . Kasaan . . . *1957.* No. 55989.

STEVENS, HENRY W., *see* Linell, K. A., *and others.* Approach roads . . . *1957.* No. 52850.

55160. STEVENSON, G. C., *and others.* Effects of induced hypothermia on subcortical evoked potentials in the cat.

(American journal of physiology, Aug. 1958. v. 194, no. 2, p. 423–26, illus.) 14 refs. *Other authors:* W. F. Collins, C. T. Randt, *and* T. D. Saurwein.

Marked depression of responses from all loci was noted at rectal temperature of 23° C. The afferent midbrain reticular formation was found to be more sensitive to hypothermia than the thalamic relay nucleus. Between 33° and 25° augmentation of spinal cord dorsal column evoked potentials took place; transmission velocity along the nerve fibers was more affected between 37° and 27° than across a synapse. ***Copy seen:*** DLC.

55161. STEWART, H. B., *Jr., and others.* Recent increases in coastal water temperature and sea level, California to Alaska. Washington, D.C., U.S. Govt. Print. Off. May 1958. 11 p. text map, 5 diagrs., 5 tables. (U.S. Coast and Geodetic Survey, Technical bulletin no. 3.) 20 refs. *Other authors:* B. D. Zetler, *and* C. B. Taylor.

Documents the recent increases in sea water temperature and sea level on the west coast of the United States with data from Coast and Geodetic Survey tide stations; presents results of analyses of data; suggests that the increases result from changes in the wind pattern over the eastern North Pacific. Data cover the period Jan. 1957–Apr. 1958. The 10 tide stations chosen were those most exposed to open ocean conditions.
Copy seen: DN–HO.

STEWART, JEANNETTE, *see* Spec. Libraries Assoc. Geog. *and* Map Div. Bulletin. *1958.* No. 55089.

STEWART, LAURAINE, *see* Boyarsky, L. L., *and* L. Stewart. Neurogenic inhibition of shivering. *1957.* No. 49872.

55162. STEWART, ROBERT EDWIN, 1915– . Distribution of the black duck. Washington, D.C., 1958. 8 p. illus., tables, maps. (U.S. Fish and Wildlife Service. Circular 51.) 3 refs.

Report based on literature and on aerial surveys. The breeding range was found to include the western shores of Hudson Bay, Northern Ontario, Northern Quebec and Labrador. The wintering range does not include arctic areas. Populations and population densities on the ranges are discussed. ***Copy seen:*** DI.

55163. STEWART, THOMAS DALE, 1901– . The age incidence of neural-arch defects in Alaskan natives, considered from the standpoint of etiology. (Journal of bone and joint surgery, Oct. 1953. v. 35A, no. 4, p. 937–50, illus., tables.) 14 refs.

Account based on study of Eskimo and Aleut skeletons, some about 1,000 yrs. old, collected by Dr. A. Hrdlička and now at the U.S. National Museum. It is concluded that the high incidence of arch defects observed is due to combination of unusual postural stress, a high accident rate and perhaps more frequent anomalous ossification. The conclusions are based in part on study of present-day work habits. ***Copy seen:*** DNLM.

55164. STEWART, THOMAS DALE, 1901– . Examination of the possibility that certain skeletal characters predispose to defects in the lumbar neural arches. (Clinical orthopedics, 1956. no. 8, p. 44–60, illus., tables.) 14 refs. Summary in Interlingua.

An investigation aimed to determine whether hereditary factors play an accessory role in the high incidence of lumbar neural arch defects among Alaska's natives. Whilst inborn skeletal anomalies are assumed to predispose such defects, the postural and working habits are in the main considered responsible for the deformities. ***Copy seen:*** DNLM.

55165. STEYSKAL, GEORGE C. A revision of the family Dryomyzidae: Diptera, Acalyptratae. (Michigan Academy of Sciences, Arts, and Letters. Papers, 1957 (1956 Meeting), pt. I, Zoology, p. 55–68, 14 illus.)

Contains keys to the genera of the section Acaliptratae, and to species of the genus *Dryomyza*, generic descriptions and an annotated list of eleven species, of which two are described as new. *D. bergi* n. sp. (lower Yukon, Alaska), *D. anilis* (southern Alaska), and *D. flaveola, D. melanderi* n. nom. and *D. setosa* n. comb., all native to Alaska, are included.
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55166. STEYSKAL, GEORGE C. *Themira nigricornis* Meigen in North America, with a revised key to the Nearctic species of Themira; Diptera; Sepsidae. (Entomological news, Apr. 1946. v. 57, no. 4, p. 93–95.)

Includes, in the key, *Themira malformans,* native to the Hudson Bay region.
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55167. STIGZELIUS, HERMAN. En berättelse om Lapplands guld. (Tekniska föreningen i Finland. Förhandlin-

gar, May 1954. årg. 74, nr. 5, p. 91–94, map.) 12 refs. Text in Swedish. ***Title tr.:*** An account of the gold in Lapland.

Only sporadic attempts have been made to extract the alluvial gold first discovered in 1546. Gold-washing started in 1870; an estimated 1,000–1,500 kg. has been washed. Existence of gold ore is indicated (at Kultala and Ruikka); no thorough search has been undertaken; several discoveries are cited.

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55168. STIGZELIUS, HERMAN. The growing importance of Finnish iron ore mining. (Bank of Finland. Monthly bulletin, May 1958. v. 32, no. 5, p. 18-20, map.)

Iron ore is in production at Otanmäki, central Finland, and several other deposits have been discovered, among them Kärväsvaara, a small deposit in the Kemijärvi district, and Kolari (67°22′ N. 23°50′E.) in west Lapland. At Kolari both hematite and magnetite ores are found with 30–40% iron content and properties favorable for concentration purposes. Iron concentrate production may begin about 1963 at 500,000 tons/yr. Finland's output of iron in concentrated and crude ore (excluding pyrite residues), now about 200,000 tons/yr., may exceed a million tons by the mid-1960's.

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55169. STIGZELIUS, HERMAN. Mining in Finland in 1957. (Canadian mining journal, May 1958. v. 79, no. 5, p. 93–94, table, text map.)

Reviews metal mining activities: total amount of ore and waste rock extracted was 2,400,000 metric tons (2,100,000 in 1956). Principal mines and smelters, discovery of new iron ore deposits in the Kolari region (approx. 67°20′ N. 23°45′ E., near Swedish border), increased extraction achieved at two mines and impending close-down at three others are noted. Preliminary construction is underway at three sites, one nickel-copper, and two iron deposits. Production of metals or concentrates for 1956 and 1957 is shown (table), copper, iron and zinc having greatest amounts. ***Copy seen:*** DGS.

55170. STILLE, HANS, 1876– . Geotektonische Gliederung der Erdgeschichte. Berlin, 1944. 80 p. diagrs. (Akademie der Wissenschaften, Berlin. Abhandlungen, Mathematisch-naturwissenschaftliche Klasse, 1944, nr. 3.) 60 refs. Text in German. ***Title tr.:*** The geotectonic division of earth history.

The early geologic history of the earth is broadly reviewed. Emphasis is on the Precambrian shields and geosynclinal areas which make up present continental masses. Of arctic interest are the descriptions of Laurentian, Baltic, Fennosarmatian, and Angaran shield locations. In their neighboring geosynclinal seas, sediments accumulated from which the Rockies, Caledonides and other mountains were built. Interpretations by leading geologists of the three shield regions are discussed. ***Copy seen:*** DGS.

55171. STILLE, HANS, 1876– . Geotektonische Probleme des pazifischen Erdraumes. Berlin, 1944. 77 p. illus., diagrs. (Akademie der Wissenschaften, Berlin. Abhandlungen. Mathematisch-naturwissenschaftliche Klasse, 1944, nr. 11.) 17 refs. Text in German. ***Title tr.:*** Geotectonic problems of the Pacific area.

Interpretation of the tectonic history of the Pacific portion of the earth are summarized. In the Arctic, the Precambrian Laurentian shield is believed to have extended to the islands north of Siberia and to have been separated from the Angaran shield by a narrow zone of mobility. The geosynclinal seas from which the east Siberian and northern Rocky folded and faulted mountains were developed are said to have coaleseed near Kamchatka. The volcanic island chains of the north Pacific are briefly mentioned.

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55172. STILLE, HANS, 1876– . Urund Neuozeane. Berlin, 1948. 68 p. 6 maps, 2 fold. (Akademie der Wissenschaften zu Berlin. Abhandlungen, Mathematisch-naturwissenschaftliche Klasse, 1945–46, nr. 6.) Text in German. ***Title tr.:*** Original and recent oceans.

The earth's oceans at the beginning of Cambrian time are classified and compared to those of the present. The relationships between the early Pacific, Arctic, and Norwegian deeps and the lands around them are clarified. Paleozoic areas bordering the shields in Scandinavia, Siberia and Greenland, Mesozoic in Eurasia, and more recent in Alaska and eastern Siberia are mapped with the early deeps and present ocean outlines on an arctic polar projection reaching to 60° N. lat. ***Copy seen:*** DGS.

55173. STOCKMANN, STEN. Beiträge zur Kenntnis der Koleopterenfauna Ostfennoskandiens, 5; die *Gnathoncus*-Arten Ostfennoskandiens. (Notulae entomologicae, 1957. v. 37, no. 3, p. 67–76, 25 illus.) Text in German. ***Title tr.:*** Contributions to knowledge of the Coleoptera fauna of eastern Fennoscandia, 5; the *Gnathoncus* species of eastern Fennoscandia.

Contains a key and descriptions of five species of this beetle (one is new) with data on their distribution and ecology; two, *G. nannetensis* and *G. buyssoni*, are native to Finnish Lapland. Parts 1–4 of this paper were listed as No. 37623.

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55174. STOCKMAYER, SIEGFRIED. Kleiner Beitrag zur Kenntnis der Süsswasseralgenflora Spitzbergens. (Österreichische botanische Zeitschrift, Feb. 1906. Jahrg. 56, no. 2, p. 47–53, 7 illus.) Text in German. ***Title tr.:*** A small contribution to knowledge of the fresh-water algal flora of Spitsbergen.

Lists, with notes, 29 species (15 desmids and 14 diatoms) obtained from the Advent Bay region. *Euastrum wiesneri* n. sp. is described in Latin.

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STOCKWELL, CLIFFORD HOWARD, 1897– , *see* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

55175. STOECKELER, J. H., *and* **J. L. THAMES.** The Lake States penetrometer for measuring depth of soil freezing. (Soil science, Jan. 1958. v. 85, no. 1, p. 47–50, illus.) 16 refs.

A simple penetrometer is described which quickly determines depth of hard freezing of mineral soils and of organic soils such as peats and mucks. It consists of a steel rod, graduated in inches, sliding inside a lead-weighted driving hammer. Total weight range is 12.0–15.5 lb. and overall length is 44–45 in. Other techniques used in frost-penetration studies are reviewed, and advantages and limitations of the penetrometer are discussed. ***Copy seen:*** DLC.

STOERMER, JOACHIM, *see* Joppich, G., *and* J. Stoermer. Das EKG . . . unterkühlten Frühgeborenen. *1957.* No. 52104.

55176. STOERTZ, GEORGE EIMERT, 1930– , *and* **S. M. NEEDLEMAN.** Report on Operation Groundhog, North Greenland, 1957. Cambridge, Mass., 1957. 40 p. illus., 4 maps incl. 2 fold., 3 diagrs., 4 tables. (U.S. Air Force. Cambridge Research Center. Geophysics Research Directorate. Contract no. CSO A57–24, with Military Geology Branch, U.S. Geological Survey.) 12 refs. Continuation of NEAC Operation Defrost 1956. Project 7806, Task 76064C.

Results of investigation of ice-free sites suitable for aircraft landings in northern and eastern Greenland; reports construction of an emergency air strip at 82°08′ N. 31°15′ W., 131 miles west of station Nord, and test landing of a C–124. Geologic reconnaissance, soil testing, location and marking of airstrip, preparation of runway and minor construction were carried out by a five-man party, July 29–Aug. 16, 1957. The air strip, 200 ft. wide, 5,000 ft. long, with overrun of 1,200 ft., is operable from mid-Sept. to late May and provides an alternate landing site to Nord. Location, accessibility, topography, weather, drainage, soil conditions, method of marking, availability of construction materials, water supply, etc., are described. Six ground surveys planned for 1958 in Greenland are noted. ***Copy seen:*** DGS.

55177. STOKES, J. C. An esker-like ridge in process of formation, Flatisen, Norway. (Journal of glaciology, Oct. 1958, v. 3, no. 24, p. 286–88, illus., diagrs.) 4 refs.

Presents first-hand description of a ridge of drift emerging in a subglacial tunnel from the snout of Flatisen (outlet of Svartisen icecap in northern Norway) and its resemblance to a small esker. The material forming the ridge and its source, the subglacial tunnel, and successive stages of the esker-like formation are illustrated and described in detail. The feature was called an esker-like ridge only because it differs somewhat from the accepted definition of eskers.

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STOLZY, L. H., *see* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958.* No. 50694.

55178. STOMMEL, HENRY MELSON, 1920– . The abyssal circulation of the ocean. (Nature, *London*, Oct. 1957. v. 180, no. 4589, p. 733–34.)

A review and discussion of problems of abyssal (cold-water) circulation presented at a symposium held Sept. 5–6

at the General Assembly of the International Union of Geodesy and Geophysics in Toronto. The deep water of the North Atlantic, and its residence time, as determined by carbon-14 determinations, the Norwegian Sea conditions, deep water flow from polar areas, are among the subjects reviewed. ***Copy seen:*** DNLM.

STONE, HRANT HARLAN, *see* Martin, J. D., *and others.* The utilization of hypothermia in early burn therapy. *1958.* No. 53157.

55179. STORDAL, JENS. *Clitocybe connata* (Schum. & Fr.) i Norge. (Friesia, 1954. bd. 5, hefte 1, p. 39–42, illus.) 4 refs. Text in Norwegian. Summary in English. ***Title tr.:*** *Clitocybe connata* (Schum. & Fr.) in Norway.

Contains notes and a list of localities of this fungus in Norway, including four in Troms province. ***Copy seen:*** DLC.

55180. STORM, GUSTAV, 1845–1903. Columbus på Island og vore forfaedres opdagelser i det nordvestlige Atlanterhav. (Norske geografiske selskab. Årbok, 1892–93, *pub.* 1893, v. 4, p. 67–86, fold. map.) Text in Norwegian. ***Title tr.:*** Columbus on Iceland and our forefathers' observations in the northwestern Atlantic.

On the 400th anniversary of Columbus' first voyage to the West Indies, his journey to Iceland 15 years earlier, is reviewed. What he may have learned, information from earlier Norse voyages, and cartographic sources of his time are considered. Discovery of Greenland, Markland, and Vinland, knowledge of ice conditions between Iceland and Greenland, the shape of the earth, Columbus' experience in open-ocean navigation, etc. are discussed. Greenland was thought to be connected to Russia, around a central polar sea.

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55181. STORM, GUSTAV, 1845–1903. Om opdagelsen af "Nordkap" og veien til "det hvide hav." (Norske geografiske selskab. Årbok, 1893–1894, *pub.* 1894. v. 5, p. 91–106.) Text in Norwegian. ***Title tr.:*** The discovery of Nordkapp and the route to the White Sea.

The first known reference to Fennoscandia is in King Alfred's appendix to Orosius' world history. Ottar, who lived near 69° N., and was Alfred's source on northern geography, discovered Nordkapp and reached settlements on the White Sea. There was a fur trade route in the 13th century, and by 1550 connections eastward to the Ob and to China were known. These led to search for the northeast Passage by Englishmen in 1553 and rediscovery of Nordkapp. Details of geography and history in northern Russia are included.

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55182. STORM, GUSTAV, 1845–1903. Venetianerne paa Røst i 1432. (Norske geografiske selskab. Årbok, 1896–1897, *pub.* 1897. v. 8, p. 37–52.) Text in Norwegian. ***Title tr.:*** The Venetians on Røst in 1432.

Reviews two separate but similar reports of a voyage to northern Norway by Pietro Quirini. In May 1431, he left Crete in his own vessel for the west coast of Europe, with a cargo of wine, pepper, spices, etc., and after misadventures, reached the Røst group of islands (67°30′ N.) on Jan. 5, 1432. The Venetians' overwintering at the local settlement and their return are described after the mss., which are historically and geographically authenticated. ***Copy seen:*** DLC.

STOROZHEV, NIKOLAĬ MIKHAĬLOVICH, *see* Ruzov, L. V. Na sushe i na more . . . *1957.* No. 54464.

55183. STORRS, HENRY GOODWIN, 1919– . Frostbite. (Northwest medicine, July 1957. v. 56, no. 7, p. 816–18, illus.) 12 refs.

Presents data of the June 30, 1953–June 1, 1955 records of the St. Joseph's Hospital, Fairbanks, Alaska: month of admission, age, sex, length of hospitalization, severity of injury, condition on discharge, etc. Frostbite is considered of rare occurrence even in this area and usually secondary to some incapacitating situation. ***Copy seen:*** DNLM.

55184. STOWELL, FINCH. Background of use of multiwall bags by the Armed Forces. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago, Low-temperature test methods and standards for containers 1954. p. 92–93.)

Contains brief resume of bag breakage and subsequent loss of cement (50% or more) during military operations in the Pacific area. Some of this loss was attributed to the low-temperature effects on the asphaltic compound used for the adhesive. Research to provide bags with the necessary strength properties resulted in the development of polyethylene laminates as substitutes for the asphaltic

adhesive. At test temperatures down to −40° F., the seams proved satisfactory but the paper itself ruptured.

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55185. STRAND, ANDREAS, 1895– . *Enicmus pseudominutus* n. sp.; Col., Lathrid. (Norsk entomologisk tidsskrift, 1958. bd. 10, hefte 4–5, p. 184–86.) 10 refs. Text in German.

Comparative discussion of *Enicmus pseudominutus* n. sp. (Norrbotten), *E. minutus* (Troms) and *E. anthracinus* (Finnmark), with data on their distribution. ***Copy seen:*** DA.

55186. STRAND, ANDREAS, 1895– . Koleopterologiske bidrag VIII. (Norsk entomologisk tidsskrift, 1957. bd. 10, hefte 2–3, p. 110–18.) Text in Norwegian. ***Title tr.:*** Report on Coleoptera, VIII.

Contains critical notes on about 35 beetles chiefly from Scandinavia, at least seven species from northern regions. For previous reports, see No. 37650; pt. VII has no arctic material.

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55187. STRAND, ANDREAS, 1895– . Koleopterologiske bidrag IX. (Norsk entomologisk tidsskrift, 1958. bd. 10, hefte 4–5, p. 189–94, plate.) Text in Norwegian. ***Title tr.:*** Report on Coleoptera IX.

Lists 18 beetles with critical notes and data on distribution, two from Troms: *Carabus nemoialis* and *Quedius pseudolimbatus.* ***Copy seen:*** DLC.

55188. STRAND, ANDREAS, 1895– . Über die nordischen Arten der Gattung *Liodes* Latr., Col., Liodidae. (Norsk entomologisk tidsskrift, 1957. bd. 10, hefte 2–3, p. 119–30, 3 plates.) 11 refs. Text in German. ***Title tr.:*** On the northern species of the genus *Liodes* Latr., Col., Liodidae.

Contains a key to the species of this genus of beetles and notes on 13 critical species, among them *L. puncticollis*, native to Lapland. ***Copy seen:*** DA.

55189. STRAND, TRYGVE. Greenschists from the south-eastern part of Helgeland, Norway, their chemical composition, mineral facies and geologic setting. (Norway. Geologiske undersøkelse, Årbok 1957, *pub.* 1958. nr. 203, p. 112–29, tables.) 24 refs. Summary in Norwegian.

From Helgeland, in the southern part of northern Norway, the greenschists described extend eastward into Sweden and northward into the Dunderdalen region of Norway, where they lie below a thrust plane overlain by high grade metamorphic rocks. The greenschists are low grade metamorphics of probable Ordovician age. Analyses of four samples are tabulated and compared to associated rocks. Their mineralogy, chemistry, and refraction indices are discussed. Their facies interpretation is questionable, depending on use of albite-epidote or ferro-magnesian content as basis for determination. It is concluded that they were probably supracrustal, submarine deposits in a geosyncline bordered on both sides by continental areas. Their occurrence is contrasted with present deposition in the Indonesian area and with that of similar, former deposition in the British Columbia-Aleutian island geosynclinal arc.

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55190. STRAND, TRYGVE. Sydøstligste Helgelands geologi. (Norway. Geologiske undersøkelse. Årbok, 1954. nr. 191, p. 56–70, illus., text map.) 9 refs. Text in Norwegian. Summary in English. ***Title tr.:*** Geology of southeasternmost Helgeland.

The geology of this part of Nordland (65°–66° N.) in northern Norway, is briefly outlined and described. The area is directly west of the Tärna, Sweden, region, with which comparisons are made. Cambrian sediments of the Swedish foreland type are lacking above the basal massif. In the overlying metamorphosed sedimentaries, Upper Ordovician quartzite and limestones, which are leading horizons in Sweden, are feebly developed on the Norwegian side. Above these are low-grade metamorphosed sediments of Flysch type deposition, the Hattfjelldal limestone nappe, and, above a sharply marked thrust plane, a complex of highly metamorphosed rocks.

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55191. STRANDE, KARE. Kontroll med kulturbeite på Mykleseter i Ringebu, 800 m. over havet. (Forskning og forsøk i landbruket, 1955. bd. 6, hefte 1, p. 1–16, illus., 10 tables.) 13 refs. Grassland Experiment Station Apelsvoll. (Report no. 21.) Text in Norwegian. Summary in English. ***Title tr.:*** Control of cultivated pasture at the mountain ranch Mykleseter, Ringebu, 800 m. above sea level.

A mountain pasture, at 2,620 ft. elevation in central Norway, was cleared of spruce and underbrush, fenced, fertilized,

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and grazed over a period of years. Pasture vegetation included *Poa pratensis, P. alpina, Festuca rubra, F. ovina, Agrostis,* and *Trifolium repens.* Fertilizing and grazing had a favorable effect on the vegetation. Costs, yields, and annual duration of pasturage are tabulated. ***Copy seen:*** DA.

STRASH, VICTOR, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

55192. STRECKER, HERMAN, 1836–1901. *Parnassius clodius* and *P. smintheus.* (Canadian entomologist, 1893. v. 25, no. 6, p. 163–64.)

These two butterflies are distinguished and notes added on a few related species, including *P. eversmanni* from Alaska and Siberia. ***Copy seen:*** DLC.

55193. STREHLE, AKSEL, 1896– , *and* J. HAESTRUP. Fra Grønland til Svalbard. København, Forlaget Fremad, 1947. 47 p. maps. (Fremads kortbøger, 2.) Text in Danish. ***Title tr.:*** From Greenland to Svalbard.

The geology, settlement, and history of the north Atlantic islands are reviewed. Explored, settled, and governed by Scandinavians and their descendants, these islands have been outposts of Europe for more than a thousand years. They lie directly between two great world powers, and have, especially Greenland and Svalbard, strategic importance.

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STRELKOV, *Prof., see Sovetskiĭ soi͡uz.* Kosmicheskiĭ termometr. *1957.* No. 55077.

55194. STRELKOV, S. A. Led-gidrotekhnik. (Vokrug sveta, Sept. 1958, no. 9, p. 31, illus.) Text in Russian. ***Title tr.:*** Ice: hydroengineer.

Photograph of the tundra in the Lena River delta, with its numerous small ponds or lakes, and note explaining this feature by deep wedges of ice formed in winter in the fissures of the ground.

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55195. STRELKOV, S. A. Novye dannye o rel'efe i chetvertichnykh otlozheniĭ͡akh doliny r. Leny k severu ot Severnogo polĭ͡arnogo kruga. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 308–317.) 5 refs. Text in Russian. ***Title tr.:*** New data on the relief and Quaternary deposits of the Lena River valley above the Arctic Circle.

Presents results of a field investigation and examination of air photos and topographic maps of the Lena valley from Zhigansk to the delta. Geomorphic structure of the Lena terrace complex is outlined. The lower, middle, upper and contemporary sections of Quaternary deposits are described.

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55196. STRELKOV, S. A., *and others.* O vozmozhnoĭ tektonicheskoĭ prichine pereustroĭstva rechnoĭ seti v nizov'ĭ͡akh rek Leny i Olenek. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1957, vyp. 6, p. 15–19.) 2 refs. Text in Russian. *Other authors:* A. P. Puminov, *and* A. N. Naumov. ***Title tr.:*** On possible tectonic cause in the reconstruction of river net of the lower courses of Lena and Olenek Rivers.

Presents observations made in the Lena valley below the town of Sintyakh, in the Olenek valley and other old valleys of the region. In reviewing their development and character, authors confirm that the Lena once flowed through the Kelimyar and Olenek valleys into Olenekskiy Bay. At that time the Olenek possibly flowed into the Lena through the Kyutingsk valley. The reconstruction of the Lena and Olenek valleys, believed to have taken place in post-Quaternary period, is evaluated, and tectonic and erosional processes in this development are discussed. ***Copy seen:*** DGS.

STRELKOV, S. A., *see also* Tkachenko, B. V., *and others.* Geologicheskoe stroenie . . . *1957.* No. 55460.

55197. STRELKOV, V. Ledi͡anye plugi. (Vokrug sveta, Mar. 1958, no. 3, p. 57, illus.) Text in Russian. ***Title tr.:*** Ice ploughs.

Note and photo of the long, straight furrows left by spring ice on the sand banks of the lower Lena River.

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STRENGTH, D. R., *see* Privitera, C. A., *and others.* Effects of freezing . . . oxydative phosphorylation of mitochondria. *1957.* No. 54145.

STRENGTH, D. R., *see* Privitera, C. A., *and others.* Oxydative phosphorylation . . . freezing . . . *1958.* No. 54146.

55198. STRENINA, A. V. Ėtnograficheskoe izuchenie ul'chel. (Akademiîa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniîa, 1949. vyp. 5, p. 40–53, illus.) 3 refs. Text in Russian. ***Title tr.:*** Ethnographic study of the Ul'chi.

A report on author's research in the lower Amur region during the Amur-Sakhalin expedition of 1947. The racial affinities (Gilyak, Evenki, Manchu, Ainu, etc.) and cultural ties (Gilyak, Evenki, Chinese and Russian) of this small Tungus Manchu group are noted. Their material culture (hunting and fishing, clothing and housing) are described and their religious beliefs, especially hunting rites, discussed. Their number is estimated at 1,400, which seems to show an increase of approx. 650 above the 758 figure of 1926 quoted by S. V. Ivanov (cf. No. 45744). ***Copy seen:*** DLC.

STRMECKI, JOSEPH, *see* Indiana. University. The Zyryans . . . *1955.* No. 51923.

55199. STRÖMBÄCK, DAG. The realm of the dead on the Lappish magic drum. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 216–20, illus.) Refs. in text.

Compares signs and drawings symbolizing the nether world on Lappish drums with Viking representations of it, and considers Lappish death mythology as well as the name of Rota, god of illness and death, a loan from the Nordic cult of Odin (Icelandic variant Þróttr).

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55200. STRÖMFELT, HARALD FREDRIK GEORG. Om algvegetationen vid Islands kuster. Göteborg, Bonnier, 1885. 89 p., 3 fold. plates, tables. (*In:* Göteborgs K. vetenskaps- och vitterhetssamhälle. Handlingar, ny tidsföljd, 21) Approx. 75 refs. Text in Swedish. ***Title tr.:*** On the algal vegetation along the Icelandic coasts.

Summary of a trip to Iceland in 1883, followed by a systemic account of algae collected (94 species). References to published descriptions and illus. are included. ***Copy seen:*** DLC.

55201. STROGANOV, SERGEĬ UL'IÂNOVICH, *and* **K. T. IŪRLOV.** Soveshchanie zoologov Sibiri. (Akademiîa nauk SSSR. Sibirskoe otdelenie. Izvestiîa, 1958, no. 1, p. 152–54.) Text in Russian. ***Title tr.:*** Conference of zoologists of Siberia.

Reports conference called by the Academy of Sciences' West Siberian Branch at Novosibirsk, Nov. 25–28, 1957, with summary of papers presented, among them S. U. Stroganov's on exploration of fauna in Siberia during the Soviet regime, five on acclimatization of the muskrat, two on sable, and other papers on seal, elk, reindeer, etc. Need to develop exploration and raise efficiency of the hunting industry was stressed.

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55202. *STROITEL'NAÎA PROMYSHLENNOST'.* Vyshe uroven' tekhniki zimnego stroitel'stva. (Stroitel'naîa promyshlennost', Sept. 1958. god 36, no. 9, p. 1–4.) 5 refs. Text in Russian. ***Title tr.:*** Raising the technical level of winter construction.

Reviews various new and improved methods and equipment in three categories: for breaking frozen ground (ram, pile driving, ground-cutting machine, drill for explosives, steam-heating, etc.), excavating, loading and storing of materials; for preparation and delivery of concrete (preheating of sand, gravel and other materials by steam, exhaust gas, thermo-chemical reaction); and for considerably expanded winter construction by coordinated research on development of methods, especially the use of large prefabricated building parts: wall sections, floors, stairways, beams, roofs, etc., suitable for different climatic conditions.

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55203. STRONG, A. M. Notes on the genus *Acteocina,* Gray. (Nautilus, Oct. 1921. v. 35, no. 2, p. 44–48.)

Ranges of eight species are cited from different authors, including *A. culcitella* and *A. eximia* registered from Kodiak Island to Puget Sound. Dr. W. H. Dall extended the range of the former to Kodiak Island waters, and Strong added comments (same journal, Jan., Apr. 1922, v. 35, no. 3 and 4, p. 96, 122–23).

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55204. STRONG, A. M. Notes on the Mactras of the West Coast. (Nautilus, Jan. 1925. v. 38, no. 3, p. 98–102.)

Lists 11 species of the *Mactra* group, with taxonomic notes. The surf clam, *Spisula* (*Hemimactra*) *voyi,* ranging from the Arctic Ocean to Puget Sound and *Schizothaerus nuttallii,* from Wrangell, are included; the former is also repre-

sented by a living form in Dall's *S. polynyma* Stimpson var. *alaskana*.

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55205. STRONG, E. M., *and others.* Microwave radio communication under severe winter conditions on the Bonneville Power Administration System. (American Institute of Electrical Engineers. Transactions, 1957, pt. 1, Communications and electronics, p. 655–62, illus., map, diagrs., table.) 3 refs. *Other authors:* E. J. Warchol *and* S. E. Benson.

Describes methods of protecting antennas, reflectors, and towers against snow- and ice accumulation in Washington State mountain links. Ice on the parabola (up to 12 in.) caused blocking of the signals and alteration of the beam angle, falling ice from parallel power lines damaged reflectors, and snow (over 25 ft.) broke towers and steel guys. Electric de-icers proved unsatisfactory. Dark enclosures (thermo-microdomes) of three-ply fiber-glass fabric laminated with polyester resinate and thermostatically controlled heating were applied with success over the parabolic antennas. Pneumatic vibrators with low amplitude and high frequency, automatically employed 15 sec./8 hrs. remove ice formations formed by frozen cloud crystals in the wind direction and reaching out to 20 ft. Tower construction for severe winter conditions is discussed, guyed towers are not favored where snowfall exceeds 20 ft.; 10-in. pipe supports are to be tried in 1957. ***Copy seen:*** DLC.

55206. STRUTINSKIĬ, ALEKSEĬ BONIFAT'EVICH, *and others.* Spravochnik mastera-stroitelîa. Kiev, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture USSR, 1957. 340 p. illus., tables. Text in Russian. *Other authors:* L. D. Tret'îakov, *and* A. A. T͡Seĭtlin. ***Title tr.:*** Manual for construction supervisors.

Contains detailed information on properties and kind of structural materials, and on methods of construction including winter work. Foundation reinforcement for buildings on soft (marshland) and permafrost ground are described and illus. (p. 105). Methods of winter construction with concrete and reinforced concrete are outlined (p. 238–49) with tabulated data on the composition of mixtures, preheating temperatures, variation in concrete strength with temperature and other factors. Artificial preheating of concrete with steam and electric current is described. Regulations governing winter work on excavations are given (p. 210), also on masonry (p. 224), roof construction (p. 266), and plastering (p. 271). ***Copy seen:*** DLC.

STUDIES ON HELMINTH FAUNA OF ALASKA, 31, *see* Rausch, R. L., *and* V. L. Jentoft. Studies . . . helminth fauna of Alaska, 31 . . . propagation . . . *1957*. No. 54239.

STUDIES ON HELMINTH FAUNA OF ALASKA, 32, *see* Schiller, E. L. Studies . . . helminth fauna of Alaska, 32; *Hymenolepis echinorostrae* n. sp. . . . *1957*. No. 54604.

55207. STUEBER, PAUL, *and others.* Regional renal hypothermia. (Surgery, July 1958. v. 44, no. 1, p. 77–83, illus.) 17 refs. *Other authors:* S. Kovacs, S. Koletsky, *and* L. Persky.

Account of experiments on dogs having the circulation of one kidney occluded for six hours whilst the kidney cooled or (in controls) remained normothermic. Survival increased to 100% with decrease of temperature towards 0° C.; there were no survivals in the control group. Levels of blood urea nitrogen, gross and microscopic anatomy, and pathology are also discussed. ***Copy seen:*** DLC.

STÜTZEL, MÁRIA, *see* Kemény, A., *and others.* A vér anorganikus phosphor . . . *1957*. No. 52232.

55208. STULBERG, CYRIL S., *and others.* Preservation of human epithelial-like and fibroblast-like cell strains at low temperatures. (Society for Experimental Biology and Medicine, Proceedings. June 1958. v. 98, no. 2, p. 428–31, illus., table.) 9 refs. *Other authors:* H. D. Soule *and* L. Berman.

Report on preservation of such cells by slow freezing in 5% glycerol medium, storage at −70° C. and rapid thawing. Following this procedure, each of the 19 strains tested could be quickly recovered and cultivated with no change in growth rate or strain characteristics.

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55209. STUPFEL, MAURICE, *and others.* Action du gaz carbonique sur la thermorégulation du rat non anésthesié. (Société de Biologie, Paris. Comptes rendus, 1957. t. 151, no. 12, p. 2045–49, illus.) 8 refs. Text in French. *Other authors:* J. -M. Jouany *and* C. Jaulmes. ***Title tr.:*** Action of

carbon dioxide upon thermoregulation of the non-anesthetized rat.

Report on experiments with animals breathing mixtures of O_2 and CO_2 at various ambient temperatures (5° to 40° C.). Under these conditions, thermoregulation becomes inoperative, the rats become poikilothermic, their internal temperature following that of the environment. At about 29° C. a steady "thermal neutrality" is reached; below that the animals become hypothermic.

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STUPNIKOVA, N. I., *see* Zhirov, K. K., *and others.* Vliîanie protsessov gidrotermal'nogo izmeneniîa . . . *1957.* No. 56199.

STUPNIKOVA, N. I., *see* Zykov, S. I., *and* N. I. Stupnikova. Opredelenie vozrasta pegmatitovoĭ zhily . . . *1956.* No. 56278.

55210. STURM, STEFAN. Wie leben die Sowjetmenschen nun wirklich? Dokumentarbericht aus dem Petschoragebiet. Würzburg, Marienburg-Verlag, 1956. 191 p. illus., map. Text in German. ***Title tr.:*** How do the Soviet people really live? A documentary account from the Pechora region.

Collections of articles, letters to the editor and feuilletons translated into German from three Russian newspapers of 1955 published in Vorkuta and Komi A.S.S.R.: *Zapolîar'e, Za novyĭ Sever,* and *Krasnoe Znamîa.* The articles, written in the popular Soviet spirit of "criticism and self-criticism," indicate industrial and administrative shortcomings, gross mismanagement and petty larceny of officials, exaggerations of statistics, poor quality of consumer goods and machinery, people's passive resistance to unrealistic state quota demands, etc. Written by Soviet journalists for local consumption, these documents depict life in Komi A.S.S.R., "untinged by foreign propaganda." The collection is intended to show the state of affairs in the industrially important lumber and coal region of northern Russia (including the mining area of Vorkuta) and to give some geographical, geological, etc., data on Komi A.S.S.R.; the population statistics for 1941 are given as 318,900. Original Russian text of some letters is appended.

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55211. SUDA, ISAMU, *and others.* Analysis of effects of hypothermia on central nervous system responses. (American journal of physiology, May 1957. v. 189, no. 2, p. 373–80, illus.) 18 refs. *Other authors:* K. Koizumi *and* C. McC. Brooks.

Account of investigation on cats and on decerebrated cat preparations. Progressive cooling of the spinal cord and brain produced hypersensitiveness between 35° and 25° C. Below this level all studied reactions were reduced in magnitude. There was also a loss in specificity of reflex pathways.

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55212. SUDILOVSKAÎA, A. M. K voprosu o sistematicheskikh vzaimootnosheniîakh geograficheskikh form domovogo vorob'îa, *Passer domesticus* L. (Moskovskoe obshchestvo ispytateleĭ prirody. Biûlleten', May–June 1957. Otd. biol., n. ser., t. 62, no. 3, p. 19–23.) 24 refs. Text in Russian. Summary in English. ***Title tr.:*** Systematic interrelation of geographic forms of the house sparrow, *Passer domesticus* L.

Study of the systema'ic position of the central Asian house sparrow *Passer domesticus griseogularis* (*bactrianus*) and *P. d. domesticus,* native to many regions of the U.S.S.R. In Kola Peninsula and Arkhangel'sk province, the latter stays during the winter but fewer in numbers. In Siberia (Taz River, Yenisey, and Yakutsk) they are found about 67° N. but migrate from more northern areas. In severe winters this migration takes a more regular character. *Passer d. griseogularis* is only a subspecies of the ordinary domestic sparrow.

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55213. *SUDOSTROENIE.* Atomnyĭ ledokol "Lenin" soshel so stapelîa. (Sudostroenie, Feb. 1958. god 24, no. 2, p. 73, illus.) Text in Russian. ***Title tr.:*** Atomic icebreaker *Lenin* launched.

Reports launching of this icebreaker at Leningrad, Dec. 5, 1957. Main specifications are given. ***Copy seen:*** DLC.

55214. *SUDOSTROENIE.* Model' ledokola "Lenin" s atomnoĭ ustanovkoĭ. (Sudostroenie, Apr. 1958. god 24, no. 4, p. 73, 2 illus.) Text in Russian. ***Title tr.:*** Model of the icebreaker *Lenin* with atomic power plant.

Depicts model on scale 1:50 to be exhibited at the World's Fair in Brussels, 1958: it has more than 50,000 parts. A sectional view through the engine room discloses layout of the power plant.

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55215. *SUDOSTROENIE.* Stroitel'stvo atomnogo ledokola. (Sudostroenie, Jan. 1957. god 23, no. 1, p. 11–14, illus.) Text in Russian. English translation by E. R. Hope, issued as Canada. Defence Research Board. Directorate of Scientific Information Service. Translation, T268R, Nov. 1957. Copy at DN–HO. ***Title tr.:*** Constructing an atomic icebreaker.

Describes construction of the 16,000 ton, 134 x 27.6 m. icebreaker *Lenin*. A new type of steel 32–52 mm. thick is used for the hull. Two turbo-generators amidships, deliver 44,000 hp. to three electromotors, each coupled to one of three aft propellers, the middle one with half of the power. Additional 500 electromotors supply power for the electric installations through 300 km. of cable. Navigational equipment includes two helicopters and radio capable of communication with ships, aircraft, polar stations, and any continental station in the Arctic.

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55216. SUGIURA, MASAHISA. Some notes on the interpretation of rapid fluctuations in earth-currents observed in high latitudes. College, Dec. 1958. 27 p. table, diagr. (Alaska. University. Geophysical Institute. Geophysical research report no. 5.) 17 refs.

A periodically varying infinite linear current, or a periodically varying turbulent circular current of small radius, in the ionosphere, is adequate for producing voltage differences in the ground of order 0.1–1 v./km. frequently observed in high latitudes during disturbed periods. The earth-current record is difficult to interpret in terms of its primary origin, unless the distribution of the perturbing magnetic field and that of electric conductivity of the earth are known; but the record is a good indicator of the upper atmospheric disturbance in the polar regions.—From author's abstract.

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SUGIURA, MASAHISA, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

55217. SUHR, J. N., von. Beiträge zur Algenkunde. (Flora, 1840. Bd. 23, p. 289–98.) Text in German. ***Title tr.:*** Contributions to algology.

Describes 19 algae from various regions, including *Callithamnion spinosulum*, native to Greenland. The other parts of this paper do not contain arctic material.

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55218. SUKHANOV, I. A. Priemka morskogo okuniâ na promysle. (Rybnoe khozîaĭstvo, Feb. 1958. god 34, no. 2, p. 57–59.) Text in Russian. ***Title tr.:*** Delivery of sea perch to the plant.

In some areas of the Barents Sea, spring catches of sea perch are so big that the mother ships are unable to process them. Author describes a method of transferring this surplus to shore plants with the aid of special refrigerated boats.

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55219. SUKHANOV, ÎA. Vot éto zakalka. (Ogonëk, Mar 1957. god 35, no. 12, p. 27, illus.) Text in Russian. ***Title tr.:*** This is effective body hardening.

Dr. Aleksandr Zykov and family lived for six years at Ugol'naya Bay on Chukotka, with comfort (house with running water and central heating), sport, hunting, summer bathing amidst ice floes, etc. ***Copy seen:*** DLC.

55220. SUKHOPARA, F. N. O rabote komissii po razrabotke proekta setki ėkonomicheskikh raĭonov SSSR. (Akademiîa nauk SSSR. Izvestiîa, ser. geog., May–June 1957, no. 3, p. 10–14.) Text in Russian. ***Title tr.:*** On the work of the Commission for preparation of a draft of division of U.S.S.R. into economic zones.

Changes in distribution of industry in the last 15–20 years have invalidated the existing schemes of economic zones. A special Commission was set up at the State Planning Commission (Gosplan) in 1956 to reconsider the division. Its objectives, problems coped with, and its work are briefly reported. Proposal is to leave the boundaries of the northern economic zone in European U.S.S.R. as they are, but to establish two new economic zones in the Asiatic North: Angara-Yenisey and Northeastern (Yakutia and Magadan provinces) regions.

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55221. SUKHORUCHENKO, M. N. Nekotorye itogi raboty rybnoĭ promyshlennosti Murmanskogo ėkonomicheskogo administrativnogo raĭona v 1957 g. i puti ee dal'neĭshego razvitiîa. (Rybnoe khozîaĭstvo, July 1958. god 34, no. 7, p. 57–61.) Text in Russian. ***Title tr.:*** Some results of the fishing industry of the Murmansk economic administration district in 1957, and ways of its further development.

Contains vague information on the increase in the number of trawlers of

the Murmansk fleet; decline and shift of fishing to the North Atlantic; activities in non-Russian arctic waters, including Newfoundland and Greenland waters; changes of fishing and preserving methods due to altered conditions; advances and yields in the new areas; plans of further development; coordinating Barents Sea with North Atlantic fishing, etc.

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55222. SULLIVAN, BERNARD JEREMIAH, 1921– , *and* M. F. LeBLANC. Effect of inositol and rapid rewarming on extent of tissue damage due to cold injury. (American journal of physiology, June 1957. v. 189, no. 3, p. 501–503, table.) 9 refs.

Both rapid rewarming and inositol were found to favor edema and to reduce tissue loss due to cold injury in golden hamsters. Maximum therapeutic results were obtained by simultaneous rewarming and inositol injections. However, rapid rewarming proved to be the best single therapy. ***Copy seen:*** DLC.

55223. SULLIVAN, BERNARD JEREMIAH, 1921– , *and* P. M. FLYNN. Influence of inositol on peripheral vascular responses to cold injury. (Society for Experimental Biology and Medicine. Proceedings, Feb. 1957. v. 94, no. 2, p. 346–47.) 9 refs.

Inositol injected into hamsters prior to induction of frostbite caused no deviation in the initial responses to cold injury. "However, the constriction phase was ameliorated, thrombi formation was inhibited, and complete stasis was eliminated." ***Copy seen:*** DNLM.

55224. SULLIVAN, BERNARD JEREMIAH, 1921– , *and* L. B. TOWLE. Vascular responses to local cold injury. (American journal of physiology, June 1957. v. 189, no. 3, p. 498–500.) 13 refs.

Report on a microscopic study of vascular responses in the hamster cheek pouch with part of it frozen by application of dry ice. Conditions in the bordering areas and the "post-thaw period;" the nature of emboli, thrombi and stasis are also discussed. ***Copy seen:*** DLC.

SULLIVAN, BERNARD JEREMIAH, 1921– , *see also* Musacchia, X. J., *and others.* A comparison of liver . . . lipids in arctic fishes, *1957.* No. 53468.

55225. SULLIVAN, WILLIAM D. Identification of Protozoa from the region of Point Barrow, Alaska. (American Microscopical Society. Transactions, Apr. 1957. v. 76, p. 189–96, illus., tables.) 21 refs.

Account of protozoans found in material collected between June 14 and July 24, 1955, in tundra pools near Point Barrow, Alaska. Of 60 species found seven were unidentified and three, though salt-water forms, were observed in freshwater pools. A succession of forms was observed during the brief period of investigation. ***Copy seen:*** DNLM.

SUMAKOVA, IRA, *see* Frolov, S., *and* I. Sumakova. Arkhangel'sk- . . . Dikson. *1957.* No. 51010.

55226. SUMMERS, FRANCIS MARION, 1906– . Two mites of the genus *Cheylostigmaeus,* including a new species from Point Barrow, Alaska; Acarina: Stigmaeidae. (Pan Pacific entomologist, Oct. 1957. v. 33, no. 4, p. 163–69,2 plates.) 5 refs.

Contains a description of *C. torulus* n. sp., collected at Point Barrow by Dr. P. D. Hurd. This species may be conspecific with *Liostigmaeus pulchellus* Thor, 1930, but this suspected synonymy cannot be further clarified until males of the Norwegian species are found.

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SUMNER, LOWELL, 1907– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

55227. SUNDBERG, ULF HJALMAR. Terminalproblem vid motortransport av virke. (Föreningen skogsarbetens och Kungl. domänstyrelsen arbetsstudieavdeling. Meddelande nr. 39–42, 1950, p. 5–24, illus.) 30 refs. Text in Swedish. Summary in English. Reprinted from Svenska skogsvårdsföreningen. Tidskrift, 1949. årg. 47, nr. 6, p. 312–29. ***Title tr.:*** The terminal problem in motor transportation of lumber.

Deals with ways of reducing cost of loading and unloading operations in motor transportation of lumber in Norrland. Handling time is analyzed. Bundling small lumber and use of mechanical aids in loading are recommended. Assembling lumber at large dumps, where loading can be fully mechanized, is discussed, with calculations of added cost per cu. m. Types of loaders used in Norrland are described with illus. and their suitability under different conditions is discussed. ***Copy seen:*** DA.

55228. SUNDBY, T. Våre skogplanteskoler, 1; Rognan planteskole. (Tidsskrift for skogbruk, June 1953. årg. 61, hefte 6, p. 225–29, illus.) Text in Norwegian. ***Title tr.:*** Our forest nurseries, 1; Rognan Nursery.

Outlines history, activities, methods, and problems of this nursery at 67°07′ N. 15°25° E. in Saltdal, northern Norway. It specializes in spruce and pine plants (much of the work still done by hand) and has done experimental work in biology and chemistry.

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55229. SUNDIUS, NILS, 1886– . Kvarts, fältspat och glimmer samt förekomster därav i Sverige. Stockholm, 1952. 231 p. illus., diagrs., maps, tables. (Sweden. Geologiska undersökning. Ser. C, Avhandlingar och uppsatser, no. 520. Årsbok 45 (1951), no. 1) Refs. in text. Text in Swedish. ***Title tr.:*** Quartz, feldspar and mica with occurrences in Sweden.

Occurrence, composition, production and use of quartz, feldspar and mica are described, with emphasis on their importance in Sweden. Mine production in Norrland (p. 181–93) has been stimulated by foundry operations near Porjus. Wartime production in the high mountain border region offset decreased imports (p. 219–22). In Sweden, the porcelain and glass industries are principal users of these minerals. Some general production figures are tabulated.

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55230. SUNDIUS, SVEN. Padjelanta, den nya nationalparken? (Till fjälls, 1957. årg. 29, p. 34–38, map. illus.) Text in Swedish. ***Title tr.:*** Padjelanta, the new national park?

Contains a geographical description of an area in north Sweden approx. 67°25′ N. 17° E.; a proposal to make it a national park was presented to the King in 1957 by various organizations.

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55231. SUNDIUS, SVEN. Vattenkraftsutbyggnaden. (Teknisk tidskrift, Sept. 24, 1957. årg. 87, häfte 34, p. 795–96, illus.) Text in Swedish. ***Title tr.:*** The water-power project.

Criticizes government plans, as advanced by T. Nilsson in a previous issue of this journal, for utilization of (among others) Lilla Lule River, without consideration of damage to its natural beauty and to reindeer pastures. Nilsson's reply in defense of his plan is appended.

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55232. SUNDT, EIVIND. Revision of the Fenno-Scandian species of the genus *Acrotrichis* Motch., 1848. Contribution to the knowledge of the family Ptiliidae (Col.) IV. (Norsk entomologisk tidsskrift 1958. bd. 10, hefte 4–5, p. 241–77, 6 illus., 4 plates.) 18 refs.

Contains a key and description of 23 species, with differential diagnoses, morphological notes and data on distribution. Four species are new to science, including *A. strandi* n. sp., native to Troms and Finnmark; at least four others are recorded "throughout the whole of Fenno-Scandia." ***Copy seen:*** DLC.

55233. SUNIK, OREST PETROVICH. K tipologicheskoĭ kharakteristike ɯzykov tunguso-man'chzhurskoĭ gruppy. (Voprosy ɯzykoznaniĭa, Nov.–Dec. 1957. god 6, p. 3–14.) 14 refs. Text in Russian. ***Title tr.:*** Typological characteristics of the Tungus-Manchu language group.

Discusses the morphology, word formation, modification and repetition, stress, intonation and use of suffixes in the agglutinative languages of the Tungus group: Eveny (Lamuts), Evenki, Golds, etc. ***Copy seen:*** DLC.

55234. SUNIK, OREST PETROVICH. O ɯzyke zarubezhnykh nanaĭtsev. (Akademiĭa nauk SSSR. Institut ɯzykoznaniĭa. Doklady i soobshcheniĭa, 1958. no. 11, p. 168–84, tables.) 16 refs. Text in Russian. ***Title tr.:*** The language of the Golds living abroad.

Discusses the phonetic and morphologic peculiarities in the dialect spoken by Golds living in northeastern China, along the right bank of the Amur River. Only small linguistic differences are observed. ***Copy seen:*** DLC.

55235. SUNIK, OREST PETROVICH O morfologicheskom sostave slova v agglɥtinativnykh ɯzykakh. (Akademiĭa nauk SSSR. Izvestiĭa, Otdelenie literatury i ɯzyka, July–Aug. 1958. t. 17, vyp. 4, p. 331–42.) 21 refs. Text in Russian. ***Title tr.:*** The morphological composition of the word in agglutinative languages.

Discusses word structure, morphemes, suffixes, inflections, etc., mainly of the Tungus language group and challenges the opinion, prevalent among Soviet linguists, that words in agglutinative

languages cannot be divided into roots and endings. ***Copy seen:*** DLC.

55236. SUNIK, OREST PETROVICH. Soveshchanie po iazykam narodov Severa. (Voprosy iazykoznaniia, Mar.–Apr. 1953, no. 2, p. 132–42.) Ref. Text in Russian. ***Title tr.:*** Conference on the languages of the peoples of the North.

Summarizes nine papers on the development, teaching and orthography of the literary dialects of Ural-Altaic and Paleosiberian languages. They were read (as listed below, with titles translated) at plenary sessions of the Institute of Linguistics (Institut iazykoznaniia) of the Academy of Sciences, U.S.S.R., and other educational institutions' conference Dec. 8–13, 1952, at Leningrad (cf. No. 27677), and published as *Soveshchanie po iazykam narodov Severa. Tezisy dokladov,* Moskva-Leningrad, 1952 (copy not seen). Four of the papers (*) were combined and enlarged later by Avrorin, q.v.

Barkhudov, S. G. Present state and problems of the scientific and practical work done in the field of languages of the peoples of the North. *Criticizes* the approach to linguistics based on erroneous theories of N. IA. Marr and discusses development of new, literary languages of the North in relation to spoken dialects.

Tereshchenko, N. M. Russian as an influence for progress in languages of the peoples of the North. *Supports* use of Russian loanwords for terms without vernacular equivalent, but opposes indiscriminate russification of the newly developed literary languages.

Boltsova, A. F. Problems in study of the mother tongue and Russian in schools of the peoples of the North. *Discusses* difficulties confronting native children in the third grade, where Russian supersedes the vernacular as the language of instruction.

*Avronin, V. A. Literary languages of the peoples of the North and local dialects.

*Konstantinova, O. A. The dialect foundation of the Evenki (Tungus) language.

*Novikova, K. A. The dialect foundation of the Eveny (Lamut) literary language.

*Tereshkin, N. I. Present problems in the development of the Voguls' literary language.

Skorik, P. IA. Problems of orthography in the languages of the peoples of the North. *Advocates* introduction of new phonetic signs to express sounds not represented in the Cyrillic alphabet; suggests adapting the orthography of Russian loanwords to the phonetic and morphological laws of the vernacular.

Almazova, A. V. The present state and future plans for publication of text books for the schools of the peoples of the North. *Criticizes* the paucity of Russian and vernacular primers, readers and textbooks due to deficient translators and writers, lack of dictionaries and grammars, poor development of the literary vernacular, etc.; existing textbooks should be completely revised and new ones published.

Appended (p. 139–42) is a synopsis of Conference discussion of these papers, excerpts from its resolutions on the development of new written languages, choice of dialects for developing the literary ones, enlargement of the school net and enforcement of general education, etc. ***Copy seen:*** DLC.

SUNNANÅ, KLAUS, *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

SUOMALAINEN, PAAVO, *see* Sarajas, H. S. S., *and others.* Stress in hypothermia. *1958.* No. 54550.

55237. SUROVTSEV, A. Ne vse rezervy ischerpany. (*In:* Na promyslakh v Barentsovom more, 1956. p. 105–111, illus.) Text in Russian. ***Title tr.:*** Not all reserves are exhausted.

Discussion of speed-up in lowering and hoisting the trawl and in cutting up, gutting and rinsing the fish. The condition of working tools, the problem of standing during work, etc. are also considered. ***Copy seen:*** DLC.

55238. SUSHKINA, NADEZHDA NIKOLAEVNA. Dva leta v Arktike. Moskva, Izd-vo Akademii nauk SSSR, 1957. 176 p. illus., ports. 2 fold. maps. (Akademiia nauk SSSR. Nauchno-populiarnaia seriia.) 45 refs. Text in Russian. ***Title tr.:*** Two summers in the Arctic.

Accounts of a trip to Novaya Zemlya in 1954 (p. 5–108) and to Franz Joseph Land in 1955 (p. 109–172). On June 25, 1954, the author left Moscow and flew via Arkhangel'sk, Nar'yan-Mar and Amderma to Belush'ye (71°32′ N. 52°18′ E.) the administrative center of Novaya

Zemlya at Belush'ya Bay. Thence she traveled by ship (latterly the *Rzhev*) up the west coast, visited Malyye Karmakuly, Gribovaya Bay, Cape Stolbovoy at the entrance to the Matochkin Shar Strait, the settlement of Lagernoye (73°20′ N. 54°21′ E.), Mityushikha, Krestovaya, Mashigina, Glazova and Vil'kitskogo Bays, and Russkaya Gavan'. She rounded the north end of the island, crossed the Kara Sea and after visiting the settlement of Kharasovoy (71°06′ N. 66°45′ E.) on Yamal Peninsula, reached Dikson Island in the middle of August, took the steamship *Kooperatsiia* to return to Arkhangel'sk.

In summer 1955, the author made a trip as a passenger on the "ice-breaker type" cargo steamship *Dezhnev* which sailed across the White and Barents Seas to Franz Joseph Land, entered Cambridge Strait with the aid of the new Soviet ice-breaker *Kapitan Belousov*, unloaded some cargo at Nagurskaya Station (80°46′ N. 46°39′ E.) on Alexandra Land, sailed along the coast of (Prince) George Land and Bell, Mabel and Bruce Islands, passed British Channel, Markham and Pondorff Straits, unloaded the rest of the cargo on Kheysa (Hayes) Island and on Aug. 4, headed back. The visited places on each trip are briefly described with information on inhabitants and their occupations, fauna, and flora, etc. Exploration is reviewed for Novaya Zemlya (p. 7–24) and Franz Joseph Land (p. 130–34); geological history is outlined (p. 99–107, 135–38). Glaciers and their types in both areas are noticed in scattered remarks. Numerous photographs of visited places are reproduced, and a cross section of the steamship *Dezhnev* is given (p. 117).

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55239. SUSOROV, A. I. Maskirovka aėrodromov i material'noĭ chasti zimoĭ. (*In:* U.S.S.R. Armiia. Upravlenie Voenno-vozdushnykh Sil. Sbornik materialov po stroitel'stvu . . . aėrodromov. Moskva, 1942. vyp. 1, p. 61–64, table.) Text in Russian. ***Title tr.:*** Winter camouflage of airfields and supplies.

Excess snow should be removed a considerable distance to wooded lots or to a decoy airfield. The tracks of airplanes and equipment should be obliterated, snow paths elminated, and foot traffic restricted to established routes. Grease spots should be covered promptly. The system of roads and paths should resemble the normal connecting routes between hamlets and villages. A white paint (74% chalk, 0.1% ultramarine, 12.9% water, and 10% ethyl alcohol) is recommended for the upper surfaces of aircraft.—From SIPRE.

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SUTCLIFFE, REGINALD COCKROFT, *see* Polar Atmosphere Symposium . . . 1956 . . . *1958*. No. 54042.

55240. SUTHERLAND, GERALD BONAR, 1919– , *and others*. Cold adapted animals, 2; changes in the circulating plasma proteins and formed elements of rabbit blood under various degrees of cold stress. (Journal of applied physiology, May 1958. v. 12, no. 3, p. 367–72, illus., tables.) 8 refs. *Other authors:* I. L. Trapani *and* D. H. Campbell. In continuation of No. 48266.

A study of rabbits exposed to 4° or −15° C. for periods of 1–10 weeks. Even short exposure changed the electrophoretic distribution of the plasma proteins and the formed elements, suggesting "modification of the entire dynamic pattern of the animals' physiology." The effects of exposure to −15° C. were only slightly greater than at 4° C.

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SUTHERLAND, GERALD BONAR, 1919– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

55241. SUTHERLAND, JAMES. St. Elias Range. (Sierra Club bulletin, Nov. 1958. v. 43, no. 9, p. 70–71.)

Reports expedition by a six-man party, Aug. 1957, to the St. Elias area, along the Canada-Alaska border: unsuccessful attempts on Mts. Craig and Wood, ascents of several other peaks, and trip by raft down the Klutlan River to the Alaska Highway. ***Copy seen:*** DGS.

55242. SUTHERLAND, PATRICK K. Carboniferous stratigraphy and rugose coral faunas of northeastern British Columbia. Ottawa. Queen's Printer, 1958. vi, 177 p., 33 plates, 3 maps (1 fold.). (Canada. Geological Survey. Memoir 295.) Refs. p. 100–108.

Report on geological reconnaissance in northern part of Rocky Mts. and adjacent regions to the east, during five seasons' field work, 1945–49. Brief references to arctic and subarctic localities are included (cf. map, p. 3), e.g., in the regional dis-

cussion (p. 33–36), index to fossil locations (p. 39–40), and correlation chart of Carboniferous and Permian formations.
Copy seen: DGS.

SUTHERLAND, PETER CORMACK, *see* Babington, C. Notice . . . lichens . . . Sutherland . . . *1852*. No. 49465.

SUTHERLAND, VIOLETTE C., *see* Adams, J. E., *and others*. Cerebral metabolic studies of hypothermia . . . human. *1957*. No. 49111.

55243. SUTTLES, WAYNE. Notes on Coast Salish sea-mammal hunting. (Anthropology in British Columbia, 1952, no. 3, p. 10–20.) 20 refs.

Aretic Eskimo features appear in Salish sea-mammal hunting and division of carcass. A link between the Salish, Nootka and Eskimos is suggested.
Copy seen: DSI.

SUTTLES, WAYNE, *see also* Smith, M. W. The cultural development . . . Northwest Coast. *1956*. No. 54997.

55244. SUVOROVA, NINA PETROVNA. Novye trilobity nizhnego kembriia Iakutii. (Akademiia nauk SSSR. Doklady, Oct. 11, 1958. t. 122, no. 5, p. 917–20, illus., plate.) 3 refs. Text in Russian. ***Title tr.:*** New trilobites from the Lower Cambrian of Yakutia. Supplements No. 48277.

Describes seven new species in three new genera: *Botomella* (1), *Elganellus* (4) and *Malykania* (2); the first found in the Aldan series in the transition between Lower and Middle Cambrian deposits in the valley of the Botom, tributary to the Lena, 100 km. above Yakutsk; the others found in the Lena series of the Lower Cambrian. Type, diagnosis, age distribution and locations are given with drawings and photos.
Copy seen: DLC.

55245. SUVOROVA, NINA PETROVNA, *and* **V. V. PETROPAVLOVSKIĬ.** O lenskom iaruse nizhnego kembriia severa Sibirskoĭ platformy. (Akademiia nauk SSSR. Doklady, Mar. 21, 1957. t. 113, no. 3, p. 667–70, text map, fold. table.) 10 refs. Text in Russian. ***Title tr.:*** The Lena stage of the lower Cambrian of the northern part of the Siberian platform.

The Lena stage is divided by earlier investigators into three principal provinces: Sinsko-Botoma, Olekma, and Yudomo-Olenek. The author explored chiefly the last, northern, subdivision, which consists of bituminous shales with two complexes of fossil fauna. In lower deposits are *Lermontovia dzevanovskii* and species of *Pagetina* and *Botsfordia;* the upper deposits include *Lermontovia grandis, L. convexa, Paramicmacca siberica, P. petropavlovskii, Micmacca tumida,* etc. Study of this fauna leads to the conclusion that the lower Cambrian deposits of bituminous shales of the Olenek geological provinces are closely related to bituminous shales of Lena stage of the Sinsko-Botoma subdivision; difference in thickness of the deposits is explained by different conditions of accumulation of such deposits during the Lena era. A comparative scheme of Lena stage deposits and faunas is presented (fold. table).
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55246. SUZDAL'SKAIA, I. P., *and* **M. B. KIRO.** Vliianie temperatury na vozbudimost' myshts bolotnoĭ cherepakhi. (Biulleten' èksperimental'noĭ biologii i meditsiny, May 1957. t. 43, no. 5, p. 28–31, graphs.) 4 refs. Text in Russian. Summary in English. ***Title tr.:*** The effect of temperature on the excitability of the turtle muscle.

Account of investigations on *Emys orbicularis* L., within a temperature range of 5° to 41° C. Cooling enhanced the excitability caused by prolonged stimulation and shortened that produced by brief stimulation. Warming had a reverse effect.
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55247. SUZDAL'SKAIA, I. P. Vliianie temperatury na vozbudimost' myshts liagushki. (Fiziologicheskiĭ zhurnal SSSR, Jan. 1957. t. 43, no. 1, p. 80–87, illus., tables.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** Effect of temperature upon excitability of frog muscle.

Account of experiments with isolated preparations at temperatures of 7° to 25° C. Cooling raised the excitability of the muscle with respect to stimuli of long duration and lowered excitability to short stimuli. Warming had opposite effects. These phenomena were observed both in summer and winter frogs.
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SUZDAL'SKAIA, I. P., *see also* Nasonov, D. N., *and* I. P. Suzdal'skaia. Vliianie temperatury . . . *1956*. No. 53497.

SUZDAL'SKAIA, I. P., *see also* Nasonov, D. N., *and* I. P. Suzdal'skaia. Vliianie temperatury . . . *1956*. No. 53498.

55248. SUZIUMOV, E. Ėkspeditsionnoe sudno "Mikhail Lomonosov" v Atlantike. (Morskoĭ flot, Oct. 1958. god 18, no. 10, p. 20–22, illus.) Text in Russian. ***Title tr.:*** The expeditionary vessel, *Mikhail Lomonosov*, in the Atlantic.

Describes activities of this vessel since its delivery to the Academy of Sciences from a Rostock yard in 1957; it is now conducting oceanographic and hydrobiological investigations in the North Atlantic. The vessel's scientific equipment is indicated. ***Copy seen:*** DLC.

55249. SUZUKI, TATUZI, *and others.* Effect of hypothermia on the secretion of 17-hydroxycorticosteroids of the adrenal glands in non-anesthetized dogs. (Tohoku journal of experimental medicine, 1957. v. 66, no. 2, p. 144.) 3 refs. *Other authors:* K. Yamashita *and* T. Mitamura.

Account of experiments with dogs made hypothermic to 26.3°–32.0° C. by cold immersion. In the chilled group secretion of the hydroxycorticosteroids invariably increased 1.7 to 2.9 fold over the controls. ***Copy seen:*** DNLM.

55250. SVATKOV, N. M. Pochvy ostrova Vrangelîa. (Pochvovedenie, Jan. 1958, no. 1, p. 91–98.) 5 refs. Text in Russian. Summary in English. ***Title tr.:*** The soils of Vrangel Island.

Outline based chiefly on unpublished materials from investigations by Z. I. Îashina. Vrangel Island belongs to the aretic desert area; its vegetation is scanty and sporadic, the terrain partly rocky. The polygonal ground, turf, gley, bog and mountain soils of the island are distinguished and described in turn. The island's soil has many features which derive from the extremely severe conditions of vegetation, the dominant influence of physical over biological processes during soil formation. The soil cover is spotty because of the polygonal microrelief. Its specific features are: disrupted profile, absence of signs of gleying processes, sharp variations of the thickness of soil horizons and interrupted character of their distribution, neutral reaction, etc. The structure of soil horizons changes constantly under influence of freezing and solifluction processes.—From author's summary.

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55251. SVEDMARK, BENGT. Ny fyndort för alm i Åsele Lappmark. (Skogen, *Stockholm*, Apr. 15, 1957. årg. 44, nr. 8, p. 257, illus.) Text in Swedish. ***Title tr.:*** New find of elm in Åsele Lappmark.

Reports wild-growing elm found on the southern slope of Lilla Stalonberget mountain (approx. 64°10′ N. 17°20′ E.). The trees, 150–200 yrs. old, are relicts of elm which grew in the area several thousand years ago. ***Copy seen:*** DA.

55252. SVEDMARK, BENGT. Ny fyndort för alm i Åsele Lappmark (Svensk botanisk tidskrift, 1957. bd. 51, häfte 1, p. 346–50, 3 illus.) Text in Swedish. ***Title tr.:*** New find of elm in Åsele Lappmark.

Contains notes on two stands of elm trees (*Ulmus glabra*) one found by Prof. C. Malmström in 1934 in Skikkisjöberget in Åsele Lappmark, northern Sweden, and the other at Handsktummen in the same region, discovered by the author in 1955. The locality is described and associated plants listed. This elm seems to be a relict species. ***Copy seen:*** DSI.

SVEJGAARD, BJARNER, *see* Andersen, E., *and others.* Geodetic tables . . . *1956*. No. 49285.

55253. *SVENSK SJÖFARTS TIDNING.* För sjöfart i arktiska vatten. (Svensk sjöfarts tidning, 1952. årg. 48, nr. 25, p. 918–19, illus.) Text in Swedish. ***Title tr.:*** For navigation in arctic waters.

Contains a short description of the Danish ship, *Kista Dan*.

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55254. *SVENSK SJÖFARTS TIDNING.* Skandinaviens starkaste isbrytarbogserare. (Svensk sjöfarts tidning, 1954, årg. 50, nr. 9, p. 323, illus.) Text in Swedish and English. ***Title tr.:*** Scandinavia's strongest ice-breaking tug.

Contains a short description of the *Tyr*, a new Swedish tug of 1,400, maximum of 2,100 shp. ***Copy seen:*** DLC.

55255. *SVENSK SJÖFARTS TIDNING.* "Världens modernaste" isbrytare. (Svensk sjöfarts tidning, 1954. årg. 50, nr. 11, p. 408–410, 423, illus.) Text in Swedish. ***Title tr.:*** "The world's most modern" icebreaker.

Describes the Finnish ice-breaker *Voima*, which has shown outstanding qualities in ice-breaking. The ship has a displacement of 4,415 tons and propulsive power of 10,500 hp. It carries oil, fuel and water for one month's operation without resupply. ***Copy seen:*** DLC.

55256. SVENSKA TURISTFÖRENINGEN, *Stockholm.* Kebnekajsefjällen; bestigningsleder och vandringsturer jämte handledning i alpin teknik. Stockholm, 1952. 156 p., illus., plate, 89 diagrs., 5 maps incl. 3 fold. (*Its:* pub. no. 1176) Approx. 75 refs. Text in Swedish. ***Title tr.:*** Kebnekaise Mountain; climbing guides and wander tours with treatment of alpine technique. Prepared by Emmerich Rossipal in cooperation with Gösta Lundqvist.

Tourism in the Kebnekaise region following Charles Rabot's expeditions in the 1880's (No. 47490) is presented in three periods: the first with expeditions at long intervals, then a period of greater activity but little improvement in routes, supplies, etc., and finally the establishment of shelters and supply bases, means of communication and transport, trail marking, and regional mapping. The work of the Swedish Tourist Association and individuals, notable climbs, etc., are cited. Detailed discussion and illustrations are given of effective mountain climbing, supplies and techniques. Ten general trails are described and mapped; nine major climbs are treated in a hundred sections illus. by diagrams. Places (177), persons, and subjects are indexed. ***Copy seen:*** DLC.

55257. SVENSKA TURISTFÖRENINGEN, *Stockholm.* Märkliga toppbestigningar i Lappland. (*Its:* Årsskrift, 1925. p. 332–34, illus.) Text in Swedish. ***Title tr.:*** Notable summit climbs in Lapland.

Six of Sweden's highest peaks were climbed in 1924, four of them probably for the first time. Late winter climbs included Perikpakte and Sarektjåkko in the Sarek region and Kåtotjåkko near Torneträsk. During the summer, Kebnepakte in the Kebnekaise complex was scaled, and in the Sarek massif: Buchtkammen and the north summit of Sarektjåkko. Climbers, routes, conditions, etc. are noted. ***Copy seen:*** DGS.

55258. SVENSKA TURISTFÖRENINGEN, *Stockholm.* Några ord om kompassens missvisning i Sverige. (*Its:* Årsskrift, 1925. p. 338, illus.) Text in Swedish. ***Title tr.:*** Brief note on compass declination in Sweden.

The compass points almost true north at Haparanda near the Arctic Circle, the angle increases to about 8° along the southwest coast. Annual variation from these figures is noted. The importance of knowing local deviations from the general pattern, especially in winter traverses of the upland, is stressed.
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55259. SVENSKA VÄGFÖRENINGEN. Mellanriksväg i Norrbotten. (*Its:* Tidskrift, Mar. 1956. årg. 43, häfte 2, p. 69.) Text in Swedish. ***Title tr.:*** International highway in Norrbotten.

Construction of a highway from Arjeplog commune to the boundary at Graddis, connecting with Norwegian road construction, is under consideration by Swedish government.
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55260. SVENSKA VÄGFÖRENINGEN. Ny snöslunga för Skåne. (*Its:* Tidskrift, Mar. 1944. årg. 31, häfte 2, p. 56–59, illus.) Text in Swedish. ***Title tr.:*** New rotary snow remover for Skåne.

Describes a snow plow for railroads: the rotary blade (nine ft. diam.) powered by a 700 hp. steam engine, rotates at 180 rpm/min. Total weight is 118 tons.
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55261. SVENSSON, HARALD. Fluviatil-glacial dalutveckling. Några synpunkter på uppkomsten av hängande bidalar med exempel från Svalbard. (Svensk geografisk årsbok 1958. årg. 34, p. 176–81, illus., map.) Text in Swedish. ***Title tr.:*** Fluvio-glacial development of valleys; some viewpoints on the origin of hanging subsidiary valleys with examples from Svalbard.

Based on a study of maps and air photographs of Vestspitsbergen. Fluvial erosion in the glacially formed valleys is described. Several factors creating hanging subsidiary valleys are mentioned: active landslide processes developing more quickly in the upper parts of the erosion ravines; the local erosion base being successively raised as erosion material accumulates in the lower parts of the ravines; a natural hanging phenomenon developing from petrographic causes. The development of comparatively small ravines into ice and snow filled cirques is illustrated. A cirque originating from a ravine has a primary difference in level from the bottom of the main valley. The hanging which characterizes the cirque need thus not be exclusively a function of glacial processes in the main valley. ***Copy seen:*** SPRI.

55262. SVENSSON, HARALD. En kartometrisk metod för bestämning av skogsgränsens höjd. (Svenska skogs-

vårdsföreningen. Tidskrift, 1956. årg. 54, nr. 2, p. 205–208, graphs, table.) 3 refs. Text in Swedish. ***Title tr.:*** A cartometric method for determination of tree-line elevation.

Describes a laboratory method which has been used to calculate the upper limit of mountain birch on the Swedish-Norwegian border mountains. At 65° N. lat., a tract 130 km. (east-west) by 20 km. was divided into thirteen 10 x 20 km. rectangles. For each rectangle, a hypsographic curve was drawn from analysis of contour lines on topographic maps, and the area above the tree line, determined by planimetric measurement of the unforested area, was marked on the abscissal axis; the tree line elevation is given by the ordinate from this mark on the abscissa to the curve. On the 13 rectangles so studied, the tree line was found to range from 417 m. near the west coast of Norway to 810 m. at a distance of 110 km. farther east. Reasons for the range are briefly suggested. ***Copy seen:*** DA.

55263. SVENSSON, INGVAR. *Schöyenia glacialis* Lank., en god art; Lep. (Opuscula entomologica, Oct. 1958. bd. 23, häfte 3, p. 241–44, illus.) 4 refs. Text in Swedish. Summary in German. ***Title tr.:*** *Schöyenia glacialis* Lank. is a good species; Lep.

This and a related species, *S. quieta* sometimes considered synonymous, were studied, and on the basis of genitalia investigation, distinguished as independent species. The taxonomic position of *S. glacialis* is discussed. Materials studied came from Torne Lappmark. ***Copy seen:*** DA.

55264. SVENSSON, INGVAR. De senaste tio årens nytillskott av svenska storfjärilar; Lep. (Opuscula entomologica, Oct. 1957. bd. 22, häfte 2–3, p. 143–60, 18 illus., 2 plates.) 41 refs. Text in Swedish. Summary in German. ***Title tr.:*** Additions to Swedish Macrolepidoptera for the last ten years; Lep.

Lists, with notes, 26 species added to the Macrolepidoptera of Sweden since publication of F. Nordström's list (No. 24713). Included are *Schöyenia glacialis* and *Eupithecia fennoscandica* from Torne Lappmark, and *Proutia norvegica* occurring in Norrbotten. ***Copy seen:*** DA.

SVERDLOV, ÎAKOV MIKHAÏLOVICH, 1885–1919, *see* Bychkova, N. V. Pis'ma . . . *1956*. No. 50033.

55265. SVERDRUP, HARALD ULRIK, 1888–1957. Finn Malmgren. (Polarboken 1957, p. 85–90, port.) Text in Norwegian. ***Title tr.:*** Finn Malmgren.

Presents recollections of Malmgren as author's scientific assistant on the *Maud*, and in some lesser known aspects of his personality. ***Copy seen:*** DLC.

55266. SVERDRUP, HARALD ULRIK, 1888–1957. Havlaere. Oslo, Fabritius, 1952. 110 p. illus., maps, diagrs., tables. Text in Norwegian. ***Title tr.:*** Oceanography.

Text book for use in fisheries schools, with an introduction to oceanography in general, and description of water masses and currents affecting fisheries off the Norwegian coast. ***Copy seen:*** DLC.

55267. SVERDRUP, HARALD ULRIK, 1888–1957. The stress of the wind on the ice of the Polar Sea. Oslo, Fabritius & Sønners forlag, 1957. 11 p., tables, diagrs. (Norway, Norsk Polarinstitutt. Skrifter, nr. 111.) ref.

Contains results of investigations by pilot balloon ascents in the area 71°59′–76°43′ N. 170°50′ W.–138°06′ E. in 1922–24 while the *Maud* was drifting in ice north of northeastern Siberia. In only 20 of 375 cases was the wind found to be practically constant through several hundred meters over the layer of frictional resistance. In the assumption that this wind represented the geostrophic wind, the surface stress was computed from the results of these 20 observations (mathematical formulae given). The direction of the stress did not coincide with the wind direction, as expected, but was on average directed 10° to the left of the wind. This discrepancy is considered of little significance because of the uncertainty of the data: the results are not conclusive. ***Copy seen:*** DLC.

55268. SVERDRUP, HARALD ULRIK, 1888–1957. Tätigkeit des Norwegischen Polarinstituts. (Petermanns geographische Mitteilungen, 1957. Jahrg. 101, Heft 2, p. 114.) Text in German. ***Title tr.:*** The activity of the Norsk Polarinstitutt.

Current geological, oceanographic investigations and mapping of Svalbard, permanent observations of the glacier Finsterwalderbreen (Vestspitsbergen) and biennial expeditions to Svalbard are noted. IGY work and activities in the Antarctic are mentioned. Efforts are noted to establish new radio stations on Kap Linné

and Bjørnøya and to have the University of Bergen start seismic measurements in the Arctic. ***Copy seen:*** DLC.

SVERDRUP, HARALD ULRIK, 1888–1957, *see also* Polar Atmosphere Symposium . . . 1956 . . . *1958.* No. 54042.

55269. SVERIGES SKOGSVÅRDSSTYRELSER. Våra skogar under ett halvsekel; några drag ur deras skötsel; minneskrift utgiven av Sveriges skogsvårdsstyrelser med anledning av deras femtiårsjubileum år 1955. 2. uppl. Uppsala, 1955. 153 p. illus., tables, charts. Text in Swedish. ***Title tr.:*** Our forests during half a century; some features of forest management; commemorative publication by the Swedish Forestry Board on the occasion of their 50th anniversary. 2d. ed.

Presents papers by experts on various phases of forestry developments in Sweden: the growing demand for wood; forestry education and training; research; forest cultivation and reforestation; drainage; seed production based on biological factors and provenance; transportation; laws and local regulations. Special consideration is given to Norrland: the gradual change from exploitation to productive forestry methods; the replacement of virgin forests with new plantings; regeneration problems; reforestation of marshland and lappmarks; and how to cope with the problem of birch.

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55270. SVESHNIKOV, V. A. Novye dliâ Belogo moriâ vidy polikhet. (Zoologicheskiĭ zhurnal, Jan. 1958. t. 37, vyp. 1, p. 20–26, illus.) 21 refs. Text in Russian. Summary in English. ***Title tr.:*** Polychaete species new for the White Sea.

Description of nine forms new for the area, collected in 1955 and 1956 in the Kandalaksha Bay. Both benthonic and pelagic worms are included. Earlier records and data on distribution are supplied. ***Copy seen:*** DLC.

55271. SVETOVIDOV, ANATOLIĬ NIKOLAEVICH, 1903– . The Atlantic origin of some groups of fishes. (*In:* International Congress of Zoology, 14th, Copenhagen, 1953. Proceedings, 1956, p. 118–24.) 40 refs.

Comparison of the northern parts of the Pacific discloses great similarity with the fauna of northern parts of the Atlantic, but the former is richer in species, genera and even families. The Pacific Gadidae show characteristics of North Atlantic or even Arctic origin, evident in their recent distribution, ecology, location of fossil remains and their age. The distribution of the Clupeidae differs essentially from that of the Gadidae: commoner in warmer waters and fewer in number (about 20 species) they are distributed in boreal subregions. In comparing the number of clupeoid species occurring in the North Atlantic and Pacific however, a predominance of the Atlantic forms over the Pacific is observed, as in the Gadidae. Both families could have migrated into the Pacific during the Pliocene and in the Bering Strait region during the marine postglacial transgression, when the climate was warmer than the present one.

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55272. SVÎATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. Istoriîa novelshego vulkanizma i obrazovaniîa rel'efa v raĭone vulkana Bakenin. (Akademiîa nauk SSSR. Laboratoriîa vulkanologii, Trudy, 1956. vyp. 12, O vulkanizme, geologii i gidrotermakh Kamchatki, p. 53–109, illus., maps.) 28 refs. Text in Russian. ***Title tr.:*** History of the recent volcanism and of formation of relief of the Bakenin Volcano area.

The extinct Bakenin Volcano (called also Mt. Bakening, 2273 m. above the sea level, 53°55′ N. 158°10′ E.) is located on the watershed of the upper reaches of the three main rivers, Kamchatka, Avacha and Bystraya, of Kamchatka Peninsula. The geographic position, geomorphology, stratigraphy, petrography and tectonics of the volcano and of its parts are described and their connection with the geomorphology of adjacent regions is discussed. Five stages of relief formation are postulated; that preexistent to formation of the most ancient andesite-pyroclastic stratum; relief after the eruptions which formed this stratum; relief of caldera during basaltic effusions; relief influenced by ancient glaciation; present-day relief; the formation changes and interaction of these stages are discussed (p. 99–106). ***Copy seen:*** DLC.

55273. SVÎATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. IÛzhno-Bystrinskiĭ khrebet na Kamchatke. (Akademiîa nauk SSSR. Laboratoriîa vulkanologii, Trudy, 1956. vyp. 12, O vulkanizme, geologii i gidrotermakh Kamchatki, p. 110–90, illus., tables, maps.) 29 refs. Text in Russian. ***Title tr.:*** The

Yuzhno-Bystrinskiy Range on Kamchatka.

Monographic study of the structure of the region roughly 52°20′–53°20′ N. and from 157° E. eastward to the coast in southeast Kamchatka, based chiefly on the author's investigations in 1947–48 and 1952–53. The region comprises Yuzhno-Bystrinskiy Range proper, the southeast end of Vostochnyy Khrebet, approx. 52°45′ N. 158° E., and adjoining areas of the Avachinskiy-Koryakskiy volcanoes group in the north, the lava plateau in the west, and Mutnovskiy and Gorelyy volcanoes in the south. The orography, geology, recent volcanic activity, petrography, tectonics, geomorphology, and glacial deposits are treated in turn. For the Yuzhno-Bystrinskiy Range and some of its environs, the Avacha and other river valleys, Nachiki Lake depression, etc., the geological history is outlined in relation to volcanism.

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55274. SVÎATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. O geneticheskoĭ klassifikat͡sii vulkanov Kamchatki. (Akademiîa nauk SSSR. Vulkanologicheskaîa stant͡siîa. Biûlleten', 1958. no. 27, p. 60–65.) 10 refs. Text in Russian. ***Title tr.:*** Genetic classification of Kamchatka volcanoes.

Principles of volcano classification are discussed; a division of the main active and extinct Kamchatka volcanoes into 13 structural types is proposed and a tentative determination of the age of their formation is outlined.

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55275. SVÎATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. O gidrogeologicheskom raĭonirovanii termal'nykh podzemnykh vod Kamchatki. (Akademiîa nauk SSSR. Doklady, Mar.–Apr. 1957. god 25, t. 113, no. 1, p. 175–78, diagr. map.) 3 refs. Text in Russian. ***Title tr.:*** Hydrogeological zoning of the thermal ground water of Kamchatka.

Formation of large artesian basins of hot water on platforms between mountains is discussed for the Kamchatka region by analogy with Caucasian and Ferganian synclines. The similar geological formation of Kamchatka Peninsula suggests the possibility of hot-water accumulation at 1,500–2,000 m. depth. Systematic changes in formation of the artesian basin of hot and superheated water in the volcanic region is illustrated. The largest such basins are considered in four of the tectonic subdivisions of Kamchatka in turn: the central depression, western lowland, eastern volcanic zone (Pacific coast), and southern volcanic zone. Deep drilling is expected to disclose information on the hydro-geology and the possibility of oil and gas concentrations. ***Copy seen:*** DLC.

55276. SVÎATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. Probuzhdenie Bezymîannogo. (Vokrug sveta, May 1958, no. 5, p. 40–41, illus., map.) Text in Russian. ***Title tr.:*** The awakening of Bezymyannyy Volcano.

Brief account of the great eruption of this dormant volcano. Its first stage, preceded by seismic tremors, began on Oct. 22, 1955, with the ejection of gas, small stones and ashes; at the end of March 1956, a pillar of burning vapors appeared and the explosion was followed by a mushroom of large dark cloud. A group of the Soviet volcanologists, headed by the chief of the Kamchatka Volcanological Station at Klyuchi, made a trip to the volcano. The former cone was almost totally destroyed; a new crater, 1.5–2 km. wide, was formed. The volcano's activity subsided only late in the fall of 1956. This eruption is regarded as one of the biggest in Kamchatka and similar to the Katmai eruption in Alaska in 1912.

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SVIDERSKIĬ, S. I., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Za sovetskuû vlast' . . . *1957*. No. 49170.

55277. SVIHLA, ARTHUR. Subfreezing body temperatures in dormant ground squirrels. (Journal of mammalogy, May 1958. v. 39, no. 2, p. 296–98, table.) 15 refs.

Report of observations on temperature of the cheek pouches, in the nest chamber, with controls in an ice-water bath. Some animals did not awake as ambient temperature dropped below freezing; they exhibited pouch temperatures of 32° to 29° F. The latter data were repeatedly checked and found to be accurate. ***Copy seen:*** DLC.

SVINT͡SOV, ÎA K., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Za sovetskuû vlast' . . . *1957*. No. 49170.

55278. SVIRIDENKO, G. Ėskadrennye minonost͡sy v boû. (Voennye znaniîa, July 1957. god 33, no. 7, p. 17–18, illus.)

Text in Russian. ***Title tr.:*** Destroyers in battle.

Outlines features and importance of destroyers. Achievements of the *Gremâshchiĭ* and *Valeriĭ Kuĭbyshev* of the Northern fleet during World War II are noted. ***Copy seen:*** DLC.

55279. SVORAD, D. The influence of lowering the body temperature on postural orientation of the organism. (Experientia, June 1957. v. 13, no. 6, p. 245, table.) Summary in German.

Summary of experiments with rabbits (30) submitted to progressive hypothermia of 25° to 14° C. core temperature. Lowering of body temperature first caused extinction of Magnus' body righting reflexes with the labyrinthine postural reflexes disappearing last. Recovery upon rewarming takes place in a reversed order. ***Copy seen:*** DLC.

55280. SWADESH, MORRIS, 1909– . Lexico-statistic dating of prehistoric ethnic contacts; with special reference to North American Indians and Eskimos. (American Philosophical Society. Proceedings, Aug. 1952. v. 96, no. 4, p. 452–63.) 12 refs.

Discusses the methods and application of glottochronology to establish the time of separation of languages derived from a common ancestral stock, including the Eskaleut and Nadene groups. The concurrence between time depth calculations, establishing the existence of a common Eskimo-Aleut language about 2,900 years ago, and the radiocarbon dating of the earliest settlements on the Aleutian Islands (approx. 3,000 years old) is stressed. An Eskaleut relationship with Ural-Altaic and Indoeuropean, and Nadene ties with Sinotibetan are considered probable. ***Copy seen:*** DLC.

55281. SWADESH, MORRIS, 1909– . Some new glottochronologic dates for Amerindian linguistic groups. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958, p. 671–74, table.) 11 refs.

A progress report based on new test vocabulary lists. Figures on minimum centuries of divergence and quantity of cognates (pairs and percentage) are tabulated for the two most divergent languages of each set, including: the Eskaleut stock (Aleut-Southwest Greenlandic), Eskimoan family (Unaaliq-Southwest Greenlandic) and Athapaskan (Navajo-Chipewyan). ***Copy seen:*** DSI.

SWADESH, MORRIS, 1909– , *see also* Eggan, F. Glottochronology . . . *1958.* No. 50700.

SWAN, HENRY, 1913– , *see* Blair, E., *and others.* A study of the cardiovascular changes . . . *1957.* No. 49765.

SWAN, HENRY, 1913– , *see* Caranna, L. J., *and others.* Effect . . . nutrient solution . . . fibrillation . . . hypothermic dog. *1958.* No. 50126.

SWAN, HENRY, 1913– , *see* Ferguson, A. T., *and others.* The effect of hypothermia . . . hemorrhagic shock. *1958.* No. 50874.

55282. SWANSON, HEIDI EARTLY. The effect of temperature on the potentiation of adrenalin by thyroxine in the albino rat. (Endocrinology, 1957. v. 60, no. 2, p. 205–213, illus., table.) 28 refs.

Account of O_2-consumption at 30°, 18° and 10° C. in thyroidectomized animals maintained at fixed levels of thyroxine. Rate of metabolism was found to vary inversely as temperature. Intact animals responded to two-five weeks cold exposure by increasing thyroxine secretion from 2 to 5.5 micrograms per day. The main role of thyroxine in cold adaptation is discussed.

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SWANTON, JOHN REED, 1873– , *see* Barbeau, C. M. Medicine-men . . . North Pacific Coast. *1958.* No. 49537.

55283. SWEATMAN, GORDON K. The barn swallow at Cambridge Bay, N.W.T. (Canadian field-naturalist, Sept.–Oct. 1951. v. 65, no. 5, p. 184.)

Note on *Hirundo rustica erythrogaster* collected on June 30, 1950, 600 miles north of its northern range at 69°03′ N. 105°05′ W.; no unusual weather conditions were indicated. ***Copy seen:*** DA.

55284. SWEATMAN, GORDON K. Redescription of *Chorioptes texanus*, a parasitic mite from the ears of reindeer in the Canadian Arctic. (Canadian journal of zoology, Aug. 1958. v. 36, no. 4, p. 525–28, illus., table.) 6 refs.

This parasite first collected and described from goats in Texas is redescribed in detail and with differential diagnosis from ears of semidomesticated reindeer. Incidence was high but the mites were virtually non-pathogenic.

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55285. SWEDEN. METEOROLOGISKA OCH HYDROLOGISKA INSTITUTET. Årsbok, part 1; Månadsöversikt över väderlek och vattentillgång. 1945(27)– . Stockholm, 1952—*in progress*. Issued yearly in approx. 100 pages, large 4to., map, tables. Text in Swedish. ***Title tr.:*** The Swedish Meteorological and Hydrological Institute. Yearbook, pt. 1: Monthly survey of weather and water supply. no. 27, 1945– . A continuation of Statens meteorologisk-hydrografiska anstalt. Årsbok, part 1, no. 1–26, 1919–1944, pub. Stockholm, 1920–1950.

Contains tables of monthly average and normal values of pressure, temperature, etc., from some 50 stations, including seven from arctic Sweden; also daily averages, max., and min. of temperatures, diurnal precipitation, and flow observations in rivers, ground temperature, water heights, and number of sunlight hours; all the latter observations are made at a limited number of stations, arctic Sweden usually represented by one or two. A monthly review of meteorological observations is included, also brief reports from individual observers on the season's advance. Tables of annual averages are appended.

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55286. SWEET, WALTER C., *and* **A. K. MILLER.** Ordovician cephalopods from Cornwallis and Little Cornwallis Islands, District of Franklin, Northwest Territories. Ottawa. Queen's Printer, 1957. 86 p. 8 plates, 2 maps (1 fold.), tables, diagrs. (Canada. Geological Survey. Bulletin 38.) 62 refs.

Detailed study of cephalopods gathered by R. Thorsteinsson in summers 1950–1953, from three formations on west and southwest Cornwallis and on eastern Little Cornwallis Island. The cephalopod faunas, their occurrence, significance as part of the so-called "Arctic" fauna, and color markings are discussed. A thick, folded and conformable sequence of marine formations of miogeosynclinal origin that ranges in age from Middle Ordovician to Late Silurian or Early Devonian comprises the greatest thickness of exposed bedrock. Small isolated patches of two younger formations rest unconformably on these older rocks. Paleontological evidence is carefully evaluated, and correlations are discussed in some detail. The geomorphology and other physical aspects of the islands are described by Thorsteinsson. A generalized geologic map (1:506,880) shows distribution of formations, fossil locations, etc. ***Copy seen:*** DGS.

55287. SWENSON, GEORGE W., *Jr.* VHF diffraction by mountains of the Alaska Range. (Institute of Radio Engineers. Proceedings. Aug. 1956. v. 44, no. 8, p. 1049–50.) *Also pub. as:* Alaska. University. Geophysical Institute. Contributions, ser. B, no. 14.

Usable television signals were received at Lake Minchumina, Alaska, over a distance of 200 mi. from the transmitters in Anchorage though Mt. McKinley was almost in the line-of-sight path. In order to study variations in the signal strength, ground station and airborne measurements of the 200 mc signal were made during the summer of 1955. Time- and space-variations in the signal strengths can probably be explained by meteorological conditions along the scattering path and/or diffraction by widely-separated mountain peaks. The results appear to substantially support the knife-edge diffraction theory.

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55288. SWENSSON, INGEMAR. Ĭa rasskazhu vam o Kirune. (Vokrug sveta, Oct. 1957, no. 10, p. 11–13, illus.) Text in Russian. Translated from Swedish by T. Tumarkina. ***Title tr.:*** I'll tell you about Kiruna.

Sketch of this mining center, northernmost town of Sweden, founded in 1899, and of its environs. The high quality and great quantity of ore, the railroad connection with the Norwegian port of Narvik and the Swedish port, Luleå, living conditions and shortage of accommodations, etc. are noted. Kiruna ore has approx. 65% iron; production will soon reach 18 million tons a year, and can be maintained at that level for at least 200 years. ***Copy seen:*** DLC.

55289. SWITHINBANK, CHARLES WINTHROP MOLESWORTH, 1926– . An ice atlas of the North American Arctic. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 22–28, 4 text maps, graph, table.) 9 refs.

Describes study being made by Scott Polar Research Institute for the Defence Research Board of Canada, methods of compilation, presentation of data, etc. Variability of ice conditions, danger of assuming reported conditions as repre-

sentative, value of ice-breakers, are stressed. Three main sources of ice information useful to shipping are compared: ice atlas, synoptic ice observations and ice forecasts. ***Copy seen:*** DN–HO.

SWITHINBANK, CHARLES WINTHROP MOLESWORTH, 1926– , *see also* Geological Assoc. of Canada. The glacial map of Canada. *1958.* No. 51142.

55290. SYCHEV, K. A. 366 dneĭ dreĭfa na plavuchem ledi͡anom ostrove. (Problemy Arktiki, sbornik stateĭ, 1958. vyp. 4, p. 108–109.) Text in Russian. Translated into English for the Geophysics Research Directorate, Cambridge Research Center, U.S. Air Force, by the American Meteorological Society. ***Title tr.:*** 366 days of drift on a floating ice island.

Brief account of the work of the drifting station North Pole-6 in 1956–57, is given by the head of its first team. The station was set up on Apr. 15, 1956, at 74°24′ N. 182°50′ E. on an ice island; its drift covered 2,550 km. (300 km. net distance) till Apr. 23, 1957, when this team was relieved. ***Copy seen:*** DLC.

55291. SYCHEV, V. I͡A., *and others.* O stratigrafii mezozoĭskikh otlozheniĭ Zhiganskogo raĭona. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1957. vyp. 6, p. 11–15.) Text in Russian. *Other authors:* B. I. Test, O. V. Cherkesov, and Z. V. Osipova. ***Title tr.:*** On the stratigraphy of Mesozoic deposits of the Zhigansk region.

Reports results of a 1956–57 investigation of a cross-section of Lower, Middle and Upper Jurassic and Lower Cretaceous deposits in the Zhigansk (66°45′ N. 123°20′ E.) region. The strata of these deposits, their stratigraphic division and floral and faunal characteristics are described. ***Copy seen:*** DGS.

55292. SYKES, J. H. M. The Russian nuclear-powered ice-breaker *Lenin.* (Discovery, Dec. 1958. v. 19, no. 12, p. 498–503, illus., diagrs.)

Describes this 16,000-ton vessel, mostly from a paper presented to the Second United Nations International Conference on the Peaceful Uses of Atomic Energy, and other papers given at Geneva, 1955 and 1958, by A. P. Aleksandrov, and others. Some 700 ft. long and over 80 ft. wide, the *Lenin*, launched in Dec. 1957, generates 44,000 hp., attains full speed at 18 knots, and is able to stay at sea without refueling for at least 12 months. General plans of the reactor and steam generator are shown; problems of design, choice of reactor, safety devices, method of operation, and advantages of nuclear propulsion are discussed. The *Lenin* is equipped with three screws, designed to give maximum thrust equal to 330 tons when driving into ice; installed power capacity in terms of hp./t. is 2.75. The highly resistant steel hull, special heeling and trimming systems for navigating through ice floes, and other special features are noted. ***Copy seen:*** DGS.

55293. SYLVÉN, NILS OLOF WALDEMAR, 1880– . Studier öfver vegetationen i Torne Lappmarks björkregion. (Arkiv för botanik, 1904. bd. 3, no. 3, p. 1–28.) Text in Swedish. ***Title tr.:*** Studies of the vegetation of the Torne Lappmark birch region.

Deals with various landscape elements, such as moors, meadows, bogs and marshes, their typical species and associated plants. ***Copy seen:*** DA.

55294. SYME, P. D., *and* **D. M. DAVIES.** Three new Ontario black flies of the genus *Prosimulium*, Diptera, Simuliidae; part I, descriptions, morphological comparisons with related species, and distribution. (Canadian entomologist, Dec. 1958. v. 90, no. 12, p. 697–719, 28 illus.) 28 refs. Contribution from the Dept. of Biology, McMaster Univ.

Cytological studies have shown that the segregate heretofore called *Prosimulium hirtipes* (Fries) in Ontario is really a complex of species, none cytologically identical with *Prosimilium hirtipes* from northern Europe. Full morphological descriptions of three of these species are given. Keys to the adults and larvae are presented. The three new species are compared also with closely related species in North America and Europe. *P. fuscum* n. sp. and *P. mixtum* n. sp. are native to northern Quebec and Labrador. ***Copy seen:*** DSI.

55295. SYROECHKOVSKIĬ, E. E., *and* **E. V. ROGACHEVA.** Novye svedeniI͡a o rasprostranenii nekotorykh ptit͡s v Prieniseĭskoĭ taĭge. (Problemy Severa, 1958. vyp. 2, p. 203–211, map.) 12 refs. Text in Russian. ***Title tr.:*** New information on the distribution of some birds in the Yenisey taiga.

Notes on 18 species of Central and

Western Siberia, based on 1956 field work along the middle and lower Yenisey (from Podkamennaya Tunguska down to Dudinka). Habits and habitats, occurrence, etc. are considered in addition to extent of geographic distribution.

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55296. SYROECHKOVSKIĬ, E. E., *and* **E. V. ROGACHEVA.** V prieniseĭskoĭ Sibiri. (Okhota i okhotnich'e khozîaĭstvo, Apr. 1957. no. 4, p. 23–24, illus.) Text in Russian. ***Title tr.:*** In the Yenisey region of Siberia.

Distribution, habits and hunting of the woodcock, pochard and medium-size curlew are outlined from observations carried out in 1956 in the Yenisey basin from the Podkamennaya Tunguska up to Dudinka, by the zoogeographic team of the West Siberian Expedition of Institute of Geography of Academy of Sciences. These birds were encountered 200–1,000 km. north of their previously recorded northern limit.

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55297. SYROVATSKIĬ, A. Knigi po istorii ÎAkutii. (Sibirskie ogni, Aug. 1958. god 37, no. 8, p. 184–85.) Text in Russian. ***Title tr.:*** Books on the history of Yakutia.

Lists and reviews books published in 1957 in Yakutia on the occasion of its 325-year union with Russia; books deal with Yakut history, culture, literature, etc. ***Copy seen:*** DLC.

SYROVATSKIĬ, A. D., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Revolûtsionnye sobytiîa 1905–1907 . . . *1956*. No. 49167.

55298. SZCZEPANKIEWICZ, STANISŁAW. Kilka obserwacji geomorfologicznych z północnej Norwegii. (Czasopismo geograficzne, 1958. t. 29, zeszyt 2, p. 199–213, illus., text map, cross-sections.) 16 refs. Text in Polish. Summary in French. ***Title tr.:*** Some geomorphological observations from north Norway.

Presents results of observations from Bøntuva north to Nordfjelt along Tromsdal made by the author and others during two trips in 1957 to the Tromsø area. Glacial, marine and fluvial deposits were studied. Previous studies are reviewed; erosion and accumulation processes are outlined. In Tromsdal five surface levels are distinguished, and their origin, composition, and extent are described and mapped. The historical relief development of the entire region and Tromsdal valley is discussed.

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55299. SZEGVÁRI, GYULA, *and others.* Largactil hatása a hő-és energiaforgalomszabályozásra. (Kísérletes orvostudomány, Sept. 1957. v. 9, no. 4, p. 412–16, illus.) 19 refs. Text in Hungarian. Summary in German. *Other authors:* I. Járai *and* G. Mestyán. ***Title tr.:*** The effect of largactil upon temperature and metabolism regulation.

The drug given to rats in doses of 12–20 mg./kg. did not lower chemical thermoregulation. In an environment of 12°–20° C., O_2-consumption is often higher after, than before its administration. Temperature fall is therefore considered as due to failure of physical thermoregulation. ***Copy seen:*** DNLM.

55300. SZEGVÁRI, GYULA, *and others.* Die Wirkung des Chlorpromazins auf die Wärmeregulation und auf den Umsatz. (Acta medica academiae scientiarum hungaricae, 1958. t. 11, fasc. 3, p. 351–57, illus.) 30 refs. Text in German. *Other authors:* I. Járai *and* G. Mestyán. ***Title tr.:*** The effect of chlorpromazine upon thermoregulation and metabolism.

Account of experiments with rats. The drug was not found to affect chemical thermoregulation. When placed in cold environment, metabolism increased in the same degree or even more than in controls. A fall in metabolism was noted only when body temperature decreased below 30° C. ***Copy seen:*** DNLM.

SZEGVÁRI, GYULA, *see also* Donhoffer, S., *and others.* Über die Lokalisation der erhöhten Wärmeproduktion . . . *1957*. No. 50601.

SZEGVÁRI, GYULA, *see also* Donhoffer, S., *and others.* Über die Periodizität der chemischen Wärmeregulation . . . *1957*. No. 50602.

55301. SZEKERES, L., *and others.* The effect of hypothermia and drugs on the high energy phosphate and glycogen content of the rat heart. (Archives internationales de pharmacodynamie et de thérapie, May 1958. v. 115, fasc. 1–2, p. 131–40, tables.) 14 refs. *Other authors:* J. Faller *and* T. Török.

Toxicity of drugs used to eliminate shivering was found to increase by cooling, whereas high energy phosphate levels

and glycogen content of the heart muscle decreased. Hypoxemic cooling alone also depleted the chemical energy stores of the myocardium. Preliminary cooling somewhat reduced the fall of high energy phosphates and glycogen in the heart of hypoxic animals. ***Copy seen:*** DNLM.

55302. SZEKERES, L., *and* G. LÉNÁRD. Über die Reaktion der höheren und tieferen Reizbildungszentren des isolierten Herzens auf Temperatursenkung. (Experientia, Aug. 1958. v. 14, no. 8, p. 300–301, illus., table.) 3 refs. Text in German. Summary in English. ***Title tr.:*** Reaction of higher and lower stimulatory centers of the isolated heart to lowered temperature.

A study of the effects of cold perfusion fluid upon higher and lower automatic centers. The sinoauricular pacemaker responded with a much greater fall in heart rate than did the ventricular automatism. The responsiveness of the atrioventricular node to cooling was intermediate between the two others. ***Copy seen:*** DLC.

55303. SZENTKIRÁLY, E. M. Changes in the nucleotides of the cross-striated muscle after freezing. (Archives of biochemistry and biophysics, Apr. 1957. v. 67, no. 2, p. 298–301, illus., table.) 10 refs.

Freezing and thawing of rabbit psoas muscle caused a rapid splitting of ATP, accompanied by instantaneous deamination. In a few minutes all adenosine is converted into inosine; the final product is IPM. ***Copy seen:*** DNLM.

55304. SZILÁGYI, T., *and others.* Effect of a lethal electric shock during hypothermia. (Nature, *London*, Mar. 29, 1958. v. 181, no. 4613, p. 909, table.) *Other authors:* K. Benkö, *and* H. Czernyánszky.

Report on experiments with hypothermic mice submitted to d.c. of 220 v. or a.c. of 10–220 v. The results indicate that hypothermia has a protective action against the injurious effects of the electric current. ***Copy seen:*** DLC.

55305. SZILÁGYI, T., *and others.* Untersuchung elektrischer Stromstösse in Hypothermie während Largactil bzw. Luminal Behandlung. (Acta physiologica, *Budapest*, 1958. t. 14, fasc. 1, p. 89–93, tables.) Text in German. *Other authors:* K. Benkö *and* H. Csernyánszky. ***Title tr.:*** Study of electric shock in hypothermia through Largactil or Luminal.

Account of experiments with hypothermic mice, administered electric shocks of up to 220 v. The chilled animals proved much more resistant to lethal doses than controls, due to their lowered conductivity. The lowering of the latter is caused by reduced ionic motility in the cooled body. Protection was less for alternating currents.

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55306. TÅNING, Å. VEDEL, 1890–1958. Experiments on the meristic and other characters in fishes, 1; on the influence of temperature on some meristic characters in sea-trout and the fixation period of these characters. København, 1944. 66 p., illus., tables, map. (Denmark. Kommissionen for Danmarks fiskeri- og havundersøgelser. Meddelelser, bd. 11, no. 3.) 67 refs.

Account of experiments in rearing these fish at various temperatures. The highest number of vertebrae was produced by the lowest and highest temperatures; intermediate temperatures produced the lowest number. The embryo was not susceptible to such changes when more than 150 D°old. Rays of different fins were not equally affected by temperature nor was their fixation time the same. The bearing of the present findings on the problem of "races" of commercial fish is analyzed and discussed.

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55307. TÅNING, Å. VEDEL, 1890–1958. Nekrolog: Professor, Dr. Phil. Harald Ulrik Sverdrup 15. november 1888–21. august 1957. (Grønland, Jan. 1958, nr. 1, p. 36–38, port.) Text in Danish. ***Title tr.:*** Obituary: Professor Harald Ulrik Sverdrup, Ph. D., November 15, 1888–August 21, 1957.

Contains notes on Sverdrup's life, work, and publications.

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55308. TÅNING, Å. VEDEL, 1890–1958. On the eggs and young stages of the halibut. København, 1936. 23 p., illus., tables, maps. (Denmark. Kommissionen for Danmarks fiskeri- og havundersøgelser. Meddelelser, bd. 10, no. 4.) 27 refs.

Description of halibut eggs for the first time collected in the sea (between Iceland and the Faeroes, at 200–700 m. depth) and of pelagic post-larval and smallest bottom stages. Distribution of the fry, including Greenland waters as well as spawning season (Mar.–May) are discussed. Occurrence of post-larval

stages of the Greenland halibut is also noted and mapped. ***Copy seen:*** DLC.

55309. TÅNING, Å. VEDEL, 1890–1958, *and others.* Records from the month of June of the Norwegian-Icelandic herring stock in the open ocean. (International Council for the Study of the Sea. Annales biologiques, 1955, *pub.* 1957. v. 12, p. 165–67, maps.) *Other authors:* H. Einarsson *and* J. Eggvin.

The records cover the area between Norway, Iceland and Svalbard, for June 1954 and 1955. Temperature distribution, and location of shoals are charted. The character of the shoals (scattered, dense, etc.) is also indicated and the development of the whole research project traced. ***Copy seen:*** DI.

55310. TABATA, TADASHI. On the formation and growth of sea ice especially on the Okhotsk Sea. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 169–80, 2 text maps, 13 graphs, diagr., 4 tables.) 14 refs. Contribution no. 389 from Institute of Low Temperature Science, Sapporo, Japan.

"Investigations conducted and forecast techniques developed are summarized. Ice thickness and the date of the beginning of ice formation in the central and northern parts of the sea are determined theoretically, assuming that ice formation begins when the temperature in the convection layer of the sea is cooled to the f.p. The relation between air temperature and maximum ice thickness is obtained using Fourier's heat-transfer equation, and the distribution of maximum ice thickness is then calculated. The coefficient of ice accretion is determined theoretically taking into account ice formation not only at the boundary surface but in the middle layer. Data are graphed on the critical depth of ice formation, cooling curve, calculated date of ice formation and ice thickness in the Okhotsk Sea, and the dependence of ice accretion on air temperature and the salinity of water and ice."—SIPRE. ***Copy seen:*** DN-HO.

55311. TABATA, TADASHI. Studies on the visco-elastic properties of sea ice. (Teion kagaku, 1956. ser. A, no. 15, p. 101–115, illus. tables.) 8 refs. Text in Japanese. Summary in English.

A rectangular ice bar was subjected to static load of 16.8 kg., and a cylinder of ice to compressive stresses of 2.7–3.8 kg./sq. cm., for periods of two–nine hrs., and their viscous and elastic constants determined from strain-time curves. Both the elastic and viscous constants were larger when stress was applied normal to the ice surface than when applied parallel to it. The constants were also larger in bending than in compressive tests, probably due to differences in temperature and salinity of the ice and the type of stress. ***Copy seen:*** DWB.

55312. TABATA, TADASHI. Studies on visco-elastic properties of sea ice. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 139–47, illus., 3 tables, 3 diagrs., 6 graphs.) 18 refs. Contribution no. 390, Institute of Low Temperature Science, Sapporo, Japan.

The visco-elastic properties of sea ice were determined from strain-time curves obtained from compression of a floating rectangle of ice severed on three sides from the ice cover and loaded at the free end or center. The viscosity was higher when stress was applied parallel to the ice surface than when applied normal to it. The elastic constant exhibited a tendency to increase with decreasing temperature.—From SIPRE. ***Copy seen:*** DN–HO.

55313. TABER, RICHARD D. Eskimo hunters: whales; the bird shooters; big game on the Chukchi. (Pacific discovery, May–Oct. 1958. v. 11, no. 3, p. 18–21, no. 4, p. 7–10, no. 5, p. 10–13, illus.).

Presents a series about hunters at Wainwright, Alaska (70°39′ N. 159° 50′ W.) on the Chukchi Sea coast, 200 mi. southwest of Point Barrow. Hunting of whales, eider ducks, ptarmigan, black brants, seals, walrus, caribou, foxes and polar bears is described. The author's main interest was in finding the extent and importance of hunting in the culture and economy of the Alaskan Eskimo in 1956. He found it still a strong factor in both: for prestige as well as sustenance. ***Copy seen:*** DLC.

55314. TABER, STEPHEN, 1882– . Complex origin of silts in the vicinity of Fairbanks, Alaska. (Geological Society of America. Bulletin, Jan. 1958. v. 69, no. 1, p. 131–36, map, table.) 6 refs.

Elaborates on theory of complex origin of silts (cf. No. 32357). The relative importance of glaciation and frost action in their origin is considered, and whether they were deposited in their present location chiefly by water or by wind. Samples are described: mineral and

chemical composition, texture, structure, etc. Age of the older silts is pre-Wisconsin, possibly early Pleistocene. A tentative origin during the Yarmouth interglacial stage is indicated for the younger ones. These Alaskan silts are compared with Mississippi Valley loess. It is concluded that most of the silt has been formed from Birch Creek schist by frost disintegration; and the thick valley silts, forming the bulk of the deposits, have reached their present location by water. ***Copy seen:*** DGS.

TABER, STEPHEN, 1882– , *see also* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958*. No. 50694.

TACK, SAMUEL, *Jr., see* Abramson, D. I., *and others.* Relationship . . . tissue temperature and oxygen uptake . . . resting. *1958*. No. 49107.

55315. TAILLEFER, FRANÇOIS. Le Labrador, nouveau Mesabi. (L'information géographique, Sept.–Oct. 1957. année 21, no. 4, p. 148–53, text map, table.) Text in French. ***Title tr.:*** Labrador, the new Mesabi.

Describes the iron resources of Labrador, their exploitation and future possibilities. Important features of the industry are noted; the Knob Lake mines, difficulties of climate, extraction, transportation, importance of aircraft in reconnaissance, and promise of deposits as yet unworked. At present, all the ore is exported to the United States or to the Ruhr. ***Copy seen:*** DGS.

TAILLEFER, FRANÇOIS, *see also* Journaux, A., *and* F. Taillefer. Les mines de fer de Schefferville. *1957*. No. 52111.

TAILLEFER, FRANÇOIS, *see also* Journaux, A., *and* F. Taillefer. Les villes minières . . . *1957*. No. 52112.

55316. TAILLEUR, I. L., *and others.* Unusual upper Paleozoic rock sequence in northern Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1746.) *Other authors:* E. G. Sable and J. T. Dutro, Jr.

Contains abstract of a paper presented at the Society meeting in Golden, Colorado, May 8–10, 1958. Discusses sequence found in rocks of Nuka Ridge (approx. 69° N. 159°–160° W.) near Colville River headwaters, and other small outcrops in the west-central part of the southern arctic foothills.

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55317. TAIT, ALBERT J. The operational concept for a sea ice reconnaissance and forecasting program conducted during arctic operations. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 265–66.)

Reviews Military Sea Transport Service annual North American Aretic sealift from 1950, development of its ice reconnaissance program, types of aircraft, typical flights, current methods, training of observers, recording and transmittal of data to the Hydrographic Office, which issues 30-day, 5-day and 48-hr. forecasts to MSTS vessels.

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55318. TAIT, G. M. American-ringed turnstone recovered in Portugal. (Ibis, Jan. 1, 1957. v. 99, no. 1, p. 122–23.)

Contains a record of recovery of a bird bearing U.S. Fish and Wildlife Service ring at Fâo, 41°30′ N. 08°50′ W., i.e., north of Oporto, on Sept. 11, 1955. This was a specimen of the European form of turnstone, *Arenaria i. interpres*, ringed by D. Parmalee on Ellesmere Island (approx. 80° N. 86° W.) on July 6, 1955; it also breeds in Alaska where it overlaps *A. interpres morinella.* Statement by R. Spencer is added that only 124 turnstones have been ringed to date in England, of which one was recovered in northwest Greenland (72°15′ N. 56° W.) and one on Ellesmere.

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55319. TAKEHARA, ICHIRO. Effect of temperature on glycolysis of rabbit blood. (Teion kagaku, 1958. v. 16, ser. B. p. 77–82, illus. tables.) 6 refs. Text in Japanese. Summary in English.

Report on activation energies of the glycolytic enzymes and changes in enzyme activities at temperatures of 40° to −5° C. The reactions discussed offer an interpretation concerning the rapid fall of pyruvate in blood stored at −5° C., but no explanation on the enhancement of glycolytic activity in seven-day-old blood, preserved at the same temperature. ***Copy seen:*** DLC.

55320. TALALAEV, EVGENIÏ VASIL'EVICH. Septiſsemiîa guseniſs sibirskogo shelkopriîada. (Mikrobiologiîa, Jan.–**Feb.** 1956. t. 25, vyp. 1, p. 99–102.) **10 refs.** Text in Russian. Summary in English, appendix p. 7. ***Title tr.:*** Septicemia of caterpillars of the Siberian egger.

Description of morphological, physiological and culture properties of a new

species of Grampositive bacteria, viz. *Bacillus dendrolimus* n. sp., and of the disease caused by it to larval *Dendrolimus sibiricus*. *D.s.*, an egger, is a serious pest in Siberian (including arctic) coniferous forests. ***Copy seen:*** DLC.

55321. TALMUD, IZRAIL' L'VOVICH, 1902– . Alûminiĭ iz nefelina. (Nauka i zhizn', Apr. 1957. god 24, no. 4, p. 14–16, illus., col. plate.) Text in Russian. ***Title tr.:*** Aluminum from nepheline.

With a scarcity of bauxite in the U.S.S.R., recovery of aluminum oxide from nepheline, which occurs in great quantity in the Kola Peninsula, was worked out by the Volkhov Aluminum Plant. The processing of the nepheline is described in detail and compared with that of bauxite. Bauxite usually contains about 45–56 percent Al_2O_3, nepheline only about 30 percent. In producing one ton of Al_2O_3 from bauxite, there are about 2–2½ tons of scrap. With the new nepheline process for each ton of Al_2O_3, there are 0.9 ton of sodium and potassium carbonites plus 9 tons of portland cement, essential to the Soviet construction program. Moreover, a certain amount of the rare metal gallium required in industry (semi-conductors) is also separated in this process.

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TAL'VIK, K. I., *see* Davidovich, S. M. Traktory i avtomobili . . . *1957*. No. 50448.

55322. TAMANTSEVA, L. S., *and* **T. P. SHEVAREVA.** K biologii shilokhvosti i kriâkvy; materialy kol'tsevaniâ. (*In:* Pribaltiĭskaĭa ornitologicheskaĭa konferentsiĭa, 1954. Trudy, *pub.* 1957, p. 27–54, illus., table, maps.) 5 refs. Text in Russian. ***Title tr.:*** The biology of the pintail duck and the mallard; banding materials.

A study of month-to-month distribution and migration of these birds over the eastern hemisphere. The material is based on returns of ducks banded since 1927 at the Astrakhan Reservation in the Volga delta. Both species spend the winter around the Mediterranean and east of it; the summer was found to be spent in the moderate and arctic regions of Eurasia. The dominant biological activity, such as nesting, brooding, etc., around the year is also described.

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55323. TAMBOVTSEV, B. M. Biologicheskie obosnovaniâ promysla Belomorskoĭ sel'di. (Murmansk. Poliârnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziâstva i okeanografii. Trudy, 1956. vyp. 9, p. 234–42, illus. tables.) 18 refs. Text in Russian. ***Title tr.:*** The biological basis of the White Sea herring fisheries.

The small White Sea herring with a low number of vertebrae was found to occupy a relatively small area and to possess a short life span coupled with low fertility. These characteristics indicate a low reserve and special protective methods in addition to the prohibition of fishing during the spawning season.

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55324. TAMBOVTSEV, B. M. Biologiâ i sovremennoe sostoâ̂nie promysla belomorskikh sel'deĭ. (Akademiâ nauk SSSR. Karel'skiĭ filial *Petrozavodsk*. Materialy po kompleksnomu izucheniû Belogo moriâ, 1957. vyp. 1, p. 44–73, illus., maps, tables.) 18 refs. Text in Russian. ***Title tr.:*** The biology and present condition of the White Sea herring fishery.

A study of the stock, rehabilitation and rational utilization of these fish, based on materials assembled during 1934–1952. The present condition of the industry in various localities is outlined. Racial composition, growth and size, reproduction, spawning grounds, development of the stock, qualitative and quantitative changes in it, and their causes are considered. Efficient organization of the industry, prospects for its development, protective measures, etc. are discussed. ***Copy seen:*** DLC.

55325. TAMBOVTSEV, B. M. Malopozvonkovye sel'di Barentsova i Belogo moreĭ. (Akademiâ nauk SSSR. Murmanskaĭa biologicheskaĭa stantsiâ. Trudy, 1957. t. 3, p. 169–74, tables.) 14 refs. Text in Russian. ***Title tr.:*** Herring with low numbers of vertebrae from the Barents and White Sea.

Information on these races, which form the basis of herring fisheries of Murmansk and Arkhangel'sk provinces, includes distribution, taxonomy, local races and their area of habitation, growth rate, size composition and age composition of catches, etc., fishing areas and periods. ***Copy seen:*** DLC.

55326. TAMBS-LYCHE, HELENE. Aphids on potato foliage in Norway,

II; investigations of potato fields in North Norway. (Norsk entomologisk tidsskrift, 1957. bd. 10, hefte 2–3, p. 73–90, 3 illus., table.) 15 refs. Sequel to No. 26597.

Seven of these aphids are widely distributed in Nordland and Troms (tabulated data for 44 localities). Descriptive notes are given and 13 less important species also considered briefly.

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55327. TAMM, OLOF, 1891– . Markstudier i det nordsvenska barrskogsområdet. Stockholm, Centraltrykeriet, 1920. 300 p., 18 illus., 4 plates, 2 text maps, 2 diagrs., 26 tables. (Sweden. Statens skogsförsöksanstalt. Meddelanden, häfte 17, nr. 3.) Text in Swedish. Summary in German. ***Title tr.:*** Soil studies in the north Swedish coniferous forest region.

This coniferous region extends from the northern tip of Sweden over more than six degrees of latitude, limited areally by the western mountains, the Finnish border, the Gulf of Bothnia, and the mid-Swedish lowland. Studies are confined to the forest podsol soils, for which profiles, chemical and physical analyses, and humidity are discussed. Attention is given to relative age of soil profiles and their degree of development, to climate and soil moisture, colloidal matter, and varying thickness of surface humus layer. Relationships between reindeer moss, mosses, and other forest undergrowth and the quality of forest stands are related to soil conditions. Some of the locations studied are in arctic Sweden.

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55328. TAMM, OLOF, 1891– . Om berggrundens inverkan på skogsmarken; med specialstudier inom Värmlands hyperittrakter. Stockholm, Centraltrykeriet, 1921. 164 p., 8 illus., 2 text maps, 5 tables. (Sweden. Statens skogsförsöksanstalt. Meddelanden, häfte 18, nr. 3.) 33 refs. Text in Swedish. Summary in German. ***Title tr.:*** On bedrock influence on forest soils; with special studies on Värmland's hyperite tracts.

Investigations include consideration of the nature of bedrock from which soil materials were derived, the physical and chemical nature of the soil, topography, and drainage. Soil profiles are analyzed, lime content of various types of bedrock is discussed. Leaching of lime and its removal are most important in determining forest stand. Other mineral nutrients are also dealt with. Vegetation species are related to soil character. In arctic Sweden where the soil is of typical forest podsol character, humus and vegetation cover differ from those of the brown soils more typical farther south.

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55329. TAMURA, MICHIO. Notulae novae ad Ranunculaceae Asiae orientalis, 1–2. (Acta phytotaxonomica et geobotanica, *Kyoto*, May 1955. v. 16, no. 4, p. 110–12; Aug. 1958. v. 17, no. 4, p. 114–21, illus.) Text in English. Summary in Japanese. ***Title tr.:*** New notes on East Asian Ranunculaceae, 1–2.

Contains critical notes on ten oriental species and ten varieties of the crowfoot family, among them *Ranunculus acris* var. *subcorymosus* from Kamchatka, *Anemone narcissiflora* var. *villosissima* (Alaska, Aleutian Islands and Kamchatka), and *A. n.* var. *sibirica* stat. nov. from Okhotsk, Kamchatka and Alaska.

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55330. TANCHE, M., *and* J. CHATONNET. Sur l'influence d'un apport calorifique imposé à l'organisme (travail musculaire) sur les réactions thermorégulatrices au froid. (Journal de physiologie, Mar. 1958. t. 50, no. 2, p. 534–37, illus.) 8 refs. Text in French. ***Title tr.:*** Effect of heat producing activity imposed on the organism (by physical work) and its thermoregulatory reactions to cold.

Account of experiments with dog preparations exposed to temperatures of −20° to +30° C. with or without induced muscular activity. An increase in total O_2-uptake was noted in the active animals; this was maximal at thermal neutrality and reduced or abolished at low temperatures. Core temperature was only slightly elevated in animals active at low temperatures.

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TANCHE, M., *see also* Chatonnet, J., *and* M. Tanche. Sur l'origine des réactions thermogénétiques . . . *1957*. No. 50190.

TANCHE, M., *see also* Klepping, J., *and others*. La sécrétion médullosurrénale . . . *1957*. No. 52322.

55331. TANDE, THORVALD. Norsk fiskeripolitikk; en analyse av fiskerinæringens utvikling siden 1920. Oslo, Studieselskapet samfunn og næringsliv, 1957. 493, 75 p., tables. 32 refs. Text

in Norwegian. ***Title tr.:*** Norwegian fisheries policy; an analysis of the fishing industry's development since 1920.

A detailed discussion, supplemented by extensive tabular data, of laws and regulations governing the export and trade on the home market of fish and fish products: sales organizations, price regulations and foreign trade policies, advantages and disadvantages of free vs. regulated trade, also export volumes of klip-fish, salted, dried, and frozen fish, and some ten other products to countries in Europe, America, Africa, and Asia. Introductory chapters deal with the some 22 species of major economic importance: spawning grounds, migration, catch volumes 1920–1954, etc.; the fleet: tonnage, financing, types of vessels, geographic distribution, etc., also refineries and their production volume. A comprehensive statistical report (68 tables) is appended. ***Copy seen:*** DLC.

TANK, WILLIAM G., *see* Reed, R. J., *and* W. G. Tank. Miscellaneous studies of polar vortices. *1956.* No. 54263.

55332. TANTON, THOMAS LESLIE, 1890– . Iron ores in Canada. (*In:* International Geological Congress. 19th, *Algiers,* 1952. t. 1, p. 311–52, map in atlas vol.) Refs.

The nature of iron ores and their occurrence in Canada are briefly summarized. The nature and extent of 31 mapped iron ore locations in Canada are outlined and known or anticipated annual production indicated. Mode of origin, amount of reserves, and various aspects of iron and steel production are considered. Principal properties are listed, including the Labrador and northern Quebec ore bodies; also a few (Natla, Bonnet Plume and Hart Rivers, Cathedral Creek) deposits in the Yukon and Northwest Territories which have undergone only earliest stages of exploration. Low grade deposits include those on the Nastapoka and Belcher Islands in Hudson Bay. The feasibility of using water power for iron production is noted, e.g. in Labrador. ***Copy seen:*** DLC.

TARABUKIN, MIKHAIL PROKOP'EVICH, 1885– , *see* Gogolev, Z. V. Iz istorii Aldanskogo promyshlennogo raĭona . . . *1954.* No. 51246.

55333. TARADANKIN, A. Taezhnaĭa ferma. (Pioner, Dec. 1957. god 34, no. 12, p. 57–59, illus.) Text in Russian. ***Title tr.:*** A farm in the taiga.

A popular account on the first attempts to domesticate the elk at an elk farm established in 1949 at Yaksha (61°50′ N. 56°52′ E.) on the Pechora River, the administrative center of the Pechoro-Ilychskiy game reserve. Only newborn wild elks survive in captivity; their care, feeding, training as draught and pack animals, etc., are described. The high caloric, vitamin and albumin content of elk milk is noted. ***Copy seen:*** DLC.

55334. TARAKHOVSKIĬ, M. L. Gipotermicheskoe deĭstvie novogo ganglioblokiruûshchego veshchestva geksonata. (Éksperimental'naĭa khirurgiĭa, Sept.–Oct. 1958. god 3, no. 5, p. 55–56.) Text in Russian. ***Title tr.:*** Hypothermic effect of the new ganglioplegic preparation hexonate.

Information is presented on chemical nature of this preparation, toxicity to various laboratory animals, hypothermic effect in dogs, rabbits and rats; dosage; course of hypothermia.

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TARASOV, L. S., *see* Vinogradov, A. P., *and others.* Izotopnyĭ sostav svintsa-primesi . . . *1958.* No. 55823.

55335. TARASOV, MIKHAIL PETROVICH, 1899– . Sever nasheĭ rodiny. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 2–3, map.) Text in Russian. ***Title tr.:*** The North of our fatherland.

Brief survey of development of the North during the last 35 years, by the Chairman of Presidium of the Supreme Soviet of R.S.F.S.R.: reclamation of forest, mineral and biological resources, utilization of the Northern Sea Route, northward advance of agriculture, acculturation of the northern peoples, foundation of new industrial centers in the far North. Extension of the Pechora railroad from Vorkuta to the lower Ob' River is noted (cf. map), also gold and tin production in the Kolyma, Indigirka and Yana River basins. ***Copy seen:*** DLC.

55336. TARKOV, V. V bor'be za kachestvo. (*In:* Na promyslakh v Barenſsovom more, 1956, p. 112–19.) Text in Russian. ***Title tr.:*** Striving for quality.

A fish master discusses means of keeping the quality of caught fish high by choosing the proper kind of ice and salt; by proper cutting, washing, salting and cooling; adequate storage of salt, ice and fish, etc. ***Copy seen:*** DLC.

55337. TATARINOV, S. F. Podzolistye pochvy Arkhangel'skoĭ oblasti. (Pochvovedenie, July 1957, no. 7, p. 13–21, tables.) Text in Russian. Summary in English. ***Title tr.:*** Podsolic soils in Arkhangel'sk Province.

Origin, classification and geography of the podsolic soils of Arkhangel'sk Province are discussed. They are formed under coniferous-moss forests in conditions of excessive moisture and low temperature. Surficial podsolization, reduced amounts of calcium and magnesium, considerable amount of hydrogen and aluminum, high acidity and signs of gley processes characterize these soils. ***Copy seen:*** DLC.

55338. TAUBER, K., *and others.* Stoffwechseluntersuchungen an unterkühlten Hunden. (Archiv für klinische Chirurgie, 1957. Bd. 285, Heft 2, p. 183–89, illus. table.) 33 refs. Text in German. *Other authors:* H. Keyssler, R. Enzenbach and R. Parhofer. ***Title tr.:*** Studies of metabolism in hypothermic dogs.

A comparative study of methods of producing hypothermia in dogs. Rectal temperature; respiratory metabolism, volume and frequency; O_2-elimination; O_2-consumption and pulse frequency were utilized. Six methods are evaluated, four of them with "lytic cocktail." ***Copy seen:*** DNLM.

55339. TAVROVSKIĬ, V. A., *and* **I. S. SHITAREV.** Materialy po pitaniiû sobolîa severo-zapadnoĭ ĨAkutii. (Zoologicheskiĭ zhurnal, Apr. 1957. t. 36, vyp. 4, p. 608–616, tables.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** Material on the food habits of sable in northwestern Yakutia.

Based on examination of 227 stomachs of sables killed in the Olenek district Nov. 15, 1950–Mar. 10, 1951, a winter with poor feeding conditions. Plant food amounted to 9.3%; the remainder consisting of mammals, birds, fish, etc. The species (25 in all) making up the diet, and body condition of the sables, are discussed. ***Copy seen:*** DLC.

55340. TAVROVSKIĬ, V. A., *and others.* Pervye itogi reakklimatizat͡siĭ sobolîa v îžnykh i vostochnykh raĭonakh ĨAkutii. (Akademiîa nauk SSSR. ĨAkutskiĭ filial, *Yakutsk.* Institut biologii. Trudy, 1958. vyp. 4, p. 3–49, illus. tables, maps.) 4 refs. Text in Russian. *Other authors:* D. U. Ivanov *and* N. A. Kornilov. ***Title tr.:*** First results of sable reacclimatization in the southern and eastern districts of Yakutia.

Report on activities in reintroduction of this precious fur animal, begun in 1948, and encompassing an area of some 1.4 millions sq. km. The general plans of reestablishing stocks of sable in the different areas are presented: methods of "reacclimatization" and their basis, initial failures (due to small numbers of animals released), large-scale operations and their details in various areas; results: repopulation of considerable areas with sable, etc. Further plans envisage repopulation of northern Yakutia by release of some 2,500 animals; methods to be used, protection and management, etc. are indicated. ***Copy seen:*** DLC.

55341. TAVROVSKIĬ, V. A. Puti uvelicheniîa pushno-promyslovykh resursov v ĨAkutii. (Problemy Severa, 1958. vyp. 1, p. 200–210.) Refs in text. Text in Russian. ***Title tr.:*** Ways of increasing the fur resources of Yakutia.

A review of investigations on: the causes of change in the number of polar foxes (lemming abundance, disease, etc.); reproduction of the stock of squirrels; causes of periodic mass-mortality of hares (diseases) and means of preventing it by keeping their numbers low through hunting; increasing the sable population; fostering fur farming. ***Copy seen:*** DLC.

55342. TAVROVSKIĬ, V. A. Sobol' severo-zapadnoĭ ĨAkutii i puti vosstanovleniîa ego promysla. (Akademiîa nauk SSSR. ĨAkutskiĭ filial, *Yakutsk.* Institut biologii. Trudy, 1958. vyp. 4, p. 50–142, illus. tables, maps.) 55 refs. Text in Russian. ***Title tr.:*** The sable of northwestern Yakutia and ways of rehabilitating its hunting.

A comprehensive study of the problem. The (27) main fur animals (polar fox, squirrel, ermine, etc.), the birds, and products in the area are reviewed, and natural conditions are characterized: relief and climate, flora, birds and mammals, etc. The distribution and numbers of sable are outlined as from the 17th century; conditions at beginning of the 20th century and at present, present stock and its distribution in different areas are discussed (the districts of Olenek and Zhigansk have by far the largest numbers). The taxonomy and morphometry of sable and sable races are treated (p. 96–127) with details on habitat, food at different seasons and areas, quantitative aspects of diet, reproduction, etc.

Finally (p. 127–139) means of control and management are discussed. They are aimed at increasing the number of animals so as to insure 15–20 skins per annum for each hunter.

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55343. TAYLOR, ALBERT A., *and* **H. C. DYME.** Air Force survival feeding. (Military medicine, July 1957. v. 121, no. 1, p. 22–27, illus.) 3 refs.

Contains information on survival food packets used by the U.S. Air Force, including Arctic, SA–4: their components and nutritive value; requirements for an "all-purpose" packet; research towards such an "all-climatic, global" food packet conducted by F. Sargent and R. E. Johnson; field and season tests with such rations; physiological requirements on rations. ***Copy seen:*** DLC.

55344. TAYLOR, ALBERT CECIL, 1905– . The effect of rate of cooling on survival of frozen tissues. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 466–75, illus.) 5 refs.

Discussion of investigations on the degree of tissue survival after freezing and thawing at different rates, with and without protective treatments. Evaluation of results is made with methods of tissue culture and grafts. The role of ice-crystal formation as survival determinant, is discussed. ***Copy seen:*** DNLM.

TAYLOR, AUSTIN L., *see* Wood, T. H., *and* A. L. Taylor. X-ray inactivation . . . yeast at freezing temperature. *1957.* No. 56108.

TAYLOR, CHARLES BRUCE, 1915– , *see* Stewart, H. B., *and others.* Recent . . . coastal water temperature and sea level . . . *1958.* No. 55161.

55345. TAYLOR, CLYDE C. Cod growth and temperature. (International Council for the Exploration of the Sea. Journal du Conseil, 1958. v. 23, no. 3, p. 366–70, illus., table.) 13 refs.

A study of relations between two growth parameters of cod and surface temperature of certain areas, including the Barents and Greenland Seas, Lofoten waters, etc. The parameters were found to be functions of the environmental temperature indicating a dependence on it of life span and maximum size obtained. ***Copy seen:*** DLC.

55346. TAYLOR, F. C. Shethanei Lake, Manitoba. Ottawa, 1958. 11 p., fold. map, table. (Canada. Geological Survey. Paper 58–7.) 5 refs.

Describes general and structural geology of the area, based on field study carried out in 1957. Map (15–1958), scale 1 in.=4 mi., shows preliminary geologic information for area 58°–59° N. 96°–98° W., 165 miles west of Churchill. Text describes the Precambrian and Pleistocene formations; structure of earliest rocks is practically unknown, outcrops are scarce, and evidences of mineralization are rare.

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TAYLOR, GÉRALD, *see* Cailleux, A., *and* G. Taylor. Code expolaire. *1952.* No. 50047.

TAYLOR, LAWRENCE D., *see* Barnes, D. F., *and* L. D. Taylor. Preliminary results . . . permanently frozen lake . . . *1958.* No. 49547.

TAYLOR, PETER F., *see* Lewis, H. E., *and* P. F. Taylor. The British North Greenland Expedition. *1957.* No. 52798.

TAYLOR, MAX T., *see* Berman, E. J., *and others.* Experimental prevention of ventricular fibrillation . . . *1958.* No. 49692.

55347. TAYLOR, R. J. F. The breeding and maintenance of sledge dogs. (Polar record, May 1957. v. 8, no. 56, p. 429–40, illus., tables.) 19 refs.

Account of studies on dogs (approx. 75) at Hope Bay, Graham Land, in 1954–55. Origin (from Labrador 1945–46, Greenland 1954) and breed are explained, and data presented on sex, working history, and character of the animal. Those of the Labrador stock (in third Antaretic generation) are compared with recent Greenland imports. Care and training, life history, breeding policy at Hope Bay, growth of the dogs, color, etc. are reported. Psychological traits are discussed in relation to trail performance and breeding policy. Comparisons are made with mechanical transport, performance and cost-data given. Though their utility is declining, dogs are still of considerable use on polar expeditions both as transport and laboratory animals. ***Copy seen:*** DLC.

55348. TAYLOR, R. J. F. The physiology of sledge dogs. (Polar record, Jan.

1957. v. 8, no. 55, p. 317–21, illus.) 10 refs.

Account of investigation conducted at Hope Bay, Graham Land, on some 75 dogs mostly from Labrador stock now in third Antarctic generation. Sledging diet and work output were studied. Digestibility and absorption of beef and whale pemmican and of their components, vitamins, etc., are discussed. Work output is analyzed: maximum "useful" work output and its conditions, power/weight ratio in dog muscle; psychological factors are considered.

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55349. TAYLOR, R. J. F. Some aspects of the physiology of sledge dogs. (Advancement of science, June 1957. v. 13, no. 53, p. 416–17.)

An account of work (pull) physiology of dogs electrometrically determined. Top speed of teams, maximum pull and work output, maximum "useful" work output are analyzed and discussed. Internal and external factors influencing work output, and comparison with human and machine work are also considered. ***Copy seen:*** DLC.

55350. TAYLOR, R. J. F. The work output of sledge dogs. (Journal of physiology, July 1957. v. 137, no. 2, p. 210–17, illus. table.) 13 refs.

Account of investigation on the pull of nine sledge dogs over a route of 3,000 km. Maximal power output maintained for 10 min. by a dog of 39 kg., was 0.235 horsepower; per body weight this is very close to the maximum recorded for man. Work output during walking, trotting and galloping and its relation to load and speed are also analyzed. The experiments were carried out in the Falkland Islands Dependencies in 1954, with third antarctic generation descendants of dogs introduced (since 1944) from Canada and Greenland.

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55351. TAYLOR, RICHARD SPENCE. Physical characteristics and mechanics of certain depressed-center stone rings in northwestern Greenland. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1804.)

Abstracts paper presented at the Society meeting in Atlantic City, Nov. 1–3, 1957. Describes stones pushed up on the borders by frost action and depressed in the center by thawing. The process is outlined and possible cause suggested.

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55352. TAYLOR, RICHARD SPENCE. A study of some high-latitude patterned-ground features. St. Paul, Minn., 1956. 229 p. illus., tables, graphs, map. 106 refs. Ph. D. thesis to Univ. of Minnesota. Microfilm: University Microfilms, Ann Arbor, Mich., Pub. no. 22,499.

Reports results of detailed studies 12 mi. southeast of Thule, northwest Greenland, on the physical characteristics and the hydrologic and thermal regimes of patterned-ground formations, having raised and depressed centers. Stones and granules concentrate at the surface and in the borders by direct congeliturbation, while fines concentrate in the center near the frost table by eluviation and preferential congelifraction. Repeated freezing and thawing causes the formation of a gutter under the borders and a basin under each mesh, and freeze-up from all directions toward the center. Each mesh constitutes a closed-system hydrologic cell in autumn. A heat cell (latent heat) forms in the center of each mesh during freeze-up, and a cold cell forms in each mesh in winter and early spring. Ice growth between stones and frost-table fluctuations sort and orient the stones radially. Moisture moves to the freezing surface and is withdrawn downward and laterally to form an ice layer on the frost table, which is responsible for most of the vertical movement. Dehydration of the middle layer reduces heave and inhibits cryostatic-pressure phenomena.—From SIPRE. ***Copy seen:*** DLC.

55353. TAYLOR, ROSCOE L., *and others.* Field crops for Alaska. College, Jan. 1958. 11 p. (Alaska. University. Extension Service. Circular 14 rev.) Rev. ed. of No. 27686 and 38488. *Other authors:* A. C. Wilton, L. J. Klebesadel *and* J. C. Brinsmade.

Lists in preferential order and describes briefly the crop varieties found most desirable for production in agricultural areas of Alaska during testing at the Alaska Agricultural Experiment Station.

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55354. TAYLOR, ROSCOE L., *and others.* Weeds in Alaska. College, Alaska, Jan. 1958. 32 p. illus., table. (Alaska. University. Extension Service. Bulletin 600 rev.) Revision of No. 35272.

Other authors: A. C. Wilton *and* L. J. Klebesadel.

Discusses harmful effects of weeds, how they are spread, types found in Alaska; also cultural and chemical methods of control, with table of chemical control agents and their use. The 23 more important weeds are treated in turn: identification, control measures, etc.

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TAYLOR, ROSCOE L., *see also* Laughlin, W. M., *and others.* Fertilizers . . . *1958.* No. 52678.

TAYLOR, S. R., *see* Moorbath, S., *and others.* Age of zircon . . . *1958.* No. 53379.

55355. TAYLOR, WILLIAM E., *Jr.* Archaeological work in Ungava, 1957. (Arctic circular, 1957, *pub.* Jan. 1958. v. 10, no. 2, p. 25–27.) Ref.

Surveys and limited excavations were made by the writer and wife at Payne Bay, Payne Lake, and Sugluk Inlet, Northern Quebec, July–Oct., under auspices of the National Museum of Canada. Artifacts were excavated from a Dorset culture site at the mouth of Payne Bay. Six sites on Payne Lake were tested, four of them Dorset. One of 40 Dorset houses was excavated. On Sugluk Island in Sept., trenches were made in five Dorset and two Thule culture sites. Two Sugluk Dorset sites showed similarities to T–1 site on Southampton Island which, by carbon-14 dating, was occupied 2,000–2,500 yrs. ago. Two other sites appear younger, but still Dorset in age. The fifth Dorset site and two Thule sites did not produce enough material for age estimates. ***Copy seen:*** DLC.

55356. TAYLOR, WILLIAM E., *Jr.* Archaeology in the Canadian Arctic. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 92–95, illus.)

Surveys past and present progress of archeological work in this area. Origins, migrations and cultures of aborigines are discussed: an early culture, provisionally termed "Sarqaq", and possibly extending to 2,000 B.C. was replaced in turn by Dorset and Thule cultures. Indications that the Thule, Dorset and possibly "Sarqaq" peoples migrated east from Alaska reinforce the theory of Asiatic origins. ***Copy seen:*** DGS.

55357. TAYLOR, WILLIAM E., *Jr.* Correspondence. (Arctic circular, 1957, *pub.* Jan. 1958. v. 10, no. 2, p. 30.)

Explanation of the low frequency of whalebone at a Sadlermiut site at Native Point, Southampton Island (discussed in No. 48352) is confirmed as due to these Eskimos trading baleen to the whalers. Much whalebone was seen at Native Point in 1924–1925 by A. Copeland.

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TAYLOR, WILLIAM E., *Jr., see also* Harp, E. Arctic. *1958.* No. 51597.

TAYLOR, WILLIAM E., *Jr., see also* MacNeish, R. S. Archaeological investigations . . . 1957. *1957.* No. 53030.

55358. TAYLOR, WILLIAM RANDOLPH. Marine algae of the northeastern coast of North America; illus. by Chin-Chih Jao. Ann Arbor, Univ. of Michigan Press, 1937. ix, 427 p. 60 plates. 395 refs.

Area treated extends from Virginia north to West Greenland waters and west to include Hudson Bay. Algal distribution, habitats, collections and preservation are outlined with a review of work in the area. A systematic list and synopsis of the algae are followed by a descriptive catalog, with keys, generic and specific descriptions, critical notes, references and data on habitats and distribution. Many of the species are native to the arctic regions treated. ***Copy seen:*** DLC.

TAZIKHIN, N. N., *see* Krymgol'ts. G. IA., *and* N. N. Tazikhin. Novye . . . iurskikh . . . Vilʹuiskoĭ sineklizy. *1957.* No. 52530.

55359. TAZIKHINA, L. V. Russkiĭ sarafan; po kollekt͡siĭ sarafanov Gosudarstvennogo muzeia ėtnografii narodov SSSR. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1955. vyp. 22, p. 21–35, illus., map.) 3 refs. Text in Russian. ***Title tr.:*** The Russian sarafan, from the sarafan collection of the State Museum of Ethnography of the Peoples of U.S.S.R.

This loose sleeveless garment and blouse constituted the basic, peasant-women's attire throughout European Russia, including the White Sea area. The material, patterns, ornaments, etc. of the museum's collection (503 items) are described and the areal distribution of various sarafan types in the late 19th-early 20th centuries mapped.

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TCHERNIAKOFSKY, P., *see* Le Méhauté, P. J., *and others.* Glimrende resultater . . . *1935.* No. 52744.

55360. TEAL, JOHN JEROME, 1921– . Musk ox can be tamed. (Explorers journal, Dec. 1958. v. 36, no. 4, p. 13.)

Discusses attempts to domesticate musk oxen, and possibilities of establishing experimental farms in Canada and Alaska where they could be bred for distribution to farmers. Birth, in captivity, of a calf is noted.

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TEBEKIN, D. A., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Revolûtsionnye sobytiîa 1905–1907 . . . *1956.* No. 49167.

55361. TEDLIE, W. D. Geology of the Barlow Lake area, Granville Lake mining division. Winnipeg, 1958. 23 p., 2 maps, incl. 1 fold. in pocket, table. (Manitoba. Dept. of Mines and Natural Resources. Mines Branch. Publication 57–2.) 4 refs.

Report, based on work in field season June–Sept. 1957, when area was covered by shoreline canoe traverses, and by pace and compass traverses; the geology is plotted on map, scale 1 in.=½ mi., base constructed from vertical aerial photos. Map area, 56°45′ – 57° N. 99°30′ – 99°45′ W., covers about 165 sq. mi., 45 miles east of Lynn Lake. The southern and eastern parts are covered by extensive deposits of glacial drift; the northwestern has pronounced relief (300–400 ft.) for this region. All consolidated rocks are Precambrian: folded and metamorphosed sedimentary rocks, with minor lenses of pyroclastics. Relative ages of lithologic units are illustrated in the table; distribution of units and geologic features are shown on map. Recent and Pleistocene deposits consist of peat, sand, gravel, and clay. Glacial erosion appears less intense than expected. The granitic intrusion in the central part of the map area has acted as a blunt wedge, in the north, deflecting trends to the northeast, and in the south toward the southeast. No major deposits of economic value were found; two minor occurrences of pyrite and molybdenite, and traces of sulphide mineralization were noted. ***Copy seen:*** DGS.

55362. TEDROW, JOHN CHARLES FREMONT, 1917– , *and* L. A. DOUGLAS. Carbon 14 dating of some arctic soils. New Brunswick, N.J., Rutgers University, Dept. of Soils, 1958. 6 p. Mimeographed. refs.

Gives results of carbon-14 dating of two samples of upland tundra soils and one of arctic brown from North Alaska. Samples of the former were taken from Umiat at approx. 700 ft. altitude and from Pt. Barrow at about 20 ft. Profiles to 60 in. depth for the Umiat soil and 30 in. for the Pt. Barrow show presence of organic matter in the upper permafrost. Age determination of this matter may throw light on how it was deposited; mineralogical, chemical and physical analyses are planned, and from combined data interpretations will be made. From C–14 dating results on an arctic brown sample from Pt. Barrow, it was found to be of great age (2900±130 yrs.); is thus in equilibrium and not likely to develop into a podsol. ***Copy seen:*** CaMAI.

55363. TEDROW, JOHN CHARLES FREMONT, 1917– *and* J. E. CANTLON. Concepts of soil formation and classification in arctic regions. (Arctic, 1958. v. 11, no. 3, p. 166–79, illus., diagrs.) 29 refs.

Discusses, on basis of studies in northern Alaska, soil forming processes in arctic regions and considers the relation between vegetation and soils and problems of classification and mapping. Tundra soils are poorly drained, mineral in nature, and underlain by permafrost at depths of 1–2 ft. Arctic brown soils form under free drainage, are mineral in character, and confined to ridges, terrace edges, and stabilized dunes. The active layer in such soils is usually deep. Downslope movement and frost action tend to disrupt any orderly morphology in both wet and well-drained sites. Moisture conditions in arctic soils exert a marked selective influence on vegetation.—From SIPRE.

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55364. TEDROW, JOHN CHARLES FREMONT, 1917– , *and others.* Major genetic soils of the Arctic Slope of Alaska. (Journal of soil science, Mar. 1958. v. 9, no. 1, p. 33–45, illus., profiles, diagrs.) 17 refs. *Other authors:* J. V. Drew, D. E. Hill, *and* L. A. Douglas.

"The genetic soils of arctic Alaska can be arranged in a drainage catena. The mature soils on well-drained sites are arctic brown and related soils. The tundra profile is an imperfectly- to poorly-drained catena member. The bogs, with permafrost, occupy many of the broad,

flat, very wet areas. No evidence of a qualitative soil-forming process unique to the arctic areas is found. Instead, the arctic tundra is primarily a northern extension of the hydromorphic soils of the forested regions, whereas the arctic brown and related soils represent the northern extensions of the podzolic process. The term tundra, when used in connexion with zonal great soil groups along with podzols, chernozems, laterites and related soils, is an erroneous one and its use, except for a hydromorphic soil, should be discouraged. The podzolic process on the stable, well-drained sites weakens northward, resulting in the successive development of podzols, minimal podzols, arctic browns, arctic browns shallow phase, and finally, no soil formation."—Authors' abstract.

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TEDROW, JOHN CHARLES FREMONT, 1917– , *see also* Drew, J. V., *and* J. C. F. Tedrow. Pedology of an arctic brown profile . . . *1957*. No. 50626.

TEDROW, JOHN CHARLES FREMONT, 1917– *see also* Drew, J. V., *and others*. Rate . . . thaw in arctic soils. *1958*. No. 50627.

55365. TEGENGREN, FELIX REINHOLD. Guldmalmsfynden vid Kemi. Åbo, 1951. 15, 2 p. 2 fold. maps (Åbo, Finland. Akademi. Acta mathematica et physica. v. 17, no. 7.) 11 refs. Text in Swedish. Summary in English. ***Title tr.:*** A gold ore occurrence at Kemi, northern Finland.

The origin of loose gold-bearing rocks, found at Laurila on the Kemi River in northern Finland in 1836, remained inexplicable until the glacial history of the area was understood. The direction of ice transportation was established in 1920, and in 1939–40, the provenience of these rocks was systematically sought. First described as a coarse-grained dolomite with gangue minerals, the rock was determined to be a typical ankerite, a hydrothermal gangue material. Locally it is of no economic importance, but identification adds to knowledge of the widespread gold mineralization of northern Fennoscandia which is believed to be associated with late Karelian granitic intrusion. ***Copy seen:*** DLC.

TEGENGREN, HELMER, *see* Itkonen, T. I. Utforskningen . . . Kemi Lappmark. *1954*. No. 51981.

55366. TEICHNER, WARREN HARDING, 1921– . Assessment of mean body surface temperature. (Journal of applied physiology, Mar. 1958. v. 12, no. 2, p. 169–76, illus., tables.) 11 refs.

A study made to determine whether this mean can be estimated from fewer than the ten points used by the U.S. Quartermaster Corps. Six selected points were found sufficient and if high reliability is not required, three points. Conditions are also discussed for determinations from one point.

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55367. TEICHNER, WARREN HARDING, 1921– . Manual dexterity in the cold. (Journal of applied physiology, Nov. 1957. v. 11, no. 3, p. 333–38, illus., table.) 9 refs.

A study of 530 subjects exposed to 14 different combinations of temperature and wind. Both air temperature and windchill were found to increase performance time significantly. Wind velocity by itself had no significant effect. Relation of skin and digital temperature and digital cooling time to performance are also analyzed. ***Copy seen:*** DNLM.

55368. *TEKNIKK OG FYSIKK.* Finnmark har vist meget gode flyegenskaper under prøveflygningene. (Teknikk og fysikk, 1952. årg. 3, nr. 11–12, p. 428–32, illus.) Text in Norwegian. ***Title tr.:*** Finnmark has shown good flying qualities during test flights.

Describes a passenger-, mail-, expedition-, and ambulance amphibian constructed in Norway and equipped with wheels, skis, and a pair of stub-wings for stabilization on water. Built for Norwegian and arctic conditions, it has traveling speed of 260 km./hr., weighs 5,945 kg. with full load, and has an action radius of 1,000 km. (2,500 with extra tanks). The undercarriage is removable, increasing effective load by 360 kg. For expedition flights, the cabin equipment is removed to yield 14 cu. m. of additional space. ***Copy seen:*** DLC.

55369. *TEKNISK UKEBLAD.* Aktieselskabet Sydvaranger, 50-årsjubileum. (Teknisk ukeblad, Aug. 23, 1956. årg. 103, nr. 30, p. 692–93, illus.) Text in Norwegian. ***Title tr.:*** Sydvaranger Ltd., 50th anniversary.

Notes development since 1906 of mining and refining at the company's iron deposits on the Pasvik Peninsula in northern Norway, backed mainly by

foreign capital. The plant, totally destroyed during World War II, has been rebuilt and modernized, the output is expected to be 1.1–1.2 million tons slick in 1956. ***Copy seen:*** DLC.

55370. TELEKI, GEZA. The utilization of aerial photographs in sea ice forecasts. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 76–79.)

Mentions purposes, importance, and limitations of use of aerial photographs in ice charting and forecasting. Proposes system of classifying sea ice by aerial photography, with three categories of measurable elements: area (2-dimensional), relief (3-dimensional), time (4-dimensional). Coverage and evaluation procedures are explained.

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TELMOSSE, FRANÇOIS J. P., *see* Caranna, L. J., *and others.* Effect . . . nutrient solution . . . fibrillation . . . hypothermic dog. *1958.* No. 50126.

55371. TEMESY, EVA. Der Formenkreis von *Saxifraga stellaris* Linné. (Phyton Apr. 30, 1957. v. 7, no. 1–3, p. 40–141, 23 illus., 3 fold. maps, table.) 259 refs. Text in German. ***Title tr.:*** The form complex of *Saxifraga stellaris* Linné.

Contains a discussion of the systematic position and subdivision of the group, description of *S. stellaris* s. lat., and a key to the subspecies and varieties. Variation of the four subspecies and four varieties is discussed, and descriptions given with Latin diagnoses, synonyms, types, illustrations, data on distribution and extensive lists of specimens arranged as: Arctic, Subarctic and Central-European. The area of the *S. stellaris* group covers practically all arctic regions (maps 1–2). Data on comparative morphology, anatomy, cytology and phylogeny are added. *S. stellaris* s. lat. consists of four subspecies, *stellaris, alpigena, comosa,* and *prolifera.* The ssp. *alpigena* comprises four varieties, *alpigena, augustifolia, obovata* and *hispidula;* there are some intermediary geographic races between some subspecies. Subspecies *alpigena* and *prolifera* have the chromosome number 2n=28. ***Copy seen:*** DLC.

55372. TEMIN, V. Na zemle Kamchatskoĭ. (Smena, Sept. 1957. god 34, no. 18, p. 12–13, illus.) Text in Russian. ***Title tr.:*** In Kamchatka Land.

Brief outline and photographs of the cultural, economic and industrial development of Kamchatka Peninsula: the fisheries, collective farms, reindeer-breeding farms, development of local mineral resources (petroleum, ocal, sulphur, schist) etc. ***Copy seen:*** DLC.

55373. TEMIN, V. V kratere Avachgory. (Vokrug sveta, Apr. 1957. no. 4, p. 59, illus.) Text in Russian. ***Title tr.:*** In the crater of Mt. Avacha.

Air photograph of Avachinskaya Sopka on Kamchatka Peninsula, with brief note on the alpinists' Iūriĭ Ivanov and Voislav Milovanovich, descent into its crater in Aug. 1956. ***Copy seen:*** DLC.

55374. TEMNOEV, N. I. O prostranstvennom raspredelenii rastitel'nosti Kanino-Timanskoĭ tundry i Mezenskikh lesov. (Botanicheskiĭ zhurnal, May 1956. t. 41, no. 5, p. 689–96, text map, 4 tables.) 36 refs. Text in Russian. ***Title tr.:*** Range distribution of the vegetation of Kanin-Timan tundra and Mezen region forests.

Contains phytogeographic and statistical data on the five principal geobotanical zones (cf. map) in which the region is subdivided: typical tundra with dwarf shrubs; tundra with marshy mounds; tundra swamps with mounds and forest islands; thin forest swamps; thin pretundra and northern taiga forests. Statistical data on horizontal distribution (in percent) of tundra, swamps, shrubs and forests are tabulated; subarctic tundra and tundra swamps occupy 36.1%, forest-tundra 30.7%, and taiga 33.2% of the area. ***Copy seen:*** DLC.

TEMPLEMAN, WILFRED R., 1908– , *see* Clark, J. R., *and others.* Summary of gear selection . . . Fisheries. *1958.* No. 50279.

TEMPLEMAN, WILFRED R., 1908– , *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

TEMPLEMAN, WILFRED R., 1908– , *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

55375. TENER, JOHN S. The distribution of muskoxen in Canada. (Journal of mammalogy, Aug. 1958. v. 39, no. 3, p. 398–408, tables.) 17 refs.

Muskoxen, never abundant in Canada, were drastically reduced in numbers and distribution after firearms and fur trading were introduced. Data (numbers,

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district) are given on Hudson's Bay Co. muskox skin trade 1862–1916. In 1917 complete protection was introduced. Present distribution and the numbers on the mainland (Thelon Game Sanctuary on Bathurst Inlet region) and on various arctic islands are given in turn. The population, 500 in 1930, is estimated now at about 1,500 on the mainland and 3,500 on the islands. Information gathered 1950–1955 indicates reoccupation of former range as well as increase in numbers.

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55376. TENER, JOHN S. Gross composition of muskox milk. (Canadian journal of zoology, Dec. 1956. v. 34, no. 6, p. 569–71, tables.) 5 refs.

Chemical analysis of a sample showed 21.54% total solids; 11.0% fat, 5.3% protein, and 3.6% lactose; vitamin B_{12} amounted to 3.4 micrograms per liter. Data are compared with those of other mammals; resemblance is closest with the water buffalo. Sample was taken at the Thelon Game Sanctuary, Apr. 1956, as part of a Canadian Wildlife Service study of the musk ox.

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TENER, JOHN S., *see also* Banfield, A. W. F., *and* J. S. Tener. A preliminary study . . . Ungava caribou. *1958.* No. 49511.

TENER, JOHN S., *see also* Gibbs, H. C., *and* J. S. Tener. On some helminth parasites . . . musk ox . . . *1958.* No. 51174.

55377. TERASMAE, J. Contributions to Canadian palynology, part III; non-glacial deposits along Missinaibi River, Ontario. Ottawa, Queen's Printer, 1958. p. 29–35, fold. diagr., tables. (*In:* Canada. Geological Survey. Bulletin 46.) 7 refs.

Based on pollen analysis of samples from buried, non-glacial Pleistocene deposits, collected by O. L. Hughes in 1954, for radiocarbon determinations in connection with a stratigraphic study of exposures along the Missinaibi (approx. 50°30′ N. 81°20′ W.). Palynological studies, the inferred cool climate, and the short non-glacial interval, indicate that these buried peat deposits do not belong to the Sangamon interglacial stage; radiocarbon determinations indicate an age of more than 38,000 years.

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TEREGULOV, IBRAGIM KHUSAINOVICH, *see* Olenin, A. S., *and others.* Torfianoĭ fond SSSR . . . *1956.* No. 53748.

55378. TERENT'EV, ALEKSEĬ VASIL'EVICH. Razvitie tekhniki rybnoĭ promyshlennosti SSSR za 40 let. (Rybnoe khoziaĭstvo, Nov. 1957. god 33, no. 11, p. 31–39, illus.) Text in Russian. ***Title tr.:*** Technological development of the U.S.S.R. fishing industry during 40 years.

Information is presented on pre-Revolutionary technical achievements, early (1918–20) attempts in techniques of salting and cooling, mechanization in handling of nets and catches, improvements in fishing methods, especially trawling, current conditions and changes toward full mechanization, advances in seine and drift-net fishing, increase of output per unit of work, advances in fishing vessels, processing industry, refrigeration, whaling.

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55379. TERENT'EV, ALEKSEĬ VASIL'EVICH. Tekhnicheskiĭ progress v rybnoĭ promyshlennosti SSSR. Moskva, Izd-vo "Znanie," 1954. 40 p. illus. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znaniĭ, seriia 4, no. 1.) Text in Russian. ***Title tr.:*** Technical advances in the fishing industry of the U.S.S.R.

Outlines progress in technical equipment and mechanization of the fisheries: trawler, etc. construction, fish detection methods, seining and (especially) processing. The Kamchatka (p. 8), Barents Sea (p. 13) and other northern fisheries are included. ***Copy seen:*** DLC.

55380. TERENT'EVA, O. A. Nasha oblast' na Vsesoiuznoĭ sel'skokhoziaĭstvennoĭ vystavke. (Na severe dal'nem, 1955, vyp. 2, p. 170–76.) Text in Russian. ***Title tr.:*** Our province in the All-Union Agriculture Exhibition.

Outlines progress and achievements in agriculture, livestock, reindeer breeding and the hunting industry in Magadan Province; the 180 best workers of the area were selected to participate in the All-Union Agriculture Exhibition in Moscow in 1955. The most successful collective farms, state farms and subsidiary farms and their outstanding workers are listed, their achievements indicated. In the Kolyma River basin the area under cultivation increased from 2

hectares in 1932 to 3,154 in 1954; reindeer herds of some kolkhozes exceed 10,000 head; furs worth over 6 million rubles a year are brought in by the hunters of the province. ***Copy seen:*** DLC.

55381. TERESHCHENKO, NATAL'IA MITROFANOVNA. K voprosu o proiskhozhdenii posleslogov. (Akademiia nauk SSSR. Institut iazykoznaniia. Doklady i soobshcheniia, 1958. no. 11, p. 62–76.) Text in Russian. ***Title tr.:*** Concerning the problem of the origin of postpositions.

Discusses postpositions or link-words used as suffixes in the Nenets (Samoyed) language. Their probably verbal or substantival origin and semantic importance as word-modifiers and word-builders are dealt with.

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55382. TERESHCHENKO, NATAL'IA MITROFANOVNA. K voprosu o vzaimootnoshenii samodiĭskikh iazykov s drugimi iazykami. (Voprosy iazykoznaniia, Sept.–Oct. 1957. god 6, no. 5, p. 101–103.) 13 refs. Text in Russian. ***Title tr.:*** On the interrelation of the Samoyed languages with those of other groups.

Describes the present-day distribution of the Samoyeds (Nenets, Enets, Nganasans and Sel'kups), their probable origin on the Sayan plateau and their later mixture with the aboriginal Ob-Yenisey basin population. Their linguistic ties with the Finno-Ugric groups and the less known structural and typological affinities to the Yukaghir, Tungus and Eskimo-Aleut languages are sketched. A common ancestral language is not to be inferred from these morphological similarities.

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55383. TERESHCHENKO, NATAL'IA MITROFANOVNA. Materialy i issledovaniia po iazyku nentsev. Moskva, Izd-vo Akademii nauk SSSR, 1956. 282 p. 12 refs. Text in Russian. ***Title tr.:*** Materials and research on the language of the Nenets.

An extensive study of the phonetics and grammar of the Nenets (Samoyed) language and its dialects based on author's linguistic expeditions to the Nenets national district, Arkhangel'skaya Oblast', in 1949 and 1950 and to the Yamal-Nenets national district, Omskaya Oblast', in 1953. Vital statistics (1926–27 census) are given, the area of distribution and ethnic surroundings outlined and the other languages belonging now or in the past to the Samoyed group are enumerated. Three Nenets texts with Russian translations and commentaries are appended. The first text is given also in the transliteration developed by Prof. G. N. Prokof'ev. Three chapters on phonetics and verbal forms were written in collaboration with A. I. Rozhin.

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55384. TERESHCHENKO, NATAL'IA MITROFANOVNA, *and* **L. V. KHOMICH.** Otchet o rabote lingvisticheskoĭ ėkspeditsii Instituta iazykoznaniia Akademii nauk SSSR v IAmalo-Nenetskiĭ okrug Tiumenskoĭ oblasti letom 1953 g. (Akademiia nauk SSSR. Institut iazykoznaniia. Doklady i soobshcheniia, 1955. no. 7, p. 147–65.) Text in Russian. ***Title tr.:*** Report on the work of the linguistic expedition of the Institute of Linguistics of the Academy of Sciences U.S.S.R. to the Yamal-Nenets district of Tyumenskaya Oblast' in summer 1953.

Grammatical problems of the Nenets (Samoyed) language are discussed and idioms of the Yamal and Taz districts compared with the Bol'shezemel'skiy district dialect, which was chosen as basis of literary Nenets. No structural and but few phonetic and morphological differences were found. The expedition's main investigations centered on the Yamal region (rayon) of the Yamal-Nenets national district in Omskaya Oblast'; it comprised the senior (leader) and junior authors also a Zyryan and two Nenets students. It continued the linguistic research of the Institute's(?) 1949 and 1950 expeditions to the Nenets national district in Arkhangel'skaya Oblast'. ***Copy seen:*** DLC.

TERESHCHENKO, NATAL'IA MITROFANOVNA, *see also* Sunik, O. P. Soveshchanie po iazykam . . . *1953.* No. 55236.

55385. TERESHCHENKO, V. F. Kost' kita na beregu Kol'skogo zaliva. (Priroda, Sept. 1957, no. 9, p. 120.) Text in Russian. ***Title tr.:*** A whale bone on the shore of Kola Bay.

Records find of the large scull bone (1.5 m. diam.) of a whale on a coastal terrace (20–30 m. above sea level) in the Kola Bay. It is considered to confirm the rise of the Murman coast, a process still continuing. ***Copy seen:*** DLC.

55386. TERESHCHENKO, VLADIMIR ALEKSANDROVICH, *and* G. A. NEKLI͡UDOVA. Tekhnologiĭa proizvodstva stenovykh materialov iz penoaktivizirovannogo legkogo betona. (Bi͡ulleten' stroitel'noĭ tekhniki, Jan. 1958. god 15, no. 1, p. 19–21, tables.) 2 refs. Text in Russian. ***Title tr.:*** Technology of production of wall materials from foam activated light concrete.

Preparation of porous fillers from blast furnace slag pumice for frost-resistant light-weight concrete is described. Composition is given of cement and non-cement solutions with additives used in preparation of concrete for large wall panels, and tabulated data are included on processing and strength after repeated freezing cycles. ***Copy seen:*** DLC.

TERESHKIN, N. I., *see* Avrorin, V. A. Literaturnye ĭazyki . . . *1953*. No. 49443.

55387. TERK, P. Sravnite ėti karty. (Klub, June 1957. god 6, no. 6, p. 17–18, maps.) Text in Russian. ***Title tr.:*** Compare these maps.

Discusses the use of maps displayed in clubs to illustrate achievements under the Soviet regime, with illlus. of maps of 1913 and 1960, locating industrial centers including those in Arkhangel'skaya and Kamchatskaya Provinces.

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55388. TERKELSEN, FREDE. *Lactarius groenlandicus* sp. nov. (Friesia, 1956. bd. 5, hefte 3–5, p. 417–19, 2 illus.)

Contains a Latin diagnosis and an English description of this new fungus found at Godhavn, West Greenland, in the fall of 1955; it grows in or near shrubs of willow (*Salix*). ***Copy seen:*** DLC.

TERLETSKIĬ, PETR EVGEN'EVICH, 1882– , *see* Kushner (Knyshev), P. I. Novaĭa . . . karta SSSR. *1951*. No. 52581.

55389. TERUMOTO, ISAO. The frost-hardiness of onion. (Teion kagaku, 1957. v. 15, ser. B., p. 39–44, illus., tables.) 6 refs. Text in Japanese. Summary in English.

Report on rendering onion cells frost-hardy contrary to the opinion held that the onion is an "unhardy" plant. Outer epidermal cells of the scale leaves were made frost resistant, by exposure to 0° C. for 2-3 weeks. Also dehydration in some hypertonic media had a similar effect. ***Copy seen:*** DLC.

55390. TERUMOTO, ISAO. The relation between cell sap concentration and the frosthardiness of the table beet. (Teion kagaku, 1958. v. 16, ser. B, p. 7–22, illus., tables.) 12 refs. Text in Japanese. Summary in English.

Account of histochemical studies on beet organs exposed to cold (O° to −5° C.). Phosphorylase activity in leaves and petioles of old plants increased with cold exposure and hardening, parallel to the sap concentration. In young plants there was no clear increase of this activity in leaves and roots, and in frozen plants it actually decreased. Low temperature also raised acid-phosphatase activity in petioles of every growing stage. ***Copy seen:*** DLC.

55391. TERUMOTO, ISAO. The relation between the activity of phosphorylase and the frost-hardiness in table beet. (Teion kagaku, 1957. v. 15, ser. B., p. 31–38, illus., tables.) 8 refs. Text in Japanese. Summary in English.

A study of phosphorylase and acid phosphatase activity as influenced by frost hardiness. Phosphorylase activity in leaves and petioles but not in roots increased with cold-hardening; it became stronger through prolonged freezing at −2° to −4° C. Acid phosphatase activity, found in all tissues, also increased through cold-hardening (exposure), and was not lost by de-hardening as was the case with phosphorylase. ***Copy seen:*** DLC.

TEST, B. I., *see* Sychev, V. I͡A., *and others*. O stratigrafii mezozoĭskikh . . . Zhiganskogo . . . *1957*. No. 55291.

55392. TETERIN, V. Tu-104 v I͡Akutske. (Grazhdanskaĭa aviat͡siĭa, Apr. 1957. god 14, no. 4, p. 10, illus.) Text in Russian. ***Title tr.:*** A *Tu-104* at Yakutsk.

Photograph of Soviet jet passenger plane surrounded by a crowd of people at the Yakutsk airfield. The airplane landed in Yakutsk on March 29th and took off on Mar. 31, landing in Moscow after eight hours' flight.

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55393. TEWELES, SIDNEY. Anomalous warming of the stratosphere over North America in early 1957. (U.S. Weather Bureau. Monthly weather review, Oct. 1958. v. 86, no. 10, p. 377–96, 14 diagrs., 11 text maps.) 32 refs.

The anomalous stratospheric warming of January and February 1957 is studied

in detail by means of constant pressure charts, time sections, and cross sections. The warming occurred as the meandering arctic stratospheric jet stream of wave number two developed into a pair of vortices extending to above the 10-mb. surface. It is concluded that development of stratospheric waves in the Northern Hemisphere is facilitated by autumnal growth of a forced perturbation locked in place by a warm ridge over the Aleutian area. Interaction between the tropospheric jet stream and arctic stratospheric jet stream during the period of development is believed responsible for the great intensity of the 1957 warming.—From author's abstract.

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55394. TEWELES, SIDNEY. Temperature and wind fields at the time of noctilucent clouds in Alaska, July 27–28, 1957. (U.S. Weather Bureau. Monthly weather review, Aug. 1957. v. 85, no. 8, p. 281.)

Most noctilucent clouds are observed at elevations of 65 to 90 km. in the vicinity of the mesopause between ozonosphere and ionosphere. Wind flow at 50 and 25 mb during cloud observation described by W. B. Lindley, q.v., was easterly, 5–10 knots; winds increased upwards through the layer; the temperature field was weak; a weak trough moved west-east across the area. An explanation of the clouds may be found in the apparent general convergence in the vicinity of the trough in a deep layer extending above the 50-mb level.

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TEWKSBURY, L. B., *see* Meyer, G. E., *and others.* A versatile new family of elastomers. *1957.* No. 53255.

THAMES, J. L., *see* Stoeckeler, J. H., *and* J. L. Thames. The . . . penetrometer . . . soil freezing. *1958.* No. 55175.

55395. THÉRIOT, IRENÉE. Mousses du Spitzberg. (Revue bryologique, 1907. t. 34, no. 2, p. 36–37.) Text in French. ***Title tr.:*** Mosses from Spitsbergen.

Contains an annotated list of 11 mosses collected by Dr. Lorentz on the coast of Spitsbergen in the summer of 1906.

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55396. THERKILSEN, KJELD RASK. Greenland cryolite. (Danish Foreign Office journal, May 1957. no. 23, p. 30, illus.)

Describes mining at Ivigtut in southwest Greenland (61°12′ N. 48°16′ W.), the only place where cryolite occurs in sufficient quantity to make extraction worthwhile. Mining was started in the 1850's; drilling and blasting are carried on day and night throughout the year. Cryolite is used mainly as a flux in aluminum production and in manufacture of enamel and opalescent glass; its byproducts are noted. Shipments totalled 38,000 tons in 1956, one-fourth directly to United States. ***Copy seen:*** DLC.

55397. THERKILSEN, KJELD RASK. Kendskab til Grønlands ukendte skaer. (Søfart, Sept. 1958. årg. 9, nr. 5, p. 17–20, illus.) Text in Danish. ***Title tr.:*** Knowledge of Greenland's unknown rocks.

Reviews: work on sailing charts for Greenland coastal waters, started by the survey ship *Heimdal* in 1935, and discontinued in 1953 due to financial difficulties; a private survey of the coast Scoresbysund-Kong Oscars Fjord by the J. Lauritzen Co.'s *Nouna Dan* in 1958; a radar chart of the fjord complex Kong Oscars Fjord-Franz Josephs Fjord composed from 1,000 radar pictures made by the naval cutter *Tejsten.* Extension of this method to other coastal areas is suggested as a preliminary navigational aid. ***Copy seen:*** DLC.

55398. THERMAENIUS, EDVARD. Rundtur hundra. (Svenska turistföreningen. Årsskrift, 1957. p. 262–78, 9 illus.) Text in Swedish. ***Title tr.:*** Round trip one hundred.

In 1956, Sweden's railway centennial, low passenger rates induced many people to travel within the country. Among other features of the year, the inland railway and its surroundings in Norrland, northern Sweden, are included in the discussion. The area is likened to neighboring Finland. ***Copy seen:*** DGS.

55399. THIEL, E., *and others.* The thickness of Lemon Creek Glacier, Alaska, as determined by gravity measurements. (American Geophysical Union. Transactions, Oct. 1957. v. 38, no. 5, p. 745–49, illus., diagrs., map.) 4 refs. *Other authors:* E. LaChapelle *and* J. Behrendt.

Presents results from 182 gravity stations on this glacier in the Juneau Ice Field (58°35′ N. 134°15′ W.) in summer 1956. Cross-sectional profiles are given and an isopach map, constructed from the appropriate ice-rock density differ-

ential to fit observed variations in the Bouquer anomaly on traverses across the glacier. The maximum ice thickness is in the upper central reaches. Average longitudinal slope of the surface is 3.5° at midglacier, increasing to 6.3° toward the icefall; the slope of the underlying rock surface is 2.4° and 4.6°, respectively. The gravity method (though less accurate than seismic) is recommended for glacier thickness studies where equipment and field work must be curtailed.

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55400. THIENEMANN, AUGUST, 1882– . Bestimmungstabelle für die Larven der mit *Diamesa* nächst verwandten Chironomiden. (Beiträge zur Entomologie, July 1952. Bd. 2, No. 2–3, p. 244–56, 2 illus.) 24 refs. Text in German. ***Title tr.:*** A determination table for chironomid larvae most closely related to *Diamesa.*

Diamesa (*Pseudokiefferiella*) *parva* occurring in Swedish Lapland is included (p. 250) and additional distributional data are given (p. 254) for this species.

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55401. THOMAS, BRUCE I. Tin-bearing deposits near Tofty, Hot Springs district, central Alaska. Washington, D.C., 1957. iii, 56 p., diagrs., maps, tables. (U.S. Bureau of Mines. Report of investigations 5373.)

Presents results of 1954–56 investigations of a tin belt at 65°05′ N. 151°00′ W., to indicate its tin-production potential and determine the lode sources of the placer minerals. Eighty-two holes were drilled, and 11 tailing pipes were trenched; deposits were estimated at 733,000 lbs. tin and 17,700 oz. gold, plus a variety of other minerals in small amounts. Accessibility, physical features and climate, history and production through 1956 (gold, silver, cassiterite), property and ownership, water supply, geology, physical characteristics and mineralization, and laboratory investigations are described in turn. Topography is mapped in detail, placer sections are illustrated; data are tabulated on drilling and sampling results, and on the spectrographic analyses. ***Copy seen:*** DI.

55402. THOMAS, CHARLES W., 1903– . Antarctic navigation. (Navigation, Autumn, 1957. v. 5, no. 7, p. 345–48, illus.)

Illustrated by examples of experiences with the icebreaker *Northwind* and the supply ship *Arned* during Operation Deepfreeze (1956–57), some hints are given for polar navigation. The importance of an understanding of Coriolis force and the significance of the ability to recognize signs in flora and fauna are stressed. Examination of bottom sediments was used to determine in advance the suitability of an ice field for an emergency landing strip.

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55403. THOMAS, CHARLES W., 1903– . The economics of surface transportation in sea ice. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 267–69, 2 tables.)

Cargo volume, time available and cost are factors considered in planning shipping. From experience of American antarctic operations since 1946, and that of J. Lauritzen Lines, the use of conventional cargo ships (with ice-breaker escort) and that of ice-working vessels of the *Kista Dan* and *Thala Dan* classes are compared, costs tabulated. Combination of the two methods in various circumstances, also introduction of atomic icebreakers are considered. Requirements (six) of economic transportation in sea ice are stated.

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55404. THOMAS, CHARLES W., 1903– . Sub-ice positioning in the Arctic Basin. (Navigation, Autumn 1958. v. 6, no. 3, p. 190–94, illus.)

Outlines possible supplementary means of position determination by interpretation of data on bathymetry, gravity, heat flow, and sediments, use of explosives, and application of satellite bearings.

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55405. THOMAS, J. F. JAMES. Churchill River and Mississippi River drainage basins in Canada, 1952–54. Ottawa, 1958. 53 p. 3 maps, incl 2 fold., in pocket, 4 diagrs., 6 tables (Canada, Dept. of Mines and Technical Surveys. Mines Branch. Report no. 858: Industrial water resources of Canada, Water survey report no. 9.) Refs. in text.

Outlines results of investigation, including field studies, 1952–54, of the chemical quality of surface and municipal water supplies available for industrial and domestic use in these two river basins. The Churchill drainage basin (1953–54) and the water systems of Fort Churchill, Man. and Bonnyville, Alta. are described (p. 35–53) with tabular

data, chemical analyses of surface waters at 26 stations and of the two municipal systems. The supply of water is plentiful; relatively hard in the plains region; requires little treatment.

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55406. THOMAS, J. F. JAMES. Mackenzie River and Yukon River drainage basins in Canada, 1952–53. Ottawa, Queen's Printer, 1957. 78 p., 2 maps (1 fold.), 6 tables, 4 graphs. (Canada. Dept. of Mines and Technical Surveys. Mines Branch. Report no. 856: Industrial water resources of Canada, Water survey report no. 8.)

Discusses chemical quality of waters available for industrial and domestic use in the large area drained by these two rivers and their tributaries. Basins of the two rivers are described. Graphs show water hardness, turbidity, seasonal variation in chemical quality, relation between mineral content and river flow. Tables summarize area and population distribution; chemical analyses of surface waters and of municipal water supplies. Data on municipal systems, treatment, population served, and water hardness are presented. Municipal water systems for 21 communities in the Mackenzie and two in the Yukon basin are described. Location of sampling stations and of municipal water supplies is shown on fold. map. General discussion of data is included. The area is of minor industrial importance; supplies of surface waters are adequate for most industrial and municipal purposes.

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THOMAS, JOHN, *see* Rich, E. E. Moose Fort . . . 1783–85 . . . *1954*. No. 54303.

55407. THOMAS, JOHN H. The vascular flora of Middleton Island, Alaska. (Stanford. University. Dudley Herbarium. Contributions, Nov. 1, 1957. v. 5, no. 2, p. 39–56, 2 illus.)

Contains some historical notes, data on the physical geography of this island (59°26′ N. 146°20′ W.), and a systematic annotated list of 116 vascular plant species distributed among 42 families, based on the author's collection in June and August of 1956. The vegetation is mainly low and herbaceous. One tree, *Picea sitchensis* and three species of shrubs, *Salix barclayi*, *Rubus spectabilis*, and *Sambucus racemosus* ssp. *pubens* make up the conspicuous woody vegetation. Nine species have been introduced possibly by the fox ranchers who lived there till about 1930. The flora of Middleton Island probably derived from the islands (Hinchinbrook and Montague) and mainland to the north.

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THOMAS, LEO ALMOR, 1917– , *see* Lindholm, G. F., *and others*. Geologic and engineering properties of silts . . . *1957*. No. 52840.

55408. THOMAS, MORLEY K., *and* **R. L. TITUS.** Abnormally mild temperatures in the Canadian Arctic during January 1958. (U.S. Weather Bureau. Monthly weather review, Jan. 1958. v. 86, no. 1, p. 19–22, 2 text maps, 2 tables.) 4 refs.

Describes occurrence of record maximum temperatures in western and (especially) northeastern Canada. Readings of 40° F. at Arctic Bay, 32° F. at Alert, 30° F. at Eureka, are the only occurrences of near- or above-freezing temperatures in January, reported from 70° latitude; these temperatures are higher than any previously recorded during the six months period, November–April. Synoptic characteristics of January 1958 weather are noted; abnormally high temperatures prevailed aloft as well as at the surface. The abnormality is attributed to the northward movement of low pressure systems over Baffin Island.

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55409. THOMAS, MORLEY K., *and* **D. W. BOYD.** Wind chill in northern Canada. (Canadian geographer, 1957. no. 10, p. 29–39, 10 text maps, graph, table.) 9 refs.

Discusses problems of measuring coldness. Using Siple's formula (No. 16134), monthly values of the wind chill factor were obtained from monthly mean values of air temperature and wind speed at Canadian arctic and subarctic stations. Maps show for all Canada: mean temperature (F.) for Jan.; extreme lowest recorded temperatures 1921–1950; mean wind speed (mph.) in Jan.; mean wind chill factor (kg. cal./m.^{2}/hr.) in Jan., Apr., July, Oct. and annually; mean annual number of degree days. Monthly and annual wind chill factors data are tabulated for Churchill, Chesterfield, Baker Lake, Resolute, Alert, Snag, also for two Antarctic stations. Chesterfield and Baker Lake have highest wind-chill

values in mid-winter closely followed by the Antarctic stations.

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55410. THOMAS, MORLEY K. Winter season snowfall data. Ottawa, Dec. 16, 1957. 20 p. tables. Mimeo. (Canada. Meteorological Branch. Circular 2994, CLI–17.) 34 refs.

Survey of snowfall data; its accuracy, and interpretation, snowfall measurement. Data including such from about 50 stations in the Arctic, are appended. Snowfall occurs at every weather station in Canada; some northern stations have recorded snow during every month of the year. ***Copy seen:*** DWB.

55411. THOMPSON, HUGH RALPH, 1926– . The old moraines of Pangnirtung Pass, Baffin Island. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 42–49, 4 illus., text map, cross-section.) 16 refs.

Results of observations made during the 1953 Baffin Island Expedition of the Arctic Institute of North America. Most convincing signs of past glaciation in Pangnirtung Pass (66°06′ N. 65°59′ W.) are the so-called "old moraines." Various hypotheses as to their origin are considered. The features are probably of complex origin, but consist primarily of moraines deposited by trunk glaciers flowing in the Pass. Deposits have been reworked and dissected by rivers; melting of ice cores in the moraines has further complicated topography. Disappearance of the trunk glaciers is tentatively estimated at 500 A.D. At least two main advances of the tributary glaciers have occurred, one closely following disappearance of the trunk glaciers, the other not later than 1850. ***Copy seen:*** DGS.

55412. THOMSEN, BRUNO. On sand samples from the west coast of Greenland 1: an examination of the contents of minerals in a number of sand samples from the northern part of the Holsteinsborg District. København, C. A. Reitzel, 1957. 25 p., plate, maps, tables, graphs. (Meddelelser om Grønland, bd. 157, nr. 2.) 12 refs.

"Forty-one samples of sand from rivers and beaches from three fjords north of Holsteinsborg were analyzed. On the basis of the minerals of the heavy fractions, the samples may be divided into three groups: group E derived from enderbitic gneiss with the main minerals, hornblende, hypersthene, and diopside, while garnet plays a secondary role only; group G chiefly derived from granulitic rocks where garnet is dominating with sillimanite and rutile as characteristic components, while the content of hornblende, hypersthene, and diopside is relative low; and finally group M, that with the main minerals, hornblende, hypersthene, diopside, and garnet and a slight content of sillimanite and rutile shows that the sample material derives from enderbitic as well as granulitic rocks."—Author's abstract.

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55413. THOMSEN, RUDI. Grønlandske medailleminder. (Grønland, Jan. 1957. nr. 1, p. 1–10, illus.) Text in Danish. ***Title tr.:*** Greenland medals.

Describes medals awarded for contributions to the exploration of Greenland and lists the recipients. ***Copy seen:*** DLC.

55414. THOMSEN, RUDI. Mønter og medailler i Grønlands jord. (Grønland, Jan. 1958, nr. 1, p. 1–10, illus.) Text in Danish. ***Title tr.:*** Coins and medals in Greenland's soil.

Describes Dutch coins and medals recovered in various places in West Greenland. They were brought to the country during the 17th and 18th centuries, period of great Dutch activity in Greenland, and have been used by the Greenlanders' as ornaments.

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55415. THOMSEN, S. Experience on Northwest Highway System shows muskeg increases road costs two to three times. (Roads and engineering construction, Apr. 1957. v. 95, no. 4, p. 101–104, 148–50, illus.) Ref. in text.

Discusses construction, maintenance, and economic problems connected with muskeg along the Alaska Highway. Ways of overcoming these problems by displacement or excavation, or by flotation methods are weighed, and economics involved in construction and maintenance of the gravel road by grading during settling in the muskeg, are discussed. One consolidation test indicated a settlement of 50% of the depth under a load of 1 ton/sq. ft. Successive ice sheets, building formations up to 10 ft. thick and 0.25–0.50 mi. long, create driving hazards, and heavy maintenance is necessary for the first years for roads built over organic terrain. ***Copy seen:*** DLC.

55416. THOMSON, ANDREW, 1894– . Lowest temperature in Canada.

(U.S. Weather Bureau. Monthly weather review, Aug. 1958. v. 86, no. 8, p. 298.)

Comment on No. 55156 and clarification of apparent discrepancy in temperature record. Lowest temperature recorded in Canada was −81° F. at Snag, Yukon Territory, Feb. 3, 1947.

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55417. THOMSON, J. G. Winter roads over muskeg. (Canadian mining and metallurgical bulletin, Mar. 1957. v. 50, no. 539, p. 159–62.) *Also pub. in* Canadian Institute of Mining and Metallurgy, Transactions, 1957, v. 60, p. 101–104.)

Describes recommended methods of construction of winter roads, based on experience of pulp and paper mills in northern Ontario; methods which result in a recoverable road, usable for as long as ten years. Route selection, provision of usable pavement and subgrade, and frequent and prompt maintenance are discussed. Miscellaneous procedures which may add to the strength or life of the road, reduce costs, etc., are noted; methods of conversion to all-weather road are mentioned. ***Copy seen:*** DGS.

THOMSON, J. G., *see also* National Research Council of Canada. Muskeg research conf. *1957*. No. 53502.

THOMSON, J. G., *see also Oil in Canada.* Northern . . . muskeg . . . *1958*. No. 53714.

THOMSON, S., *see* National Research Council of Canada. Muskeg research conf. *1957*. No. 53502.

THOMSON, SHEILA C., *see* Groves, J. W., *and others.* Notes on fungi . . . northern Canada, III . . . *1958*. No. 51404.

55418. THORÉN, RAGNAR. Fotografisk rekognoscering och tolkning av havsisen i Arktis. (Ymer 1958. årg. 78, häfte 4, p. 263–79, illus., map.) 17 refs. Text in Swedish. Summary in English. ***Title tr.:*** Photographic reconnaissance and interpretation of sea ice in the Arctic.

Photointerpretation as a science was introduced by the author at the International Society of Photogrammetry's world congress at the Hague in 1948. Its Commission VII, Photographic interpretation, was organized and divided into six working groups, one of them for interpretation of ice. The importance of this science is discussed. Four oblique aerial photographs showing different parts of the Arctic Basin and taken by the author at night, May 23–24, 1958, with a Swedish-built Hasselblad camera are presented and interpreted. The general movements of the ice in the eastern and western parts of the Basin are described as well as different types of ice (Siberian ice, north polar ice, ice islands). The different ice conditions in the eastern and western parts of the Basin due to the influence of the Gulf Stream in the latter are treated in some detail.

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55419. THORÉN, RAGNAR. Med svenska örlogsmän i Arktis. (Tidskrift i sjöväsendet, Nov. 1957. årg. 120, häfte 11, p. 853–71, illus., map.) Text in Swedish. ***Title tr.:*** With Swedish men-of-war in the Arctic.

Describes voyage of the torpedo boat *Älvsnabben* to Kinnvika (80°03′ N. 18°18′ E.) on Nordaustlandet in July–Aug. 1957 with members of a Swedish-Finnish-Swiss expedition. Wildlife observed during the unloading at Kinnvika, stops at Ny Ålesund and Longyearbyen on the return voyage, and geology of the area are commented upon.

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55420. THORN, W., *and others.* Beitrag zum Stoffwechsel von Leber, Niere, Herz und Skeletmuskulatur in Asphyxie, Anoxie und bei Hypothermie. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 265, Heft 1, p. 34–54, illus., tables.) 38 refs. Text in German. *Other authors:* J. Heimann, B. Müldener, *and* G. Gerken. ***Title tr.:*** Contribution to the metabolism of the liver, kidney, heart and skeletal muscles during asphyxia, anoxia and hypothermia.

An extensive study of tissue metabolism of rabbits, including conditions in hypothermia of 26° C. In the latter case, all reactions slowed down, according to drop in temperature. The organs do not show an increase in lactic acid, which excludes the theory claiming acidosis in hypothermic animals, due to limited O_2-supply. ***Copy seen:*** DNLM.

55421. THORN, W., *and others.* Stoffwechselvorgänge im Gehirn und Herz unter ischämischer und anoxischer Belastung bei normaler und herabgesetzter Körpertemperatur. (Pflügers Archiv für gesamte Physiologie, Dec. 1957. Bd. 266, Heft 1, p. 42–44.) Text in German.

Other authors: H. Scholl *and* B. Müldener. ***Title tr.:*** Metabolism of brain and heart during ischemic and anoxic stress at normal and lowered body temperature.

Report on experiments with normo- and hypothermic (26° C.) rabbits made ischemic or anoxic. ATP, ADP, inorganic phosphate, phosphocreatin, lactic acid and other metabolites in brain and cardiac muscle were studied. Changes in both organs were found to be similar.

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THORNE, ROBERT L., *see* Lorain, S. H., *and others.* Lode-tin mining at Lost River . . . *1958.* No. 52911.

THORNTHWAITE, CHARLES WILLIAM, 1899– , *see* Mather, J. R., *and* C. W. Thornthwaite. Microclimatic investigations . . . *1958.* No. 53181.

55422. THORSTEINSSON, RAYMOND, *and* **E. T. TOZER.** Geological investigations in Ellesmere and Axel Heiberg Islands, 1956. (Arctic, 1957. v. 10, no. 1, p. 3–31, 11 illus., 4 diagrs., map.) 19 refs.

Contains account of a Canadian Geological Survey reconnaissance of western Ellesmere and eastern Axel Heiberg Island carried out during Apr.–Sept. 1956. The various journeys from Eureka by dog sled, on foot, and by powered canoe are reported in detail with information on the snow and ice conditions encountered and mention made of an unexpected shore ice condition on the east side of Eureka Sound. Eskimo remains were found on both islands: tent rings, animal traps, sled runners, and a tomb. Wildlife observed is listed in appendix with note of numbers, localities, etc. Geological results are outlined and the previous geologists' work on rocks of Ordovician, Silurian, Pennsylvanian, Permian, Triassic, Jurassic, Cretaceous and Tertiary ages are described. Special emphasis is given to structural features, Tertiary rocks affected by deformation cover a greater area than formerly believed and lie in a belt east of rocks affected by Paleozoic deformation. Thrust faulting, unconformities, and gypsum piercements are considered.

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THORSTEINSSON, RAYMOND, *see also* Fortier, Y. O., *and others.* Geologiîa . . . neftenosnosti Kanadskogo arkticheskogo arkhipelaga. *1958.* No. 50954.

THORSTEINSSON, RAYMOND, *see also* Harker, P., *and* R. Thorsteinsson. Permian section on Grinnell . . . *1958.* No. 51590.

55423. THULIN, GUSTAV. Über die Phylogenie und das System der Tardigraden. (Hereditas, 1928. bd. 11, häfte 2–3, p. 207–266, 29 illus.) 70 refs. Text in German. ***Title tr.:*** On the phylogeny and system of Tardigrada.

Contains data on the systematics, morphology and phylogeny of water bears, followed by a synopsis of about a hundred species. Five genera and eleven species are described as new, two from the Abisko region in Lapland: *Isohypsibius septentrionalis* n. sp. (Njulja) and *Diphascon arduifrons* n. sp. (Nissontjåkko). A brief survey of phylogeny of tardigrades is appended.

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THUMAN, WILLIAM C., *see* Robinson, E., *and others.* Ice fog . . . *1957.* No. 54343.

55424. THUNBORG, FOLKE. Glesbebyggelsens kommunikasjonsproblem. (Svenska vägföreningen. Tidskrift, Sept. 1954. årg. 41, häfte 7, p. 282–86, illus.) Ref. Text in Swedish. ***Title tr.:*** Communication problems of sparsely populated areas.

Referring to Gunnar Hoppe's study on the roads in Norrbotten, Sweden (No. 29706), the development since 1943 is summarized. The population without road facilities (5,321 in 1943) has been reduced to about 3,400 by 1954, excluding nomadic Lapps. Rivers and lakes provide additional communication routes in the summer season; most heavy transportation is carried out in the winter, when lakes and fields are frozen.

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55425. THURÁNSZKY, K., *and* **C. CSETRY.** Hypothermie und intravasale Aggregation (Sludge). (Acta physiologica, *Budapest,* 1957. t. 11 (suppl.), p. 49–50.) Text in German. ***Title tr.:*** Hypothermia and intravasal aggregation (sludge).

Summary of experiments with cats made hypothermic to a blood pressure of 40 mm. Hg, with normothermic controls having blood pressure reduced to the same degree. In all cases hypothermia was found to reduce erythrocyte sludging caused by reduced circulation.

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THURSTON, WILLIAM R., *see* Arctic sea ice conference. *1958.* No. 49364.

55426. TĬABIN, N. I. K voprosu o proĭavlenii solnechnoĭ aktivnosti v atmosfere Zemli. (Problemy Arktiki, sbornik stateĭ, 1957, vyp. 1, p. 67–71, graph.) 5 refs. Text in Russian. ***Title tr.:*** The display of solar activity in the atmosphere of the earth.

Discusses the effects of sunspots and their cycles, as well as magnetic changes and ultraviolet light which accompany the rise or decline of sunspots. The relationship of sunspot cycles to atmospheric circulation for the 1891–1955 period is examined and graphed (p. 69) according to the Vangengeĭm classification. Atmospheric circulation in the Arctic is outlined through the first half of this century in relation to solar activity: the latter is shown to affect not only the intensity of atmospheric circulation, but its type as well.

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TIBBITTS, C. CHASE, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

TICKTIN, HOWARD E., *see* Ehrmantraut, W. R., *and others.* Cerebral hemodynamics and metabolism in accidental hypothermia. *1957.* No. 50711.

55427. *TIDSSKRIFT FOR HERMETIKINDUSTRI.* Opbygningen av den russiske fiskeindustri; en fjasko? (Tidsskrift for hermetikindustri, Sept. 1935. årg. 21, nr. 9, p. 289.) Text in Norwegian. ***Title tr.:*** Development of the Russian fishing industry; a fiasco?

Russian development of a fishing industry capable of supplying domestic needs and some export is discussed. Conditions in Murmansk and Vladivostok are reported by a German, after three years' service as fish inspector in Murmansk. Idle factories, poor conditions for personnel aboard ships, and lack of training in handling of equipment are mentioned as characteristic of the industry at that time.

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55428. TIEDEMANN, JOHANNES. Eisbrecher "Karhu." (Schiff und Hafen, Nov. 1958. Jahrg. 10, Heft 11, p. 887–97, illus., tables, diagrs., map.) Text in German. ***Title tr.:*** The ice-breaker *Karhu.*

Discusses briefly the importance of ice-breaking service to Finnish shipping, and surveys Finland's ice-breaker fleet 1890–1959, with brief descriptions and tabulated specifications of the most important vessels. The *Karhu,* built by Sandvikens Skeppsdocka, Helsinki, and launched in Oct. 1957, is described in detail with cross-sections, diagrams and photos. Of 3,370 t.d.w., it has 7,500 h.p. diesel-electric engines and four propellers (two fore, two aft). A sister-ship, the *Murtaja* (same builder) was launched in Sept. 1958 and is to be ready for service in 1960.

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55429. TIEDEMANN, JOHANNES. Eisbrecher "Oden" mit dieselelektrischem Antrieb. (Schiff und Hafen, Feb. 1958. Jahrg. 10, Heft 2, p. 87–98, illus., tables, plates, diagrs.) Text in German. ***Title tr.:*** The ice-breaker *Oden* with diesel-electric drive.

A brief history is given of Sandvikens Skeppsdocka (Helsinki, Finland), where 35 ice-breakers have been built in the last 20 years. The 10,500 h.p. Swedish ice-breaker *Oden* is described in detail.

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TIESSEN, H., *see* Irwin, R. W., *and* H. Tiessen. Note . . . device for frost control . . . *1958.* No. 51963.

TIETZ, WILLIAM J., *see* Morrison, P. R., *and* W. J. Tietz. Cooling and thermal conductivity . . . Alaskan mammals. *1957.* No. 53407.

55430. TIFFANY, LEWIS HANFORD, 1894– . Geographic distribution of the North American species of the Oedogoniaceae. (American journal of botany, Mar. 1955. v. 42, no. 3, p. 293–96, 4 text maps.) 15 refs.

Distributional data on the algal genus *Oeodogonium* include five species from Greenland and one from Alaska; and on genus *Bulbochaete,* five species from Alaska and seven from Greenland. None of the Oedogoniaceae are known to inhabit salt water, although three species of *Oedogonium* and one of *Bulbochaete* have been reported from slightly brackish water; *Oedocladium* is a terrestrial genus.

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55431. TIKHOMIROV, BORIS ANATOL'EVICH. Dannye o poleznykh rasteniiakh ėskimosov iugo-vostochnogo poberezh'ia Chukotki. (Botanicheskiĭ zhurnal, Feb. 1958. t. 43, no. 2, p. 242–46.) 34 refs. Text in Russian. ***Title tr.:*** Data on useful vegetation of

Eskimos of the southeast coast of Chukotka.

Reviews Russian and Western literature on edible and medicinal plants known to coastal Chukchis, Yakuts and Eskimos, noting the northward diminishing toxicity of poisonous flora. Plants used primarily for food by the Eskimos of Chaplino were studied by author during his botanical investigations of Chukotka's hot-spring region, in summer 1956. A list is given of lower (three families) and vascular plants arranged in 17 families, with notes on species, vernacular names, and uses. Most of the useful plants belong to the families Polygonaceae (four species), Leguminosae (two), Rosaceae (five), and Vacciniaceae (two). The nutritional value of these plants eaten raw and/or boiled is discussed. The study of food and medicinal plants used by Asiatic and American Eskimos is suggested as a possible clue in tracing their ancestral relationship. ***Copy seen:*** DLC.

55432. TIKHOMIROV, BORIS ANATOL'EVICH. Dinamicheskie îavleniîa v rastitel'nosti pîatnistykh tundr Arktiki. (Botanicheskiĭ zhurnal, Nov. 1957. t 42, no. 11, p. 1691–1717, 13 illus., 3 tables.) 54 refs. Text in Russian. ***Title tr.:*** Dynamic phenomena in the vegetation of spotted tundras in the Arctic.

Study, based chiefly on investigations in the central Taymyr Peninsula, of spotted tundras as an element of the natural complex of arctic vegetation, and of their characteristic structural features. At least six different types of spotty tundras can be distinguished: *Dryas punctata*+*Cassiope tetragona*+*Carex hyperborea*+miscellaneous green mosses; *Carex hyperborea*+*Dryas punctata*+miscellaneous green mosses; etc. Characteristics of the soil regimes of different parts of such tundras are given (table 1). The main types of spotted tundras and features peculiar to their vegetation are discussed and figured (fig. 7–12). Wind and corrasion of the snow cover are the principal factors contributing to tundra denudation. Regeneration of the vegetation on bare spots of spotted tundra is a slow process, in which cryptogams and bacteria play the leading part. Bacteria come first, followed in turn by algae such as *Stratonostoc commune* (chemical analyses table 2–3), green mosses, liverworts and lichens (listed), and (later) flowering plants. These two processes, the denudation of the tundra and re-vegetation of bare spots, going on continuously and simultaneously, are the most important phenomena of the dynamics of spotted tundra vegetation. ***Copy seen:*** DLC.

55433. TIKHOMIROV, BORIS ANATOL'EVICH. K kharakteristike flory i rastitel'nosti termal'nykh istochnikov Chukotki. (Botanicheskiĭ zhurnal, Sept. 1957. t. 42, no. 9, p. 1427–45, 9 illus., table.) 29 refs. Text in Russian. ***Title tr.:*** On the character of the flora and vegetation of the hot springs in the Chukotsk Peninsula.

Six groups of hot springs in the area 64°26′–66°51′ N. 171°30′–172°63′ W. are considered: environmental conditions briefly characterized, and main features of the vegetation discussed with reference to many flowering plants, trees and shrubs, lichens and mosses, the group of thermophytes and halophytes being especially noted. The activity of the suslik, a ground squirrel, *Citellus undulatus*, and its influence on the vegetation are discussed. The hot-spring flora of the southeastern section of the peninsula is comparatively rich, with predominance of moderate boreal elements (trees, shrubs and herbaceous species) and the role of arctic species insignificant. This region may be considered a relict of the flora of Asian Beringia, resembling that of the St. Lawrence Bay. Appended is summary table of the vascular thermophytes (Chaplinsk and Senyavinsk groups in the Chukotka and Kamchatka hot springs), with ecological and distributional data. A special study of hot springs for medicinal purposes and industrial use (vegetable hothouses) is recommended. ***Copy seen:*** DLC.

55434. TIKHOMIROV, BORIS ANATOL'EVICH. Nekotorye zadachi izucheniîa rastitel'nogo pokrova Sovetskoĭ Arktiki. (Akademiîa nauk SSSR. Vestnik, July 1958. god 28, no. 7, p. 45–48.) Ref. Text in Russian. ***Title tr.:*** Some objectives in study of the vegetation of the Soviet Arctic.

Investigation of the vegetation in the Soviet Arctic needs to be substantially extended (despite recent progress), especially in Siberia: eastern coastal regions of Taymyr Peninsula, the area between the lower Lena and Chaunskaya Bay, the Cherskiy, Verkhoyanskiy, Anadyrskiy, Koryakskiy Ranges; forest-tundra areas especially need increased study. An Academy of Sciences scientific station at Lake Taymyr and several observation

points in other arctic localities should be set up. ***Copy seen:*** DLC.

55435. TIKHOMIROV, BORIS ANATOL'EVICH. O nesushchestvovavsheĭ ėkspeditsii Benkendorfa na r. Indigirku. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiâ, Mar.–Apr. 1958. t. 90, vyp. 2, p. 163–66.) 14 refs. Text in Russian. ***Title tr.:*** On the non-existent Benkendorf expedition to the Indigirka River.

Discloses that this expedition of 1846 for investigation on the mammoth cited in the literature for more than a century, should be considered as non-existent in accordance with proved facts; hence Benkendorf's "finds" and "contribution" on the nourishment of the Siberian mammoth are entirely misleading. Rectification of this matter is attributed to E. D. Zaklinskaâ (No. 33020) and others cited; new sources are discussed.

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55436. TIKHOMIROV, BORIS ANATOL'EVICH. O prirodnykh usloviâkh i rastitel'nosti ėpokhi mamonta na severe Sibiri. (Problemy Severa, 1958. vyp. 1, p. 156–72, illus., table, maps.) 33 refs. Text in Russian. ***Title tr.:*** Natural conditions and vegetation in northern Siberia during the times of the mammoth.

Comprehensive review with information on the ideas about mammoth food at the turn of the century; the Berezovka mammoth and reconstruction of the contemporary vegetation from its stomach contents; present distribution of plants the pollen of which was found in the stomach; the Taymyr find and reconstruction of conditions of its lifetime; considerations concerning the time of dying-out of these animals; prospects of further finds in this region. Map (p. 157) locates 42 mammoth and rhinoceros finds 1692–1948 in northern Siberia.

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55437. TIKHOMIROV, BORIS ANATOL'EVICH. Ob okhrane lesov Kraĭnego Severa. (Priroda, Dec. 1957. god 46, no. 12, p. 35–37, 2 illus.) 3 refs. Text in Russian. ***Title tr.:*** Forest protection in the far North.

Contains descriptions of the northernmost woody vegetation on the island Ary-Mas on Novaya River (72°37′ N.) of Krasnoyarskiy Kray and notes on forest outposts in the lower Lena River basin on Tit-Ary Island in the Lena delta. The damage to these remarkable forests by man and reindeer is deplored; state protection is recommended.

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55438. TIKHOMIROV, BORIS ANATOL'EVICH, *and* **E. V. DOROGOSTAĬSKAÂ.** Proniknovenie novykh rasteniĭ vo floru Arktiki v sviâzi s razvitiem sel'skogo khozâĭstva. (Akademiiâ nauk SSSR. Izvestiâ, seriiâ biologicheskaâ, Sept.–Oct. 1957. no. 5, p. 601–610, 3 illus., table.) 13 refs. Text in Russian. ***Title tr.:*** Penetration of new plants into arctic flora in connection with development of agriculture.

Contains a study of introduction by man, of new plants into the Tiksi Bay region (71°41′ N. 129° W.). Climatic conditions, precipitation, and length of cultivation of agricultural plants are discussed. Twenty-seven species of introduced plants, collected in 1955 at the Tiksi Agricultural Station are listed with data on: biological type, locality, date of collection and phenophase, distribution in Yakutia. Special attention is given to weeds. Successful cultivation of cabbage, radish, lettuce, onions in the open, and cucumbers and tomatoes (in hothouses) is claimed.

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TIKHOMIROV, BORIS ANATOL'EVICH, *see also* Akademiiâ nauk SSSR. Botanicheskiĭ institut. Rastitel'nost' Kraĭnego Severa SSSR . . . *1958.* No. 49163.

TIKHOMIROV, BORIS ANATOL'EVICH, *see also* Sokolovskaâ, A. P. Pyl'tsa rasteniĭ Arktiki. *1958.* No. 55046.

55439. TIKHONENKOV, I. P., *and others.* Pervaâ nakhodka ėl'pidita v Soûze. (Akademiiâ nauk SSSR. Doklady, June 11, 1957. t. 114, no. 5, p. 1101–1103, diagr., 2 tables.) 4 refs. Text in Russian. *Other authors:* E. I. Semenov *and* M. E. Kazakova. ***Title tr.:*** First find of elpidite in the U.S.S.R.

Contains a description of a rare mineral known previously from southern Greenland, found in 1949 in some pegmatitic rocks of the Lovozero massif in Kola Peninsula. It is white and has specific gravity of 2.615. Comparative crystallographic and chemical analyses (tabulated) of specimens from Lovozero, and from Narssarssuaq, southwest Greenland, show that they are identical. The chemical formula of elpidite is $Na_2ZrSi_6O_{15}.3H_2O$. ***Copy seen:*** DLC.

55440. TIKHONOV, M. Kostorezy. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 23, illus.) Text in Russian. ***Title tr.:*** Bone carvers.

Note on Chukchi and Eskimo bone carvings recently shown in an art exhibition in Magadan, with photos.

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TIKHOVA, E. P., *see* Aderikhin, P. G., *and* E. P. Tikhova. Izmenenie t͡sveta poverkhnosti pochv Severa. *1958.* No. 49118.

55441. TIL'MAN, S. M., *and* **D. F. EGOROV.** Novye dannye po stratigrafii i tektonike pravoberezh'ia r. Kolymy v ee nizhnem techenii. (Akademiia nauk SSSR. Doklady, Mar. 11, 1957. t. 113, no. 2, p. 421–24, text map.) 5 refs. Text in Russian. ***Title tr.:*** New data on the stratigraphy and tectonics of the right bank of the Kolyma River in its lower reaches.

The stratigraphic structure of the Anyuy Range and Oloyskiy deflection in the Chauna Bay region on the East Siberian Sea coast is schematically represented. The Anyuy folding system may be divided into three principal structural elements: northern and southern anticlinal zones and a central synclinal zone, consisting of Precambrian, lower Paleozoic and Mesozoic deposits. The more detailed structure is shown (text map). The peculiar features of Anyuy folding zone are the absence of pyroclastic formations and numerous intrusions of granodiorites. On the south it is adjoined by the Oloyskiy trough of Upper Jurassic—Lower Cretaceous age. Its lower part consists of sandy limestones and tufaceous sandstones with numerous *Aucella* species, overlain by Upper Cretaceous formations of sandstones, bituminous shales, tuffs, and tufaceous sandstones with imprints of *Podozamites, Baiera, Cladophlebis, Phoenicopsis, Podocaroxylon* and *Protocedroxylon* species.

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55442. TIMAKOVA, M. N. Pitanie i pishchevye vzaimootnosheniia navagi i korŭshki Onezhskogo zaliva Belogo moria. (Akademiia nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniŭ Belogo moria, 1957. vyp. 1, p. 185–221, illus. tables, map.) 35 refs. Text in Russian. ***Title tr.:*** Food and mutual food relations of the navaga and smelt of the Onega Bay, White Sea.

Study based on material collected at 12 stations, representing the whole Bay. The diet of the navaga (arranged in taxonomic order), changes with age of the predator, seasonal changes in quantity and composition of food, and corresponding aspects in the diet of smelt are analyzed and discussed. The relation between the diets of the two species is evaluated in detail according to months, and locations. No, or an insignificant food competition was found to exist between the two species.

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TIMAKOVA, M. N., *see also* Palenichko, Z. G., *and* M. N. Timakova. Gidrobiologicheskaia . . . Kuz . . . *1957.* No. 53836.

55443. TIMASHEV, ANATOLIĬ KONSTANTINOVICH. Voeĭkov. Moskva, Izd-vo "Molodaia gvardiia," 1957. 286 p. illus., maps. 57 refs. Text in Russian.

Biography of the outstanding Russian climatologist, meteorologist and geographer, Aleksandr Ivanovich Voeĭkov, 1842–1916. His plans for Russian expeditions to explore Novaya Zemlya and other arctic areas (p. 50–52) and for development of tundras and northern regions (p. 236–37) are noted. A chronology of his life and a selective list of his works and of publications about him are appended, p. 281–85.

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55444. TIMOFEEV, D. V. Ėkspluatat͡siia i stroitel'stvo ėlektrosetevogo khozi͡aĭstva v usloviiakh Kraĭnego Severa. (Ėlektricheskie stant͡sii, July 1957. god 28, no. 7, p. 52–56.) Ref. Text in Russian. ***Title tr.:*** Operation and construction of electric transmission lines in the far North.

The effects of severe conditions in the far North on the construction and operation of electrical networks are discussed. Permafrost, air temperatures to −51° C. in winter, winds to 37 m./sec., and the heavy moisture content of the subsoil are the most important factors; new construction methods are required. The high resistance of frozen ground makes it unsuitable for grounding of wires, which should be extended to the bottom of unfrozen water reservoirs or to thawed islands in the frozen strata. The soil around poles should be covered by moss, peat, or other thermo-insulating materials to protect the poles from frost heaving.

Heaving of the ground can be eliminated by reduction of moisture around the poles or by preservation of the permafrost conditions during periods of thaw. The pole holes should be made by the steam needle method or drill of the same diameter as the pole. The electric equipment and especially oil switches should be placed in a closed compartment and air around them warmed to temperature not above 0° C. in winter, also in spring and fall, to diminish humidity. Transformers should be set up outside, even at air temperature of −35° C. Underground cable should be placed in conduits for protection against ground deformation, especially on slopes. Preservatives are not required for wood poles because of the low bacterial activity in permafrost areas. ***Copy seen:*** DLC.

55445. TIMOFEEV, T. Klub sportsmenov. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 25, col. plate.) Text in Russian. ***Title tr.:*** The athletic club.

Nearly 1,300 girls and boys use training facilities of the Palace of Sport (Dvorets fizkul'tury) in Magadan.

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55446. TIMOFEEV, V. T. Atlanticheskie vody v Arkticheskom basseĭne. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 41–51, maps, tables.) 7 refs. Text in Russian. Translated into English by John Miller, American Meteorological Society, for the Geophysics Research Directorate, Cambridge, Mass. Copy at CaMAI. ***Title tr.:*** Atlantic water in the Arctic Basin.

Analysis of data on: temperature, thickness, area, volume, heat content, currents (direction and velocity to 1,000 m. depth) and water discharge in the Barentsburg-ice edge hydrological section across the Greenland Sea. The main mass of Atlantic water, after crossing the Nansen Rise, between Greenland and Spitsbergen, travels eastward along the Eurasian continental slope at approx. 930 km./yr. or 2.9 cm./sec., as far as the Beaufort Sea, where it loses its heat content, increases in area and volume. The mean velocity for the complete passage around the Arctic Basin is calculated to be 375 km./yr. or 1.2 cm./sec.; thus the Atlantic water enters the Barents Sea in six months, the Kara Sea in 1.5 yrs., the Laptev Sea in 2.5 yrs., the East Siberian Sea in four years and the Chukchi Sea in five yrs. Water leaves the stream continuously along the way, moving northward toward the Pole and toward Greenland. After completing the circumpolar passage, the remaining water turns southward to join the East Greenland current. Thickness of the Atlantic water layer varies irregularly from 694 m. as it crosses the Nansen Rise, to 512 m. as it turns to join the East Greenland current. Data are tabulated by sectors and depths; maps show distribution of mean and maximum temperature, thickness of the layer, depth of maximum temperature, and a schematic chart of the circulation pattern.

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55447. TIMOFEEV, V. T. O formirovanii donnykh vod t͡sentral'noĭ chasti Arkticheskogo basseĭna. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 1, p. 29–33, tables.) 6 refs. Text in Russian. ***Title tr.:*** The formation of bottom water in the central part of the Arctic Basin.

Having reviewed the ideas of Nansen and P. P. Shirshov on the problem, author maintains, on the basis of temperature and salinity, that this water is formed in the Greenland Sea during fall and winter. Thence it moves across the Nansen Rise and sinks into the Basin. Some of this water may have origin in the Atlantic or in the seas bordering the Arctic Basin. ***Copy seen:*** DLC.

55448. TIMOFEEV, V. T. Priblizhennoe opredelenie teplovogo balansa vod Arkticheskogo basseĭna. (Problemy Arktiki, 1958. vyp. 4, p. 23–28, tables.) 5 refs. Text in Russian. ***Title tr.:*** Approximate determination of the heat balance of the Arctic Basin waters.

A physical-mathematical analysis of thermal gains and losses of the water mass and of the atmosphere above it, and the heat exchange between them, based on year-round observations. The role of thermal factors in ice formation, the significance of influx of Atlantic waters, etc., are also discussed. The annual heat gain is 507.474×10^{12} kcal., of which 42% is supplied by Atlantic waters, 7% is introduced by Pacific waters, and 2% by river water. The annual heat loss is 507.474×10^{12} kcal. of which 52% is lost to the atmosphere by arctic seas, 34% by the Arctic Basin, and 14% is carried out into the Greenland Sea.—From SIPRE. ***Copy seen:*** DLC.

TIMOFEEV, V. T., *see also* Dolgin, I. M., *and* V. T. Timofeev. Nauchnai͡a inspekt͡sii͡a . . . *1958.* No. 50593.

55449. TIMONOV, V. V. K voprosu o gidrologicheskom rezhime Gorla Belogo mori͡a; po rabotam 1922 i 1923 gg. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovani͡a moreĭ SSSR, 1925. vyp. 1, p. 7–56, illus., tables, maps, incl. fold.) Text in Russian. Summary in German. ***Title tr.:*** The hydrological regime of the White Sea narrows; based on work in 1922 and 1923.

One longitudinal and three cross profiles were made of the narrows between the White and Barents Seas. Temperature, salinity, currents and tides, and the changes in them were the main problems studied, with the aim of elucidating exchange of water masses. A high exchange of water was observed as caused by tidal currents, also by fresh water coming down from the land with the more salty water from the Barents Sea forming currents compensating the less saline outflow. ***Copy seen:*** DLC.

55450. TIMONOV, V. V. Opyt nabli͡udeni͡a nad pul'sat͡sieĭ morskogo techeni͡a. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovani͡a moreĭ SSSR, 1934. vyp. 20, p. 43–47, illus., tables.) Text in Russian. Summary in German. ***Title tr.:*** Experimental observation on the pulsation of sea currents.

Account of observations in the Kandalaksha Bay from the vessel *Samoyed* in Oct. 1931. An adaptation of the Ekman-Merz apparatus was used. Tidal conditions were studied at depths of 5, 50, and 200 meters. The results suggest the presence of pulsations in the direction of the tidal currents. ***Copy seen:*** DLC.

55451. TIRÉN, OLOF. Skogsbetet på avskrivning i Norrland. (Skogen, *Stockholm,* Apr. 15, 1955. årg. 42, nr. 8, p. 160–61, +, illus.) Text in Swedish. ***Title tr.:*** Elimination of forest pastures in Norrland.

Farm forests are less economic as pastures than when cultivated. The changeover is slow, however, due to high cost of clearing and development. State subsidies are recommended to speed the process. ***Copy seen:*** DA.

55452. TIRON, K. Prilivy Kandalakshskogo zaliva. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovani͡a moreĭ SSSR, 1934. vyp. 20, p. 5–14, illus., table, map.) 20 refs. Text in Russian. ***Title tr.:*** The tides of Kandalaksha Bay.

Method of recording White Sea tides at Tar-Guba, Kandalaksha Bay (66°41′ N. 33°54′ E.) and data for March 1933 are reported. In addition to the tidal elements, the wind conditions were studied. The material is submitted to a theoretical analysis. ***Copy seen:*** DLC.

TISHKOVET͡S, I. V., *see* Kocherov, P. N., *and* I. V. Tishkovet͡s. Iz opyta postroĭki ledokolov-buksirov. *1958.* No. 52350.

TITOVSKIĬ, I., *see Radio.* V Arktike . . . *1957.* No. 54194.

TITUS, R. L., *see* Thomas, M. K., *and* R. L. Titus. Abnormally mild temperatures . . . Arctic . . . *1958.* No. 55408.

55453. T͡SI͡ULINA, L. N. Ocherk lesnoĭ rastitel'nosti verkhnego techeni͡a r. Aldana. (Akademi͡a nauk SSSR. I͡Akutskiĭ filial, *Yakutsk.* Institut biologii Trudy, 1957. vyp. 3, p. 83–138, illus. tables, map.) About 60 refs. Text in Russian. ***Title tr.:*** Outline of forest vegetation of the upper course of the Aldan River.

A study based on a reconnaissance march made in the summer of 1950. Four kinds of forest areas are distinguished and described: (1) thin forests below the barren mountain area; (2) coniferous and deciduous forests of the sandy soils; (3) similar forests on crystalline ground, and (4) coniferous and deciduous forests on limestone formation. These last are most extensively treated as they occupy the largest and most important source of timber in the area. Their extent, types, species composition of trees and of ground cover, age and quality of timber, etc. are discussed and illustrated. The forests of sandy soil (2) occupy the second place in detail of description and apparently in economic importance. A list of 123 plants (Latin and Russian names) is appended.

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T͡SI͡UL'PANOVA, A. F., *see* L͡Iubashenko, S. I͡A., *and* A. F. T͡Si͡ul'panova. Bolezn' Aueski . . . *1957.* No. 52868.

55454. T͡SI͡UMENT͡SEV, N. V. K voprosu o geologicheskom vozraste stoi͡anki Buret'; iz polevykh nabli͡udeniĭ 1939–1940 gg. (Akademi͡a nauk SSSR. Institut istorii material'noĭ kul'tury. Krat-

kie soobshcheniĭa, 1941. vyp. 10, p. 31–40, illus., diagrs.) 2 refs. Text in Russian. ***Title tr.:*** The problem of the geological age of the Buret' site; observations made during the 1939–1940 field work.

Discusses the geological structure of the upper Angara at its confluence with the Belaya River, and describes the argillaceous and sandy loam deposits down to the alluvial sand stratum. The paleolithic Buret' site is dated into the end of the last glacial or beginning of the postglacial era.

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55455. TIŪREMNOV, SERGEĬ NIKOLAEVICH, 1905– , *and* I. P. LARGIN. K voprosu metodiki oprobovaniĭa zalezheĭ pri razvedke torfiânykh mestorozhdeniĭ. (*In:* R.S.F.S.R. Glavnoe upravlenie torfiânogo fonda. Sbornik stateĭ . . . 1956, p. 5–45, diagrs., tables.) 13 refs. Text in Russian. ***Title tr.:*** Methods of testing of bed samples in surveying peat deposits.

Discusses a new classification of peat types, structural characteristics of the beds and geomorphology of the deposits. New types of sample are described, their number and disposition on the field related to local bed structure, natural conditions and properties. Attention is given to the ash content, moisture in different layers and on different parts of the peat field. Survey data of various fields at different depths are tabulated and statistically analyzed.

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55456. TIŪTIŪNOV, I. A., *and others.* K voprosu ob ėnergii khimicheskogo izmeneniĭa mineral'noĭ chasti podzolistoĭ i tundrovoĭ pochv. (*In:* Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Sezonnoe promerzanie gruntov i primenenie l'da dlĭa stroiteľnykh t͡seleĭ. 1957. p. 82–87, tables.) 3 refs. Text in Russian. *Other authors:* S. V. Shimanovskiĭ *and* A. V. Golubev. ***Title tr.:*** The intensity of chemical changes in the mineral components of podsolic and tundra soils.

The quantitative characteristics of chemical changes associated with freezing are discussed on the basis of voltage measurements of Zn and C-electrode galvanic cells installed in the ground 3 cm. apart to depths of 90 cm. in spotted tundra soil (Bol'shezemel'skaya tundra) and in podsolic soil (Moscow region); the latter was kept free of vegetation and snow for better comparability with tundra conditions. The intensity of chemical changes in tundra during the fall-winter season (time of minimum microbiological activity in podsolic soil) was the same as in podsolic soil.—From SIPRE.

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TIŪTIŪNOV, I. A., *see also* T͡Sytovich, N. A., *and others.* O fizicheskikh ĭavleniĭakh . . . v . . . gruntakh. *1957.* No. 55539.

55457. TJEBBES, K., *and* C. WRIEDT. The albino factor in the Samojede dog. (Hereditas, 1927. bd. 10, häfte 1–2, p. 165–68.) 9 refs.

Contains discussion of albinism (reduction of color intensity) in dogs, rabbits, etc. "The factor causing Samojede color in dogs belongs to the albino series. Corresponding to the albino factor in horses, it reduces, in the heterozygotes, the red pigment, when present, but not the black. Samojede dogs may carry a cryptome dominant homogenous black."

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55458. TJEDER, BO. A synopsis of the Swedish Tipulidae, 1. Subfam. Limoniinae: tribe Limoniini. (Opuscula entomologica, 1958. bd. 23, häfte 1–3, p. 133–69, 40 illus.) 180 refs.

Describes 60 species of typical crane flies, with synonymic notes, taxonomy, distribution and ecology; at least 18 of the species are native to northern regions of Sweden and adjacent countries.

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55459. TJERNVIK, TORSTEN E. On the Early Ordovician of Sweden; stratigraphy and fauna. Uppsala, Almqvist & Wiksell, 1956. p. 107–284, 6 illus., 36 diagrs., 3 text maps, 11 plates, 2 tables. (Uppsala. Universitet. Mineralogisk-geologiska institutet. Bulletin, v. 36, pt. 2–3.) 114 refs.

Sections through the upper Tremadocian and lower Arenigian rocks from most of the Paleozoic districts of Sweden are described and figured. The limestones examined are subdivided into trilobite zones, and attempt is made to correlate some of these with the graptolite zones of the Arenigian Lower Didymograptus shale. Outcrops of the Ceratopyge limestone and shale near Malgomaj and Vojmsjön in southern Lapland, and containing *Ceratopyge forficula* in the limestone are noted (p. 176-77). The descriptions of species (p. 186–276)

includes a number of new trilobite genera and species and revision of several old species. ***Copy seen:*** DLC.

55460. TKACHENKO, B. V., *and others.* Geologicheskoe stroenie severnoĭ chasti Sredne-Sibirskogo ploskogor'ia. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Geologiia Sovetskoĭ Arktiki, 1957, p. 133–242.) Text in Russian. *Other authors:* M. I. Rabkin, K. K. Demokidov, V. A. Vakar, A. L. Grozdilov, E. L. Butakova, and S. A. Strelkov.

Title tr.: Geological structure of the northern part of the central Siberian plateau.

Outlines relief, stratigraphy (p. 137–203), volcanism (p. 203–227), tectonics (p. 227–239), and mineral resources of the region (approx. 66°33′–71°30′ N. 86°–120° E.), which extends from the Yenisey River in the west to the Olenek-Lena watershed in the east. This comprehensive survey is based on field investigations and geological mapping in the last 20 years by many scientists (as attributed). The most studied area is around Noril'sk where deep borings have been made and geophysical methods applied. The northern part of Siberian platform is built of different formations of Archeozoic, Proterozoic and Sinian, as well as all Paleozoic groups and Lower Triassic. The stratigraphy of all these formations is outlined. Volcanic activity played an important role at several stages; and the various deposits are summarized in table (p. 209). Tectonics of the region were mainly determined by the Anabar anticline and Tungusska syncline. Coal is the most important mineral resource, deposited mainly in the Tungusska syncline. Prospects are noted for oil in Anabar anticline. Copper and nickel ores of the Noril'sk region are very rich. Other mineral resources are briefly mentioned. The geological map (1:2,500,000) which accompanies the volume covers this region.

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55461. TKACHENKO, B. V. Uspekhi sovetskoĭ geologicheskoĭ nauki v izuchenii Arktiki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1957. vyp. 5, p. 4–11.) Text in Russian. ***Title tr.:*** Successes of the Soviet geologic sciences in the study of the Arctic.

Contains general account of geologic exploration of the Soviet Arctic during the last forty years, in three periods: 1921–1925, 1925–1941, and post-World War II. In the first period, Khibiny apatites, the copper and nickel of Noril'sk, the Pechora and Tungusska coal basins were discovered. The second period is characterized by study of the Yenisey, Olenek, Yana, Indigirka, and Kolyma Rivers; completion of mapping at 1:2,500,000, extensive study of Taymyr Peninsula, Novaya Zemlya, Pay-Khoy. Outstanding among the achievements since 1946 are mapping at 1:1,000,000 and study of trap formations of the Siberian platform. ***Copy seen:*** DGS.

TOBLAA, R. L., *see* Stein, S. W., *and others.* The effects of adrenergic and adrenolytic agents . . . arrhythmias . . . hypothermia. *1958.* No. 55145.

TOCANTIS, L. M., *see* Schwartz, I. R., *and others.* Transplantation of bone marrow . . . preservation at −70° C. *1957.* No. 54638.

55462. TODD, MARGARET RUTH, 1913– . Foraminifera from Carter Creek, northeastern Alaska. Washington, D.C., U.S. Govt. Print. Off., 1957. p. 223–35, 3 text maps, 2 tables, 2 plates. (U.S. Geological Survey. Professional paper 294–F. Shorter contributions to general geology.) 101 refs.

Report on a meager, Miocene on Pliocene, fauna of Foraminifera, from the Alaskan coast, approx. 69°55′ N. 144°40′ W., the material collected by R. H. Morris in 1953, and the fauna found by H. R. Bergquist. Only two samples contained foraminifera, altogether 38 species in 24 genera. Comparisons are made with Recent Arctic faunas and with Tertiary faunas of nearest location in both Eastern and Western Hemispheres. Evidence favoring either a Pacific or Atlantic origin for these fauna was not found. ***Copy seen:*** DGS.

TODD, MARGARET RUTH, 1913– , *see also* Cushman, J. A., *and* M. R. Todd. Foraminifera . . . coast . . . *1947.* No. 50406.

TODD, MARGARET RUTH, 1913– , *see also* Cushman, J. A., *and* M. R. Todd. A foraminiferal fauna . . . Amchitka . . . *1947.* No. 50407.

55463. TODD, WALTER EDMOND CLYDE, 1874– . The Newfoundland race of the gray-cheeked thrush. (Cana-

dian field-naturalist, Oct.–Dec. 1958. v. 72, no. 4, p. 159–61.)

Contains a study of identities of two races of the gray-cheeked thrush; *minimus* of Newfoundland, *alicia* of the mainland (Labrador to Alaska), and *bicknelli*, which was discussed elsewhere.

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TÖNNIS, D., *see* Hirsch, H., *and others.* Über die Wiederbelebung des Gehirns bei Hypothermie. *1957.* No. 51727.

TÖNNIS, D., *see* Hirsch, H., *and others.* Über Formänderungen von Aktionspotentialen . . . *1958.* No. 51728.

55464. TØPFER, IB. Hverdag i Scoresbysund. (Grønland, May 1957. nr. 5, p. 172–80, illus.) Text in Danish. ***Title tr.:*** Everyday life at Scoresbysund.

Contains impressions of life at this East Greenland settlement (70°28′ N. 21°58′ W.). Housing (of high standard), the nearby settlement Kap Hope, and hunting are dealt with.

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55465. TØPFER, IB. Lidt om livet i vore dages Nordøstgrønland, 2. (Vor viden, Feb. 1958. no. 11. haefte 219, p. 348–52, illus.) Text in Danish. ***Title tr.:*** Notes on life in today's northeast Greenland, 2.

Describes briefly accommodations and trades of the 350 inhabitants of Scoresbysund. Founded in 1924, the town consists almost entirely of new buildings. Private homes are practical and economical to heat, and a new hospital is planned. Access by ship is possible for two months; the adjacent radio station at Kap Tobin keeps contact with the world for the rest of the year. Seals, bears, foxes, wild fowl, musk oxen, whales, and salmon provide the food and income for the Eskimos.

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55466. TØPFER, IB. Magnus, en gammel fanger i Scoresbysunddistriktet. (Grønland, Aug. 1958, nr. 8, p. 315–20, illus., port.) Text in Danish. ***Title tr.:*** Magnus, an old hunter in the Scoresbysund district.

Recounts impressions from meetings at Kap Tobin, just south of Scoresbysund with an old East Greenlander originally of Angmagssalik who moved to Scoresbysund when that colony was founded.

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55467. TØPFER, IB. På laksetur i Nordøstgrønland. (Grønland, Nov. 1957. nr. 11, p. 421–27, illus.) Text in Danish. ***Title tr.:*** Salmon fishing in northeast Greenland.

Contains impressions from a sledge trip from the meteorological station at Kap Tobin just south of Scoresbysund to catch char in the lakes in Liverpool Land (71° N. 22° E.).

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TÖRÖK, T., *see* Szekeres, L., *and others.* The effect of hypothermia . . . phosphate and glycogen . . . heart. *1958.* No. 55301.

55468. TOKAREV, P. I. O glubinnoĭ fokal'noĭ poverkhnosti i svi͡azi zemletri͡aseniĭ s rel'efom v Kuril-Kamchatskoĭ zone. (Akademii͡a nauk SSSR. Vulkanologicheskai͡a stan͡sii͡a. Bi͡ulleten', 1958. no. 27, p. 66–81, diagrs., tables, map.) 12 refs. Text in Russian. ***Title tr.:*** The deep focal plane and the connection between earthquakes and relief in the Kuril-Kamchatka zone.

Data are tabulated (p. 67–72) and analyzed on approx. 240 earthquakes with *M* exceeding 6, which occurred in the Kuril-Kamchatka area during 1912–1954; geographic location and depth of their epicenters are indicated (map p. 74). The distribution of epicenters of less than 70 km., 70–300 km., and over 300 km. depth is distinguished and the relation of these groups to each other and to the relief of the surface is discussed.

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55469. TOKAREV, SERGEĬ ALEKSANDROVICH, 1899– . Étnografii͡a narodov SSSR; istoricheskie osnovy byta i kul'tury. Moskva, Izd-vo moskovskogo un-ta, 1958. 615 p. illus., graphs, maps incl. col. Approx. 600 refs. Text in Russian. ***Title tr.:*** Ethnography of the peoples of the U.S.S.R.; historical foundations of customs and culture.

An informative handbook, based on lectures during 20 years to students, but recapitulating, for the non-specialist, a large body of research results, primarily on the pre-Soviet period. The ethnographic classification is mainly according to principles of linguistic classification. Northern peoples are discussed among others: Karelians, Lapps, Komi: 60% Zyryans (p. 128–41); Yakuts and the northern minorities, viz: Ostyaks and Voguls, Samoyeds, Yeniseians, Tungus (Evenki, Dolgans, Golds, Ul'chi, Orochi, Udegeytsy, Oroki), Gilyaks, Yukaghirs, Kamchadals, Chukchis and Koryaks,

Eskimos and Aleuts (p. 409–557). For each people their distribution, vital statistics (1926, occasionally 1939 census), and ethnogenesis are given, together with data on exploration, economy, material culture (houses and settlements, clothing, transportation), social organization, survival of religious beliefs, folklore and crafts. Anthropological types, stages of cultural and economic development, reindeer herding and its origin are considered; attempts at acculturation by the tsarist regime, and socialist reconstruction of the minorities are discussed. Approx. 150 refs., mainly Russian works pub. prior to 1950, pertain to northern peoples; diagrams of race classification and a 1957 col. ethnic map (1:25,000,000) are included; lists of local words and expressions and ethnic terms are appended.

The book was discussed at a special June 1958 session of the Institute of Ethnography (*Sovetskaîa ėtnografiîa*, 1958, no. 6, p. 121–27) and Tokarev criticized for a dilettantist approach, for errors of fact, insufficient treatment of the Soviet period, incompleteness of bibliographic material, etc. ***Copy seen:*** DLC.

55470. TOKAREV, SERGEĬ ALEKSANDROVICH, 1899– . S. V. Bakhrushin, 1882–1950; nekrolog. (Sovetskaîa ėtnografiîa, 1950, no. 2, p. 222–23.) Text in Russian. ***Title tr.:*** S. V. Bakhrushin, 1882–1950, an obituary.

Biographical sketch of this Soviet ethnographer, with emphasis on his work on the history and social organization of the Siberian peoples, especially the Yakuts; some of his publications cited in the text. ***Copy seen:*** DLC.

55471. TOKAREV, V. Po Sibiri i Zapolîar'iu. (Sovetskaîa muzyka, Dec. 1958. god 22, no. 12, p. 106–110, illus.) Text in Russian. ***Title tr.:*** Across Siberia and beyond the Arctic Circle.

A member of the All-Russian guest-performance-concert union reports on their four-man tour of Siberia including the lower Yenisey region: Dudinka, Noril'sk, Ust'Port, Karaul, Igarka; and Taymyr Peninsula: Dikson Island, Dikson (town on mainland), Khatanga. Types of program, public response, means of transportation are mentioned.

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55472. TOKAREV, V. A. Geologicheskaîa interpretat͡siîa materialov po seĭsmichnosti Kol'sko-Skandinavskogo regiona. (Akademiîa nauk SSSR. Doklady, Apr. 1, 1958. god 26, t. 119, no. 4, p. 772–73, diagr., map.) 3 refs. Text in Russian. ***Title tr.:*** A geological interpretation of data on seismicity in the Kola-Scandinavian region.

The published data on seismic activity of the Kola-Scandinavian Peninsulas for the period 1891–1951 (No. 43794) include 1,094 earthquakes. The location and extent of these earthquakes, according to their epicenters, are indicated and mapped. The relationship between seismic activity and geomorphic development of this region is discussed and comparison made with other regions. For better knowledge of the geomorphic structure of this region and its connection with adjacent areas, further seismic investigation in the Kola Peninsula, Karelian A.S.S.R., Greenland, Norwegian Sea and North Atlantic is necessary.

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55473. TOKMAKOV, P. P. Khrustalenosnye kvart͡sevye zhily zameshcheniîa i khrustalenosnye polosti perekristallizat͡sii Aldana. (Akademiîa nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Trudy, 1957. vyp. 10, p. 49–56, illus., tables.) 4 refs. Text in Russian. ***Title tr.:*** Replacement and recrystallization in cavities of crystalliferous quartz veins in the Aldan region.

The predominantly quartzite Tengra River series of local Archean is characterized. Three types of quartzites: massive, bedded sericite-sillimanite, and feldspathized quartzites are distinguished and outlined. Hydrothermal and solution processes of filling, replacement and recrystallization of crystalliferous veins are treated and illustrated by photos and diagrams. Growth and changes of quartz crystals, their color and substance are noted. ***Copy seen:*** DLC.

55474. TOLANSKSKY, S. Symmetry of snow crystals. (Nature, *London*, Jan. 1958. v. 181, no. 4604, p. 256–57.)

To explain the high degree of symmetry often seen in snow crystals, an hypothesis is advanced that the free crystal is vibrating as a flat plate, with a hexagonal symmetry. Formation of ice on one arm causes a damping of vibration at the corresponding positions of the other five arms and similar ice formation on them. The hypothesis is claimed to explain some other qualities of snow.

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55475. TOLSTIKHIN, O. N. Termal'nye vody Kamchatki i problema ikh osvoeniîa. (Sovetskaîa geologiîa, Feb. 1958. god 1, no. 2, p. 109–133, 4 tables, text map.) 27 refs. Text in Russian. Summary in English. ***Title tr.:*** The thermal waters of Kamchatka and problems of their utilization.

Contains results from a five-man geological expedition in 1952 headed by the writer, along with materials from the Institute for Resorts Studies. Kamchatka has more than 80 regional groups of thermal springs caused by recent volcanic activity, the waters originating in sedimentary and volcanic rocks of the Upper Cretaceous, Tertiary and Quaternary. The waters from the Upper Cretaceous are warm, contain chiefly sodium hydrocarbonate with carbon dioxide gas, and their mineralization is up to 5 g./l. The thermal waters of Tertiary sediments contain sòdium chloride and hydrocarbonate especially with methane; their mineralization goes up to 12 g./l. Waters in Tertiary effusives have sodium sulphate with nitrogen, and mineralization up to 1 g./l. Recent volcanic waters are acid with pH below 27, with mineralization up to 5 g./l. and these have best prospects for utilization. Location, zones and type of the thermal waters are shown (map) and data of chemical analyses of Mesozoic, Tertiary sedimentary, Tertiary effusive and volcanic waters are given. Such waters may be utilized for electric power development, domestic, medicinal, agricultural, etc. purposes. But the most pressing need is their adaptation to household use in workmen's settlements, in view of the steadily growing population of Kamchatka. ***Copy seen:*** DLC.

TOLSTIKHIN, O. N., *see also* Mokrousov, V. P., *and* O. N. Tolstikhin. Nekotorye voprosy . . . Kamchatki. *1958.* No. 53359.

TOLSTIKHIN, O. N., *see also* Mulikovskaîa, E. P., *and* O. N. Tolstikhin. O soderzhanii germaniîa . . . *1958.* No. No. 53445.

TOLSTIKHINA, M. A., *see* Aleskerova, Z. T., *and others.* Stratigrafiîa . . . *1957.* No. 49247.

55476. TOLSTIKOV, EVGENIÏ IVANOVICH. The arctic and antarctic programme of the International Geophysical Year. (International Union of Geodesy and Geophysics. Eleventh General Assembly, Toronto, 1957. Comptes rendus. Public lectures. p. 79–85.)

General account of Soviet investigations in the polar regions, from those of drifting station North Pole-1 in 1937–38; background provided for work of the International Geophysical Year, and research underway. Conditions on North Pole-4 are specially noted, as the author was chief of that station. Fields of study investigated include oceanography, ice, geology, meteorology, terrestrial magnetism, botany, physiology, etc.

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55477. TOLSTIKOV, EVGENIÏ IVANOVICH. K severu ot ostrova Vrangelîa. (*In:* Burkhanov, V. F., Cherez okean na dreĭfuûshchikh l'dakh, 1957. p. 231–46, ports., illus.) Text in Russian. ***Title tr.:*** Northward from Vrangel Island.

Drifting station North Pole-4, life, work and main events there during Apr. 1954–Apr. 1955, are described by the head of its first team: setting-up of the camp at 75°48′ N. 181°35′ E. on Apr. 8; its personnel, transportation (helicopter, small aircraft and tractor), equipment and supplies, etc. The station drifted 2,600 km. during the first year; its bathymetric observations disclosed a minimum depth of 293 m. and maximum of 3,286 m.; hydrobiological observations, visits of polar bears, etc., are noted. Author's party was relieved by a new team under P. A. Gordienko, which in turn was relieved in 1956 by another team headed by A. G. Dralkin. ***Copy seen:*** DLC.

55478. TOLSTIKOV, EVGENIÏ IVANOVICH. Na l'dakh v okeane; iz dnevnika nachal'nika stanîsii. Moskva, Izdvo "Morskoĭ transport," 1957. 124 p., illus., ports, 6 plates, map. Text in Russian. ***Title tr.:*** On ice in the ocean; from notebook of chief of the station. Literary make-up by ÏU. Gal'perin.

Day-by-day notes of the head of the first party on the drifting station "North Pole-4," from their landing on the ice in the Arctic Basin on Apr. 8, 1954, till their relief by another team and flight back to the mainland on Apr. 16, 1955. The main events and work during the drift are recounted: selection of the ice floe for aircraft landings and for the camp of the station; setting up the tents and knock-down structures; the station's equipment: airplane, helicopter, tractor, etc., and air supply; personnel and their characteristics, health conditions and ailments; radio communication with the mainland;

organization of the scientific work: aerological, meteorological, bathymetric, hydrological, biological, magnetic observations. The struggle with melt-water in summer and with ice pressure and cracks in winter is noted. Data are given on location and on depths recorded. Maintenance and defects in clothing, dwellings and tents are mentioned (p. 54–55). Scientific work carried out during September (p. 64–65) and a brief summary of the year's meteorological data (p. 116–17) are presented. Visit of a team of artists on Apr. 12, 1955 is noted, p. 122–23. ***Copy seen:*** DLC.

55479. TOLSTOV, A. N. Izmenenie temperatury gruntov pod derevîannymi zdaniîami v zavisimosti ot otopleniîa voobshche i ot sistemy otopleniîa v chastnosti. (Akademiîa nauk SSSR. Institut merzlotovedeniîa. Trudy, 1958. t. 14, p. 92–95, tables, diagrs.) ***Title tr.:*** Variations in soil temperature under wooden buildings as dependent on heating in general and the heating system in particular.

Results of studies 1953–56 in the Allaykhovskiy district (approx. 70° N. 147° E.) of Yakutia on the effect of heated wooden buildings on the temperature regime of frozen ground are reported; data are tabulated; and local soil characteristics are described. Soil temperatures were measured in bore holes 6.10–8.35 m. deep below and alongside a continuously heated building constructed on piles with the floor 0.20–0.25 m. above the ground and banked with soil on the sides, and another building resting directly on the ground with a dead air space of 0.10–0.20 m. below the floor. A sudden decrease in soil temperature was recorded below and around the first building as soon as heating was discontinued, the 0° C. isotherm rising from a depth of 1.2 m. to 0.5 m. and dropping to 0.8 m. when heating was resumed a month later. Under the second building, which was heated only during cold weather, soil temperatures increased in 1955 after a steam heating system was installed to 1.3° C. at a depth of 1 m. and −5.7° C. at 5 m., as against −1.3° and −7.3° C., respectively, in 1954.—From SIPRE.

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55480. TOLSTOV, S. P. Sorok let sovetskoĭ ėtnografii. (Sovetskaîa ėtnografiîa, 1957, no. 5, p. 31–55.) Refs. Text in Russian. ***Title tr.:*** Forty years of Soviet ethnography.

Reports on the creation of special investigation committees for the administration and economic rehabilitation of aboriginal peoples, scientific expeditions, ethnographic and linguistic research and publications. Northern areas are included, and the following are cited (p. 33–34): Commission for the Study of Yakut A.S.S.R. and the Polar Commission established in the 1920's, the Committee of the North (Komitet Severa) in 1924, the Sub-arctic census (Pripolîarnaîa perepis') of 1926–27, the ethnographic map of the peoples of the North published in 1933, the organization in 1925 of the "northern group" (Severnaîa gruppa) at the University of Leningrad for the purpose of training national cadres among the minorities of the north and its evolution in 1930 into the Institute of the Peoples of the North (Institut narodov Severa TSIK SSSR), etc. The ethnographic publications based on the findings of the Severo-vostochnaîa and other expeditions are mentioned (p. 50–51).

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55481. TOLSTOY, PAUL. The archaeology of the Lena basin and its New World relationships; part I and II. (American antiquity, Apr., July 1958. v. 23, no. 4, pt. 1, p. 397–418; v. 24, no. 1, p. 63–81, illus. tables, map.) Approx. 100 refs.

Pt. 1 is a review of the 1945–1955 neolithic finds in the Lake Baykal area and along the middle and lower Lena River, based mainly on A. P. Okladnikov's publications. The stone and early bronze artifacts and pottery are described for each culture sequence in turn, the culture areas defined, and the archeological sites mapped and tabulated. Pt. 2 deals with the evidence of Amerasian parallels, stressing the evidence of reciprocal influences. While certain features, e.g. core and blade tools, pottery, etc. originated, assuredly, in Siberia, other stone artifacts like lunate sideblades, long-stemmed and spurred points, etc. are, probably, of American Plains origin, and spread north- and westward to arctic Siberia through the intermediary of the Denbigh or related culture. A coeval occurrence of some lithic artifacts in the Baykal-Lena and the Archaic-Woodland cultures of eastern North America and the slow diffusion of pottery in the American North are discussed. The Siberian and American finds are compared and tabulated.

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55482. TOLSTOY, PAUL. Some Amerasian pottery traits in north Asian prehistory. (American antiquity, July 1953. v. 19, no. 1, p. 25–39, table.) 77 refs.

Discusses neolithic decorative ceramic patterns of Eurasia, including the Lake Baykal, Lena and Kolyma River areas, and compares them with those of North America. The fabric- and cord-marking, striation, check and dentate stamping techniques are described, their area of occurrence defined and chronologically tabulated. An Asiatic origin of American pottery is advanced and its diffusion traced from the Bering Sea area south to Middle and South America.

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TOLSTUKHINA, A. S., *see* Kosheleva, I. T., *and* A. S. Tolstukhina. K voprosu . . . okul'turivanii . . . severnogo Priob'ia. *1957.* No. 52420.

55483. TOMAREVSKIĬ, B. I. Kedr v lesakh Arkhangel'skoĭ oblasti. (Priroda, Oct. 1957. god 46, no. 10, p. 113.) Text in Russian. ***Title tr.:*** Cedar in the forests of Arkhangel'sk province.

Contains notes on the so-called Siberian cedar, *Pinus sibirica* (=*P. cembra*), one of the most valuable timber trees of the Asian section of the U.S.S.R. The oldest stand of this pine was planted by monks of a monastery in the Vychegda River basin in the 18th century. Recently a number of plantings has been made in various localities of the province. Siberian cedar is a source of excellent edible nuts (100 kg./tree) and oil, also of vitamin C (from needles), turpentine, etc.

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55484. TOMARKIN, LEANDRO W. A new method for increasing tire traction on wet, snowy and icy surfaces. (Rubber age, Aug. 1958. v. 83, no. 5, p. 832–35, tables, diagrs.)

A new type of tire, chemically and mechanically treated through the Tomarkin Process to improve the traction, is described. Tested on the most slippery road surfaces, where cars equipped with snow-grip tires remained immobile due to spinning, no slipping, skidding, spinning or backsliding was experienced. As the skid-resistant quality is not based on the tread design, there is no decrease in efficiency with use.

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55485. TOMILIN, A. G. Osobennosti povedeniia kitoobraznykh. (Priroda, Jan. 1958. god 47, no. 1, p. 108–110, illus.) 11 refs. Text in Russian. ***Title tr.:*** Peculiarities of cetacean behavior.

Description of two reflexes in the dolphin, one involving the head, the other the tail and both connected with air expiration-inspiration, as soon as animals reach the surface. The reflex exists from birth and is unconditioned. The habits of other species, including whales, to lift their injured or sick fellows, or the newborn to the surface is explained as instinctive endeavor to prevent drowning.

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55486. TOMIN, MIKHAIL PETROVICH, 1883– . Opredelitel' korkovykh lishaĭnikov Evropeĭskoĭ chasti SSSR, krome KraĬnego Severa i Kryma. Minsk, Izd-vo Akad. nauk BelorusskoĬ SSR, 1956. 533 p., 51 illus. (Akademiia nauk BelorusskoĬ SSR. Institut biologii.) Text in Russian. ***Title tr.:*** A key to scaly lichens of the European part of the U.S.S.R., except the far North and Crimea.

Contains tables for the determination of families, genera and species, and a systematic list of 767 lichen species, with diagnoses, also data on habitat and distribution. Many species native to the Kola Peninsula, Arkhangel'sk province and Novaya Zemlya, are included. A check list of orders, suborders, families and genera of Ascolichenes and an alphabetical index of Latin names, are appended. ***Copy seen:*** DLC.

55487. TOMLINSON, ROGER FRANK. Geomorphological investigations in the Kaumajet Mountains and Okak Bay (North River) region of Labrador. (Arctic, 1958. v. 11, no. 4, p. 254–56.)

Outlines summer 1958 investigations of glacio-geomorphic features of two localities (approx. 57°40′ N. 62° W.) in northeast Labrador. Direction of ice movement, extent of glaciation, characteristics of deglaciation, and final ice activity are noted. Evidence indicates that the whole region was covered with ice, which originated in the west and flowed east in the final stage of glaciation of the area, tentatively correlated with the Wisconsin.

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TOMORI, Z., *see* Korpáš, J., *and* Z. Tomori. Vplyv hypotermie . . . *1957.* No. 52415.

55488. TOMPKINS, STUART RAMSAY, 1886– . After Bering: mapping the North Pacific. (British Columbia

historical quarterly, Jan.–Apr. 1955. v. 19, nos. 1–2, p. 1–55.) Over 40 refs.

Survey of Russian, British, American, Spanish, etc., voyages in the North Pacific area from 1741–42 till Shelekhov's death in 1795; based on published materials which are listed (p. 7–11). Over 200 expeditions are summarized, in turn, with time, names of ship, leader and captain, route, and achievements. Their cumulative work "finally cleared up most of cartography of the Northwest Coast and Alaska." Besides exploratory expeditions voyages of traders and hunters are listed, with notes on their discoveries (e.g., Pribilof Islands) or contributions to knowledge of Alaska and the Aleutians. Alaskan natives and their trade relations with Russians are outlined in introduction. In general, the period 1741–95 was marked by withdrawal of Spaniards from competition in the North Pacific and by Russian expansion mainly through the initiative of traders in contrast with the oncoming period of monopoly and centralization of the Russian American Co. founded in 1799. ***Copy seen:*** DSI.

TONELLI, L., *see* Gentile, M., *and others.* Definizione dell' ECG caratteristico . . . *1956.* No. **51124.**

55489. TOPCHIEV, ALEKSANDR VASIL'EVICH. Leninskie premii za raboty v oblasti nauki i tekhniki. (Akademiia nauk SSSR. Vestnik, May 1957. god 27, no. 5, p. 3–8.) 2 refs. Text in Russian. ***Title tr.:*** Lenin prizes for work in the field of science and technology.

Reports granting of 17 Lenin prizes for outstanding achievement to Soviet scientists, explorers and engineers; one was awarded to a group of geologists, A. P. Burov, R. K. Iurkevich, G. Kh. Faĭnshteĭn, V. N. Shchukin, V. B. Belov and Iu. I. Khabardin, who discovered the diamantiferous fields in Yakutia. ***Copy seen:*** DLC.

TORCHIANA, BERNARDO, *see* Cattaneo, A. D., *and others.* La resistenza cerebrale all'ipossia, 1 . . . ipotermia. *1957.* No. 50153.

55490. TORELL, A. Studieresa i Norrbottens län. (Svenska vägföreningen. Tidskrift, Sept. 1954. årg. 41, häfte 7, p. 306–307, illus.) Text in Swedish. ***Title tr.:*** Study tour in Norrbotten County.

Reports a 450-mi. bus tour by Swedish road officials to study the main roads of the 5,000 mi. public network, of which approx. 1,000 mi. are closed for 2-3 weeks a year during the thawing period. Some improvements, completed and projected, are noted. ***Copy seen:*** DLC.

55491. *TORFIANAIA PROMYSHLENNOST'.* Nauchno-tekhnicheskoe soveshchanie po briketirovaniiu torfa. (Torfianaia promyshlennost', 1958. god 35, no. 4, p. 25–32.) Text in Russian. ***Title tr.:*** Scientific-technical conference on production of peat briquettes.

Contains abstracts of 19 papers presented at the conference of 220 representatives from 71 organizations conducting research on and producing peat briquettes. The conference held in Moscow Apr. 15–17, 1958, treated the following subjects: expansion of production, scientific research, improvement of methods and quality and reduction of operating costs. ***Copy seen:*** DLC.

55492. TORPP, OLAV. Belastninger på vegbruer og veger i Norge. (Nordisk vejteknisk forbund. Forhandlinger, 1948. no. 3, p. 186–200, diagrs., table.) Text in Norwegian. ***Title tr.:*** Loads on bridges and roads in Norway.

In Norway's communication net, highways supplement railways, and all except light-use roads must be bridged to bear trailer trucks and heavy busses. Approximately half of the highway bridges (some 12,000) require strengthening due to heavier loads in recent years. An axle load of 10 tons is now considered reasonable for most bridges. Construction, impact, load, and subsurface support are analyzed. In northern Norway, where the glacial marine limits are low, few of the major highways and bridges are on clay foundations. ***Copy seen:*** DLC.

55493. TORRES, J. C., *and others.* Effect of artificially controlled heart rate on the incidence of ventricular fibrillation in hypothermia. (American journal of physiology, Nov. 1958. v. 195, no. 2, p. 437–39, illus.) 7 refs. *Other authors:* E. T. Angelakos *and* A. H. Hegnauer.

Report on two groups of dogs subjected to auricular and ventricular driving during hypothermia. The animals of both groups died from ventricular fibrillation at mean temperatures of 21.3° and 20.3° C. respectively. Abnormalities in S–A nodal rhythm or

A–V conduction are not considered contributory to fibrillation. Conduction time in both groups increased linearly over the temperature range studied, and the slopes were parallel.

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TORRES, J. C., *see also* Angelakos, E. T., *and others*. Ouabain . . . hypothermic dog heart. *1958*. No. 49321.

TOUMIKOSKI, RISTO KALEVI, *see* Kujala, V. V., *and others*. Agaricales. *1953*. No. 52545.

55494. TOVAR, MARTÍN. El paro circulatorio en hipotermia general; estudio esperimental. (Revista española de anestesiología, Apr. 1957. v. 4, no. 2, p. 114–19.) 12 refs. Text in Spanish. ***Title tr.:*** Circulatory arrest in general hypothermia; experimental study.

Account of experiments with dogs made hypothermic and subsequently submitted to total circulatory cardiac occlusion for 10–25 min. In this condition, the effects upon the central nervous system were studied and also various cardiac interventions performed and investigated.

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55495. TOVAROVA, I. I. O vynose vodnorastvorimykh veshchestv iz piroklastiki vulkana Bezymîannogo. (Geokhimiîa, 1958, no. 7, p. 686–88, tables.) 2 refs. Text in Russian. Summary in English. ***Title tr.:*** On the ejection of water-soluble substances from pyroclasts of Bezymyannyy Volcano.

Presents the results of chemical analyses of 785 samples from a stream with 65° C. temperature, and 787 samples from a 20° C. stream. Data are given on type and amount of water-soluble substances from pyroclastic materials of Bezymyannyy. The soluble material in the Kamchatka River basin is said to amount to about 20 million tons.

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TOVAROVA, I. I., *see also* Gorshkov, G. S., *and* I. I. Tovarova. Geochemical effect of Bezymianny . . . *1957*. No. 51300.

TOWLE, LEO B., *see* Sullivan, B. J., *and* L. B. Towle. Vascular responses to local cold injury. *1957*. No. 55224.

55496. TOWNES, HENRY KEITH, 1913– . The nearctic species of Tendipedini; Diptera, Tendipedidae (=Chironomidae). (American midland naturalist, July 1945. v. 34, no. 1, p. 1–206, 261 illus.)

Contains a taxonomic treatment of the adult midges of this tribe occurring in the United States, Canada, Alaska and Greenland, with keys and a systematic annotated list of 201 species and varieties. More than a hundred species are described as new; and several new combinations are established. At least twelve species, two of them new: *Pseudochironomus crassus* and *Tendipes* (*Tendipes*) *tuberculatus*, are native to Alaska, northern Canada and Greenland. A list of unrecognizable species and those erroneously described as Tendipedini, including some arctic ones, also a check list, and an index of names, are appended.

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55497. TOWNSEND, J. W., JR., *and* E. B. MEADOWS. Density of the winter night time arctic upper atmosphere 110 to 170 km. (Annales de géophysique, 1958. t. 14, fasc. 1, p. 117–30, illus., 6 graphs.) 6 refs. Summary in French.

Presents determinations of upper air density, unintentionally obtained by a mass spectrometer mounted in an Aerobee-Hi rocket, fired Nov. 20, 1956 at Fort Churchill. The density profile is higher than that above White Sands.

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TOWNSEND, J. W., *Jr.*, *see also* Meadows, E. B., *and* J. W. Townsend, *Jr.* Diffusive separation . . . upper atmosphere . . . *1958*. No. 53197.

55498. TOYE, A. M. Cold weather protection techniques and methods of payment. (Roads and engineering construction, Oct. 1957. v. 95, no. 10, p. 144–46.)

Describes Canadian techniques for frost-protection of concrete, such as heating of water and aggregates and covering freshly placed pours with tarpaulins, straw, insulated forms, etc. Methods and scales of payments allowed the contractor for his frost protection costs are outlined and discussed.

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55499. TOZER, EDWARD TIMOTHY, 1928– . Stratigraphy of the Lewes River group (Triassic), central Laberge area, Yukon Territory. Ottawa, 1958. 28 p. illus., 2 maps, incl. 1 fold., diagr. (Canada. Geological Survey. Bulletin 43.) 25 refs.

Contains detailed description of stratigraphic sequence of the Lewes River

group in text, map, and diagrammatic columnar sections; also a list of fossils characteristic of each unit. The Lewes (Thirtymile) River group consists here of about 7,000 feet of limestone, shale, and greywacke, divided by the author, after field work 1953, into seven formations; lithology, fauna, and probable age of each are described. Formation A is probably the basal unit of the Lewes River group, underlain by andesite of Triassic or earlier age. Shales and conglomerates of the Jurassic Laberge group overlie the group. Most widely distributed fauna is an assemblage characterized by corals, a species of brachiopod, pelecypods, and rare ammonites. Comparison is made between Triassic rocks of southern Yukon and those of adjacent areas. *Map* (61°10′–61°35′ N. 135°–135°15′ W., scale 1 in. = 1 mi.) shows distribution of formations and other geologic features. ***Copy seen:*** DGS.

55500. TOZER, EDWARD TIMOTHY, 1928– . Triassic faunas from the Queen Elizabeth Islands, arctic Canada. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1653–54.) Abstract of a paper presented at the Society meeting in St. Louis, Nov. 6–8, 1958.

Gives sequence of 15 recognized faunas dated from Scythian through Norian, mostly from Ellesmere and Axel Heiberg Islands. ***Copy seen:*** DGS.

TOZER, EDWARD TIMOTHY, 1928– , *see also* Thorsteinsson, R., *and* E. T. Tozer. Geological investigations . . . *1957*. No. 55422.

55501. TRAIL, JAMES WILLIAM HELENUS, 1851–1919. The galls of Norway. (Botanical Society of Edinburgh. Transactions, 1889. v. 17, p. 201–219, 482–86.)

Contains annotated lists of gall hosts, also of coleopters, hemipters, dipters, etc., which form galls. A few galls living on plants of northern Norway (Nordland, Troms and Finnmark) are included.
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TRAINER, FRANK WILSON, 1921– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

55502. TRALAU, HANS. *Gentiana purpurea* L. als Vertreter der skandinavischen Bergflora. (Oesterreichische botanische Zeitschrift, 1958. Bd. 105, no. 4, p. 347–49, text map.) 3 refs. Text in German. ***Title tr.:*** *Gentiana purpurea* L. as representative of Scandinavian mountain flora.

Discusses: Gentiana purpurea and associated plants, as divided into four alpine groups, extending north into Lycksele Lappmark and Nordreisa. They are considered relict species which survived in some refuges during the last glaciation. *G. p.* var. *camtschatica* was described by E. Hultén from Kamchatka but never found subsequently. ***Copy seen:*** DA.

55503. TRANSHEL', VOL'DEMAR GENRIKHOVICH, 1868–1942. Obzor rzhavchinnykh gribov SSSR. Moskva-Leningrad, 1939. 426 p. 37 illus. (Akademiia nauk SSSR. Botanicheskii institut.) 13 refs. Text in Russian. ***Title tr.:*** A review of rust fungi of the U.S.S.R.

Basic work. Introductory part (p. 9–60) deals with the spore germination and life cycles of Uredenales; their systematics and nomenclature; tribes and genera; rust fungi as indicators of the relationship of their hosts; geographic distribution, with statistical data; parasitism on cultivated plants and methods of experimental infections. This is followed by a systematic account of over a thousand species arranged according to host families, and giving the most important synonyms and data on habitat, hosts, and geographic distribution. About 25 species are described in Latin as new. Many species recorded in northern regions of the U.S.S.R. are included. Indices of genera and species of rust fungi and of families and genera of host plants are appended. ***Copy seen:*** DLC.

TRANSHEL', VOL'DEMAR GENRIKHOVICH, 1868–1942, *see also* Kuprevich, V. F., *and* V. G. Transhel'. Rzhavchinnye griby . . . 1 . . . Melampsorovye. *1957*. No. 52570.

TRAPANI, IGNATIUS L., *see* Sutherland, G. B., *and others*. Cold adapted animals, 2 . . . plasma . . . elements . . . blood . . . cold. *1958*. No. 55240.

55504. TRAVIS, BERNARD VALENTINE, 1907– , *and* **C. N. SMITH.** Mosquito repellents selected for use on man. (Journal of economic entomology, June 1951. v. 44, no. 3, p. 428–29.) 8 refs.

Contains tabulated data on 14 mosquito repellents and 12 mixtures of repellents deemed safe to use on man, and gives

some comparative results for each one. The table includes a column: "Alaskan *Aëdes* spp." Against the various *Aëdes* species, the most promising repellents were: propyl N, N-diethylsuccinamate, repellent 6–12 (2-ethyl-1.3-hexanediol), and dimethyl carbate.

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55505. TREADGOLD, DONALD W., 1922– . The great Siberian migration; government and peasant resettlement from emancipation to the First World War. Princeton, Princeton University Press, 1957. xiii, 278 p. illus., maps, tables. 155 refs.

A popular account of the colonization of Siberia, Russian migration policy, peasant resettlement, land distribution, administration of new provinces, etc., with scattered references to northern regions. Data on growth of native and Russian population, peasant settlers and political deportees, migrants and returners, comparative economic levels at home and in Siberia, extent of tillage per workers in family, migrants' origin, etc., are tabulated. ***Copy seen:*** DLC.

55506. TREADWELL, C. R., *and others.* Nutrition studies in the cold, 1; influence of diet and low environmental temperature on growth and on the lipid content of livers in the rat. (Journal of nutrition, Dec. 1957. v. 63, no. 4, p. 611–22, illus., tables.) 19 refs. *Other authors:* D. F. Flick *and* G. V. Vahouny.

Account of experiments with immature and young adult rats fed eight choline- and inositol-free diets with varying protein and fat contents. Growth rate, protein efficiency ratio, liver lipids, dietary requirements for lipotropic factors, and the food and caloric intake were studied in groups kept at 1° and 25° C.

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55507. TREADWELL, C. R., *and others.* Nutrition studies in the cold, 2; curative effect of cold on fat fatty livers. (Society for Experimental Biology and Medicine. Proceedings, Feb. 1958. v. 97, no. 2, p. 434–36, tables.) 5 refs. *Other authors:* D. F. Flick and G. V. Vahouny.

Rats fed for 21 days hypolipotropic diets at 25° C. were subsequently kept for four weeks at 1° C. or at the previous temperature. Levels of liver lipids were found to be lower in the cold-maintained group than in the animals kept 21 or 49 days at 25° C. Cold thus seems to cure fatty liver. ***Copy seen:*** DNLM.

55508. TREADWELL, T. K. Hydrographic surveys in the Arctic. (International hydrographic review, Nov. 1958. v. 35, no. 2, p. 33–41, illus., text map.) Reprinted from *Military engineer,* Mar.–Apr. 1958. v. 50, no. 334, p. 87–92.

Describes U.S. Hydrographic Office project of 1954, to re-chart southern Canadian Arctic Islands waters to aid shipping for DEW Line construction. The three-year plan and operations during summers 1955–1957 are outlined: detailed surveys in Dolphin and Union Strait, Queen Maud Gulf, and Simpson Strait; preliminary examination of the route from Amundsen Gulf to Baffin Bay; etc. A deep-draft ship route through the Northwest Passage was verified: the southerly route via Dolphin and Union, Simpson, Rae, Ross, and Franklin Straits, Prince Regent Inlet, Lancaster Sound; 33 charts of the area resulted from the survey; and three changes to H.O. Pub. No. 77, *Sailing directions for northern Canada,* 1951 (No. 26956) correcting it to Apr. 2, 1958. ***Copy seen:*** DN–HO.

55509. TRESHNIKOV, ALEKSEĬ FEDOROVICH, *and* **V. M. PASETSKIĬ.** Solomon Andrė. Moskva, Gos. izd-vo geogr. lit-ry, 1957. 46 p. illus., ports., map. 2 refs. Text in Russian. ***Title tr.:*** Salomon Andrée.

Brief popular biography of the Swedish explorer Salomon August Andrée, 1854–1897, and account of his balloon flight with two companions in 1897 from Vestspitsbergen, forced landing, and death on Kvitøya. Story of the discovery of the party's last camp in 1930 is recounted. ***Copy seen:*** DLC.

55510. TRESHNIKOV, ALEKSEĬ FEDOROVICH. U severnogo polûsa. (*In:* Burkhanov, V. F. Cherez okean na dreĭfuûshchikh l'dakh, 1957, p. 159–97, illus.) Text in Russian. ***Title tr.:*** At the North Pole.

Activities of the drifting station North Pole-3, 1954–55, are recounted by its head: the departure from Leningrad Mar. 31, 1954, flight to the central part of the Arctic Basin, selecting an ice floe and setting-up the station on Apr. 9 at 86° N. 175°54′ W. Personnel, equipment and facilities are described: the prefabricated houses, tractor, airplane and helicopter, etc. Ice cracking became serious in Nov.–Dec. and Mar.–Apr., the station was evacuated on Apr. 20, 1955 at 86°03′02″ N. 36°38′02″ W. Weather conditions are noted for the

entire period. The 376-day drift covered 2,000 km. and finished 820 km. from the starting point. Importance of the scientific results is stressed.

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TRESHNIKOV, ALEKSEĬ FEDOROVICH, *see also* ÎAkovlev, A. S. Rual Amundsen . . . *1957*. No. 51881.

TRESKOV, A. A., *see* Puchkov, S. V., *and others*. Novoe sil'noe zemletrîasenie . . . *1958*. No. 54165.

55511. TRESSLER, DONALD KITELEY, 1894– . Importance of low-temperature performance in military packaging. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 3–4.)

Low temperatures adversely affect properties of many containers and container materials: ordinarily flexible sheetings become brittle, etc. Military requirements are such that containers must stand shipment, handling, and storage under arctic winter conditions. Storage materials must be capable of standing the effects of temperatures down to −80° F. for a period of at least three days. Need is stated for improvement in low temperature test methods and equipment, for new low temperature standards for containers and container materials. ***Copy seen:*** DLC.

TRET'ÎAKOV, LEV DMITRIEVICH, *see* Strutinskiĭ, A. B. Spravochnik masterastroitelîa. *1957*. No. 55206.

55512. TRET'ÎAKOV, PETR NIKOLAEVICH, 1909– . Pervobytnaîa okhota v severnoĭ Azii. (Gosudarstvennaîa akademiîa istorii material'noĭ kul'tury. Izvestiîa, 1934. vyp. 106, Iz istorii rodovogo obshchestva na territorii SSSR, p. 220–62.) Approx. 90 refs. Text in Russian. ***Title tr.:*** Primitive hunting in northern Asia.

Discusses the communal hunting and fishing tactics of the primitive, class-less hunters belonging to one patriarchal kin group as opposed to the individual hunting methods adopted with the onset of a class-society after the Russian conquest. The different techniques of driving or stampeding game (reindeer, elk) into abatis, corrals, traps and water courses, also the use of domesticated animals as decoys are described; fish weirs, use (by Koryaks, p. 245) of seal-skin thongs to trap whales in an inlet, and other devices utilized by aborigines from Kola to Chukotka are outlined.

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55513. TREVOR-ROPER, P. D. Hypothermia in hamsters; the ocular response to freezing and resuscitation. (Ophthalmological Society of the United Kingdom. Transactions, 1957. v. 77, p. 401–415, illus.) 15 refs.

Description of gross and microscopical changes in the eye of hamsters chilled to below 0° C. Corneal opacity, cataract, retina and retinal vessels are dealt with in detail, and the potentialities of hypothermia for ophthalmology, noted.

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55514. TRÎAPITSYN, V. A. O vidakh roda *Encyrtus* Latr. fauny SSSR; Hymenoptera, Encyrtidae. (Entomologicheskoe obozrenie, 1957. t. 36, no. 3, p. 699–714, 21 illus.) 48 refs. Text in Russian. Summary in English. ***Title tr.:*** Species of the genus *Encyrtus* Latr. (Hymenoptera, Encyrtidae) in the U.S.S.R.

Contains a description and discussion of the genus, a key to the species and descriptions of six. Two are known in the North: *E. infidus* from Khibiny in Kola Peninsula and Yakutsk, and *E. albitarsis* known from northern Yakutia (Olenek River basin) and Swedish Lapland. ***Copy seen:*** DLC.

TRICK, G. S., *see* Meyer, G. E., *and others*. A versatile new family of elastomers. *1957*. No. 53255.

55515. TRINCHER, K. S. Zavisimost' lipopeksicheskoĭ funktsii legkikh ot temperatury vneshneĭ sredy. (Biûlleten' èksperimental'noĭ biologii i meditsiny, Oct. 1958. t. 46, p. 65–68, tables.) 11 refs. Text in Russian. Summary in English. ***Title tr.:*** Dependence of lipopexic function of the lungs on the temperature of external environment.

Account of experiments with rats, guinea pigs and chicken exposed for three-six days to cold (4°–6° C.) with controls kept at 25°–28° C. Quantitative chemical analyses showed a slightly increased lipid content in the lungs of animals exposed to cold.

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55516. TROFIMOV, BORIS ALEKSANDROVICH. K voprosu o proiskhozhdenii i razvitii faun mlekopitaîûshchikh chetvertichnogo perioda umerennoĭ i severnoĭ zon. (Akademiîa

nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Trudy, 1955. t. 12, p. 106–120, 5 maps.) 7 refs. Text in Russian. ***Title tr.:*** The origin and development of mammalian fauna of the Quaternary period in the temperate and northern zones.

Deals with the existence, distribution and changes of this fauna in the middle and northern Northern Hemisphere. Finds of large-mammal remains provide the best Quaternary paleontological evidence since they are better preserved than the remains of forest, alpine mammals or other, minor fauna. A general account is given of the species, their distribution during the Miocene, Pliocene, and early Pleistocene, and their later changes; distribution of Hipparion fauna in the Pliocene and upper Miocene and their later disappearance. The spread of new mammalian forms during the later Quaternary in northern regions of Eurasia and North America is outlined and their fate during glacial period briefly considered. Certain mammals suffered substantial impoverishment and disappeared during the transition from Pleistocene to Holocene. Survival of the musk ox, *Ovibos moschatus*, in the arctic regions is indicated. Pleistocene distribution of the mammoth (*Mammonteus primigenius* Blum.), rhinoceros (*Coelodonta antiquitatis*, Blum.), bison and elk (*Alces alces* L.) is also presented in maps.

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55517. TROFIMOV, G. A. Pochemu snizilas' dobycha belki. (Okhota i okhotnich'e khoziaĭstvo, May 1958. god 4, no. 5, p. 10–12, illus.) Text in Russian. ***Title tr.:*** Why did the squirrel catch decrease?

Squirrels taken in Khanty-Mansi National District dropped from 1,432 thousand in 1938, to 173.5 thousand in 1956; the decrease is attributed to the reduction in number of hunters, inefficient hunting organization and poor equipment.

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55518. TROFIMOV, G. A. Puti razvitiia okhotnich'ego khoziaĭstva v Khanty-Mansiĭskom natsional'nom okruge. (Ratsionalizatsiia okhotnich'ego promysla, 1958. vyp. 7, p. 25–32.) Text in Russian. ***Title tr.:*** Development of the hunting industry in Khanty-Mansi National District.

The annual catch in this district on the Middle Ob averages approx. 300,000 squirrels, 4,000 sables, 2,000 muskrats, with a total value of over 6 million rubles; the hunters mostly belong to 39 agricultural collectives (artel'). This yield is about one-third that in 1940, an insufficient number of hunters being the main cause of the decline. Plans to double the fur output by 1960 are noted and measures are discussed for raising hunting efficiency by a shift of manpower from fisheries to hunting and trapping.

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55519. TROFIMOV, G. A. Zabytaia otrasl' khoziaĭstva. (Okhota i okhotnich'e khoziaĭstvo, Apr. 1957, no. 4, p. 12–13, illus.) Text in Russian. ***Title tr.:*** A neglected branch of the economy.

Discusses shortcomings of the hunting industry in Khanty-Mansi National District. Its 1955 yield of pelts was worth 20 million rubles, but only 6.8 million rubles worth was delivered by hunters, the rest came from the fur farms. The poor take is attributed to compulsory concentration of the District's inhabitants in kolkhozes, and the pressing of born hunters into the fishing industry. Lack of hunters' huts in uninhabited areas, transportation difficulties and shortage of dogs and equipment left the remote and most abundant areas unexploited. Assistance of hunters by the kolkhoz administration is urged.

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55520. TROFIMOV, P. M. Iz istorii lesopileniia na Severe. (Izvestiia vysshikh uchebnykh zavedenii. Lesnoĭ zhurnal, 1958, no. 6, p. 140–43.) 10 refs. Text in Russian. ***Title tr.:*** From the history of the lumber industry in the North.

Outlines the development of this industry, chiefly in Arkhangel'sk and Arkhangel'sk Province, from the 17th century to 1861; lumbering equipment, saw mills, state and foreign participation, output.

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55521. TROFIMOV, S. V. Stroitel'stvo stantsionnykh poselkov v surovykh usloviiakh severa. (Transportnoe stroitel'stvo, Mar. 1958. god 8, no. 3, p. 11–14, illus.) Ref. Text in Russian. ***Title tr.:*** Construction of railroad station settlements under severe northern conditions.

Two-story houses are advocated to reduce total settlement area. They must be arranged along the direction of predominant winter winds with short streets

and snow fences. Preferred arrangements of buildings are shown.

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55522. TROFIMOV, VLADIMIR SERGEEVICH. Almazonosnaîa provint͡siîa v Sibiri. (Priroda, July 1957, no. 7, p. 10–18, 8 illus., table.) Text in Russian. ***Title tr.:*** A diamond-bearing province in Siberia.

Recounts discovery during 1948–1956, of diamond fields between the Yenisey River and the Lena and from the Taymyr and Anabar depressions south to the eastern Sayan Mts. The richest pipes of diamond-carrying kimberlite are in the northeast, in the Vilyuy, Olenek and Muna River basins; they are mostly oval or round in form (50 to 700 m. diameter) and are filled with fragments of limestone, traps, marls, dolomites, etc., and some magmatic minerals. Besides the kimberlite pipes, sand and gravels along the Irelyakh, Malaya Botuobuya, Vilyuy, and Markha Rivers yield diamonds. The quality of Siberian diamonds is rather low, most of them are used in the cutting industry. The average weight is 0.07 carat, the greatest 0.44. The total output from this region may compete with that of the richest diamond fields in the Belgian Congo or Ghana in Africa.

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55523. TROFIMOV, VLADIMIR SERGEEVICH, *and* **G. V. NAUMOV.** ÎAkutskie almazy. Moskva, Izd-vo "Znanie," 1957. 32 p. illus., sketch map. (Vsesoûznoe obshchestvo po rasprostraneniû politicheskikh i nauchnykh znaniĭ, ser. 8, no. 22.) 11 refs. Text in Russian. ***Title tr.:*** Diamonds of Yakutia.

Popular account of world diamond production, with emphasis on its importance to industry. Search for diamonds in the U.S.S.R. is recounted (p. 13–26) noting the discovery (in 1829) in the Ural; the recent systematic search in Central Siberia, with finds in the Nizhnyaya Tunguska and Vilyuy Rivers basins in 1948–49, and discovery of diamantiferous pipes in western Yakutia (cf. map) in 1954–56; the largest of these pipes and those in South Africa are compared in size (p. 19).

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55524. TROFIMUK, ANDREÏ ALEKSEEVICH. Problemy geologii Sibiri i Dal'nego Vostoka. (Akademiîa nauk SSSR. Vestnik, Feb. 1958. god 28, no. 2, p. 31–32.) Text in Russian. ***Title tr.:*** Geological problems of Siberia and the Far East.

Tasks facing the recently established Institute of Geology and Geophysics of Siberia are briefly summarized by its director. Discoveries of coal, iron, nonferrous and rare metal ores, diamond, mica, etc. deposits in Siberia are noted; need for further detailed geological exploration is stressed.

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TROFIMUK, ANDREÏ ALEKSEEVICH, *see also* Ivanov, B. V. Konferent͡siîa . . . *1958*. No. 51999.

55525. TROIT͡SKIĬ, S. P., *and* **V. A. DOT͡SENKO.** Rezul'taty tematicheskikh polevykh rabot v nizov'îakh reki Eniseîa v 1957 godu. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1957. vyp. 6, p. 42–45.) Text in Russian. ***Title tr.:*** Results of assigned topical field work on the lower Yenisey River in 1957.

Reports on activities of two field parties which studied the stratigraphy of Quaternary deposits on the right bank of the Yenisey, one, headed by S. P. Troit͡skiĭ, between Ust'-Yeniseyskiy Port and Karaul (70°05′ N.), the other, under V. A. Dot͡senko, between the Sukharikha and Kureyka, and the Gorbiyachin River valley (approx. 67°30′ N. 87°–88° E.). Achieved results are briefly summarized. ***Copy seen:*** DGS.

TROTTER, CHARLES L., *see* Dutcher, R. R., *and others*. Petrographic . . . coals . . . Arctic Slope . . . *1957*. No. 50663.

55526. TROUT, GEOFFREY C. Cod, Arcto-Norwegian stock. English cod tagging in 1954 and 1955. (International Council for the Study of the Sea. Annales biologiques 1955, *pub.* 1957. v. 12, p. 139–40, tables.)

Report on study of growth and mortality with tagged fish released in small batches over the Spitsbergen Bank. Percentage of recapture of the various length groups and recaptures of the 1951–52 taggings are analyzed and discussed.

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55527. TROUT, GEOFFREY C. Results of English cod tagging in the Barents Sea. (International Council for the Exploration of the Sea. Journal du Conseil, 1958. v. 23, no. 3, p. 271–80, illus., tables.) 4 refs.

Report based on 1951 and 1952 tagging experiments with some from 1954 and 1955. Analysis of the data suggests that length composition of the recaptured fish should be taken into consideration, as well as method of recapture. Overall recapture percentage can be misleading and of little value. The Lea tag was found to be superior to the Petersen.

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TROW, W. A., *see* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958*. No. 50694.

55528. TRULEVICH, VLADIMIR KONSTANTINOVICH, *and* **F. F. TUL'ZHENKOVA.** Ovoshchevodstvo Kraĭnego Severa. (Sad i ogorod, Oct. 1957. god 95, no. 10, p. 63–67, illus., map.) Text in Russian. ***Title tr.:*** Vegetable growing in the far North.

Brief general outline of progress achieved in vegetable cultivation in the Soviet period: 200 state farms, over 1,400 collective farms and 50 machine-tractor stations are working in the far North using methods developed at 22 experimental stations and by some 2,000 experts. The limit of vegetable growing has advanced northward 300–400 km. in the European part of the U.S.S.R., and 600–800 km. in Asia; in several places it has reached the shores of the arctic seas. Strains of cabbage, onion, carrot, cucumber and tomato, best suited to climatic conditions of the far North, are listed. Text map shows the limit of vegetable growing in 1930 and at present.

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55529. TRUSHIN, V. F. Rezhim taâniâ snega i intensivnost' vesennego zhidkogo stoka pri sploshnom pokrytii snega chernym poroshkom. (Meteorologiâ i gidrologiâ, Mar. 1957, no. 3, p. 44–45, table.) 10 refs. Text in Russian. ***Title tr.:*** The effects of the blanketing of snow with black powder on snow melting and meltwater run-off.

Studies on acceleration of thawing of snow under cover of black powder or ashes are reviewed from 1885 to 1953. Black powder initiates early melting even at air temperatures below 0° C., prolongs the melt period, and diminishes meltwater run-off. The effects were observed only with deep snow. No differences were apparent with thin snow because the rapid appearance of snow-free areas produced the same effects as the black powder. Data on observed differences are tabulated (with column headings erroneously reversed).

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TSAREGRADSKIĬ, VALENTIN ALEKSANDROVICH, *see* Galchenko, I. I. My idem na sever . . . *1955*. No. 51057.

TSAREVA, L. P., *see* Shilin, L. L., *and* L. P. Tsareva. O rasprostranenii berilliâ . . . *1957*. No. 54783.

55530. TSEEB, R. IA. Materialy po pitaniiu i rasprostraneniiu pikshi v pribrezhnoĭ zone vostochnogo Murmana. (Akademiâ nauk SSSR. Murmanskaâ biologicheskaâ stanciâ. Trudy, 1957. t. 3, p. 130–39, illus. map.) 7 refs. Text in Russian. ***Title tr.:*** Materials on the food and distribution of haddock in the coastal zone of the eastern Murman.

Description of conditions prevailing during 1953–1954. Year-round data on diet, and some regional aspects of it are discussed. Similarly seasonal distribution of this species is presented and analyzed, and migration towards the coast noted.

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55531. TSEEB, R. IA. Pitanie pikshi. (*In:* Akademiâ nauk SSSR. Murmanskaâ biologicheskaâ stanciâ. Zakonomernosti skopleniĭ . . . 1958. p. 190–210, illus., tables.) 28 refs. Text in Russian. ***Title tr.:*** The food of haddock.

Study based on trawl-net collections during a two-and-one-half year period (1953–1955). Main elements of the diet (fish, especially capelin, crustaceans) and changes in quantity and composition of food during the year are discussed. Data are presented and considered, on composition of food in the stomach and intestine, food value and digestibility of the benthos, temperature effects upon diet.

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55532. TSEEB, R. IA. Raspredelenie pikshi v 1953–1955 gg. (*In:* Akademiâ nauk SSSR. Murmanskaâ biologicheskaâ stanciâ. Zakonomernosti skopleniĭ . . . 1958. p. 228–33, tables.) 12 refs. Text in Russian. ***Title tr.:*** Distribution of haddock in 1953–1955.

Account based on various sources including special catches. Appearance and migration to and from the eastern Murman coastal zone are reconstructed for each month. Biological and environ-

mental (temperature) factors responsible for the distribution are analyzed.
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55533. TSEEB, R. IA., *and* A. V. ZHABREVA. Sravnenie pitaniia treski i pikshi. (*In:* Akademiia nauk SSSR. Murmanskaia biologicheskaia stantsiia. Zakonomernosti skopleniĭ . . . 1958. p. 223–27, illus., tables.) 3 refs. Text in Russian. ***Title tr.:*** Comparison between the food of cod and haddock.

Authors discuss the month-by-month food intake and preferences of the two forms, similarities and dissimilarities in intensity of feeding and in the kind of food taken; competition; the temperature factor. ***Copy seen:*** DLC.

TSEĬTLIN, ALEKSANDR ALEKSANDROVICH, *see* Strutinskiĭ, A. B. Spravochnik mastera-stroitelia. *1957*. No. 55206.

55534. TSENIN, S. S. Transportnoe osvoenie basseĭna r. Leny. (Rechnoĭ transport, Aug. 1958. god 17, no. 8, p. 10–11.) 2 refs. Text in Russian. ***Title tr.:*** Development of transportation in the Lena River basin.

Economic developments in central and western Yakutia affecting transportation along the Lena are reviewed from 1930 to 1950. After the railroad connection with Ust'-Kut was completed (1951), the river became a major route for all northeastern U.S.S.R. Navigation on various parts varies from 70–130 days per year. In the event of sudden closing of the river due to weather, cargo is discharged on the bank and transported via the nearest highway. With the coordinated river-railroad-highway system, freight traffic has increased in volume and diversity. Transportation areas are described in detail from the economic and technical standpoints for the period 1950–1957, with attention given to specific climatic difficulties particularly in the arctic area. ***Copy seen:*** DLC.

55535. TSINTSIUS, VERA IVANOVNA. Sravnitel'naia fonetika tunguso-man'chzhurskikh iazykov. Leningrad, Gos. uchebno-pedagog. izd-vo, Leningradskoe otd-nie, 1949. 342 p. tables. 68 refs. Text in Russian. ***Title tr.:*** Comparative phonetics of the Tungus-Manchu languages.

Exhaustive analysis of the phonetic systems of the northern (Lamut, Negidal and Evenki including Solon) and southern (Gold, Udegey, Ul'chi, Oroki, Orochi and Manchu) Tungus groups. Their linguistic classifications are reviewed and their syntax, grammar, morphology and phonemes discussed and compared. ***Copy seen:*** DLC.

55536. TSUNTS, MIKHAIL. Pokorenie velikanov. (Nauka i zhizn', May 1957. god 24, no. 5, p. 13–16, illus., col. map.) Text in Russian. ***Title tr.:*** Subjugation of giants.

Notes plans for construction of "cascades" of hydro-electric stations on the Angara, Yenisey, Ob and Irtysh Rivers. Significance of their construction for resource development in Siberia is discussed. ***Copy seen:*** DLC.

55537. TSVETKOVA, S. G. Itogi 7-go mezhduvedomstvennogo soveshchaniia po merzlotovedeniiu. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Jan. 1957. god 22, no. 1, p. 142–43.) Text in Russian. ***Title tr.:*** Results of the 7th interdepartmental conference on permafrostology.

"Problems in the improvement of permafrostology in the U.S.S.R. during the postwar period and programs for further investigation discussed at the Conference (Mar. 16–26, 1956) are outlined. Extensive data on permafrost and its physical and mechanical properties collected by several institutions were used to compile a new general map of permafrost in the U.S.S.R. (scale 1:5,000,000) and several maps for a number of regions of the Far East. New methods of thawing permafrost with solar radiation, electricity, and hot water were developed in this period, and the problem of water supply in permafrost was evaluated. Improvements were also achieved in foundation construction. The development of methods of controlling ground freezing and thawing, thorough studies of permafrostological processes and their origin in various regions, and engineering problems were noted as the chief tasks for permafrostologists during the next few years."—SIPRE.
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TSVETKOVA, S. G., *see also* Porkhaev G. V., *and* S. G. TSvetkova. K voprosu ob ėksperimental'nykh metodakh . . . *1958*. No. 54096.

55538. TSYPIN, IAKOV EVGEN'EVICH. Posobie dispetcheru dvizheniia rechnogo flota. Moskva, Izd-vo "Rechnoĭ

transport," 1957. 183 p. diagrs. (1 fold.), tables. 18 refs. Text in Russian. ***Title tr.:*** Manual for the dispatcher of river fleet traffic.

The organization of river traffic including passenger, cargo and auxiliary service vessels along major and secondary waterways in the U.S.S.R. is presented in detail. Transportation on the northern rivers Ob, Yenisey, Irtysh, Lena, Amur and others is included. Organizational problems before opening and closing the navigation season are outlined (p. 143–49). ***Copy seen:*** DLC.

55539. TSYTOVICH, NIKOLAĬ ALEKSANDROVICH, *and others.* O fizicheskikh ſâvleniſâkh i protsessakh v promerzaſûshchikh, merzlykh i ottaivaſûshchikh gruntakh. (*In:* Materialy po laboratornym issledovaniſâm merzlykh gruntov, sbornik 3, 1957. p. 5–114, illus., tables, diagrs., graphs.) 109 refs. Text in Russian. *Other authors:* Z. A. Nersesova, A. P. Bozhenova, I. A. Tſûtſûnov, B. N. Dostovalov, P. A. Shumskiĭ, F. G. Bakulin, B. A. Savel'ev, V. F. Zhukov, G. A. Martynov, S. S. Vſâlov, *and* E. P. Shusherina. ***Title tr.:*** Physical effects and processes in freezing, frozen, and thawing soils.

The effects of the phase state of water on the physical and mechanical properties of frozen soils are examined on basis of the literature and recent investigations. Data collected at the Institute of Permafrostology on the liquid-water content of various soils and on the effects of temperature and pressure on the amount of unfrozen soil water, are presented. Processes accompanying ground freezing are examined in detail, and several theories on the changes in physical properties of freezing and frozen ground are discussed. Variations in supercooling related to soil composition and structure are analyzed as well as the effects of soil freezing on moisture migration, ice formation, and granulometric changes. Freezing processes in rock and the effects of ice formation on rock structure are dealt with on the basis of investigations 1920–55. The deformation of dispersed soils on thawing is discussed in detail, with emphasis on the thermal characteristics of ice melting and moisture migration in the thawing strata. Effects of temperature, chemical composition, water content, structure, surface loading, and other external factors on the properties of frozen ground are examined, and formulas for calculating their numerical values are presented.

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55540. TSYTOVICH, NIKOLAĬ ALEKSANDROVICH. Osnovaniſâ i fundamenty na merzlykh gruntakh. Moskva, izd-vo Akad. nauk SSSR, 1958. 168 p. illus., tables, graphs, maps, diagrs. 91 refs. Text in Russian. ***Title tr.:*** Foundations on frozen ground.

Physical and mechanical processes during freezing, and the properties of frozen and thawing soils are discussed. Methods and techniques of foundation construction on preserved permafrost and on seasonally thawed ground are outlined with emphasis on the mathematical calculations. Isothermal maps of seasonal freezing depths in the western part of U.S.S.R. (to about 85° E.), and of the distribution and depth of permafrost in the U.S.S.R. (including bottom permafrost in arctic shelf seas) are presented. Some 40 diagrams and graphs elucidate the text. ***Copy seen:*** DLC.

TSYTOVICH, NIKOLAĬ ALEKSANDROVICH, *see also* Pekarskaſâ, N. K., *and* N. A. TSytovich. O roli treniſâ . . . *1957.* No. 53924.

TSYTOVICH, NIKOLAĬ ALEKSANDROVICH, *see also* Shusherina, E. P., *and* N. A. TSytovich. Nekotorye opyty po izucheniſû vliſâniſâ promorazhivaniſâ . . . *1957.* No. 54840.

TSYTOVICH, NIKOLAĬ ALEKSANDROVICH, *see also* Vſâlov, S. S., *and* N. A. TSytovich. Cohesion of frozen soils . . . *1957.* No. 55796.

55541. TUCHKOV, I. I. Novaſâ stratigraficheskaſâ skhema verkhnego triasa i ſûry Severo-Vostoka SSSR. (Akademiſâ nauk SSSR. Izvestiſâ, ser. geologicheskaſâ, June 1957. god 22, no. 5, p. 56–63, tables.) Text in Russian. ***Title tr.:*** A new stratigraphic division of the upper Triassic and Jurassic in northeastern U.S.S.R.

Presents a new stratigraphic division of these deposits based on examination of various cross-sections in the eastern Verkhoyansk region, Yana, Indigirka and upper Kolyma basins, Cherskiy Mts., Sea of Okhotsk coastal areas and adjacent parts of the Northeast. Various series of Upper Triassic, Lower, Middle, and Upper-Jurassic and Lower Cretaceous are distinguished, and their distribution,

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thickness and faunal characteristics given. A tabular summary of this division is included. ***Copy seen:*** DLC.

55542. TUCHKOV, I. I. Otlozheniîa karnilskogo îarusa Severo-Vostoka SSSR i ikh nizhniaîa granitsa. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Oct. 1958, no. 10, p. 87–101, table, map.) 17 refs. Text in Russian. ***Title tr.:*** Karnian deposits in northeastern part of the U.S.S.R. and their lower boundary.

Outlines regional distribution and characteristics of the Karnian series of upper marine Triassic in upper and middle Kolyma River region, the upper Indigirka, coastal areas bordering the northern Sea of Okhotsk and other adjacent regions. According to faunal characteristics the Karnian deposits are distinguished into two horizons, which are treated in turn and index fossils are given. Comparison is made with similar deposits of Alaska, British Columbia, California, Nevada, Japan, China, etc. Limits of the Karnian sea basin are defined and boundary drawn between Karnian and Ladinian series. ***Copy seen:*** DLC.

TUCHKOVA, M. I., *see* Atlasov, I. P., *and others*. O nakhodke îsirkonievogo . . . *1957*. No. 49420.

55543. TUCK, LESLIE M. Present distribution and population of the starling in Newfoundland. (Canadian field-naturalist, July–Sept. 1958. v. 72, no. 3, p. 139–44, text map.) 9 refs.

Contains data on the distribution and spread of *Sturnus v. vulgaris*, reported from many localities of northern Canada: Churchill, Fort McKenzie, Fort Smith, etc. Notes on its nesting and population in Newfoundland are included.

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55544. TUCKER, W. E. The hazards of winter sports. (Practitioner, Dec. 1957. v. 179, no. 1074, p. 689–97, illus., tables.) 3 refs.

Account on the sources, mechanism and common areas of injury from winter sports, including skiing, sledging, etc., direct and indirect injury, general forms of treatment, kinds of injuries and their therapy: contusions, muscle injuries, sprains and internal derangements, fractures. ***Copy seen:*** DNLM.

TUDDENHAM, S. F., *see* Downing, J. A., *and* S. F. Tuddenham. Developments . . . 1956. *1957*. No. 50617.

55545. TUGOLUKOV, V. A. Okhotskie ėvenki. (Sovetskaîa ėtnografiîa, 1958, no. 1, p. 11–23.) 15 refs. Text in Russian. ***Title tr.:*** The Okhotsk Evenki.

Discusses the past and present material culture, customs and economy of one of the larger (some 2,000) Evenki (Tungus) groups, who inhabit Tuguro - Chumikanskiy and Ayano-Mayskiy districts, Khabarovskiy Kray, along the Sea of Okhotsk (approx. 54°–57° N.). Their original social organization and economy, conquest, taxation and exploitation by 18th–19th century Russian officials and merchants, economic ruin during the Civil War years, etc. are dealt with. The cultural and social advances, collectivization, transition from nomad to settled life, emancipation of women, introduction of schools and health services under the Soviet regime are described. The abortive attempt in the 1930's to introduce horticulture and animal husbandry and the present-day return by the kolkhozes to a primarily hunting, fishing and reindeer-herding economy are noted. The shortcomings of formal schooling not geared to the specific needs of the local economy are criticized.

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55546. TULLY, JOHN PATRICK, 1906– , *and* A. J. DODIMEAD. Canadian oceanographic research in the northeast Pacific Ocean. (Pacific Science Congress. 9th, *Bangkok, Thailand*, 1957. Abstracts of papers, p. 157.)

Reports progress of a major study including, to that time, three summer and one winter surveys north of 40° N. and east of 170° W. Principal oceanographic features are reviewed.

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TUL'ZHENKOVA, FAINA FEDOROVNA, *see* Trulevich, V. K., *and* F. F. Tul'zhenkova. Ovoshchevodstvo . . . *1957*. No. 55528.

TUMARKINA, T., *see* Swensson, I. îA . . . Kirune. *1957*. No. 55288.

55547. TUOMIKOSKI, RISTO KALEVI, 1911– . Die *Lactarius*-Arten Finnlands. (Karstenia, 1953. v. 2, p. 9–25.) 56 refs. Text in German. ***Title tr.:*** *Lactarius* species in Finland.

Contains an annotated list of some 40 species with distributional data and some critical and historical notes. At least ten species are recorded in Kuusamo and Finnish Lapland. ***Copy seen:*** DA.

55548. TUOMIKOSKI, RISTO KALEVI, 1911– . Notes on Finnish Agaricales. (Karstenia, 1953. v. 2, p. 26–32.) 32 refs.

Contains taxonomic notes on four species of genus *Leccinum* ("a polymorphous and notoriously difficult group"), on cone-dwelling agarics, and on two species of genus *Stropharia*. *Pseudohiatula esculenta*, recorded in Ivalo, in Inari Lappmark, is discussed.

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TURANSKAIÂ, N. V., *see* Gerasimovskiĭ, V. I., *and* N. V. Turanskaiâ. Vysokoe soderzhanie lantana . . . *1957*. No. 51156.

55549. TURESSON, GÖTE WILHELM, 1892– . Contributions to the genecology of glacial relics. (Hereditas, 1927. bd. 9, p. 81–101, 5 illus., 6 tables.) 46 refs.

Evaluation is attempted of the interpretation of certain plants, like *Poa alpina*, occurring in the lowland as "glacial relics," based partly on material from Gällivare and Abisko in Swedish Lapland, and from Bodø, northern Norway. The population is split into three ecotypes: an alpine (oect. *alpinus*), a sub-alpine (oect. *subalpinus*), and a lowland (oect. *pediacus*). The concept of glacial relict is rejected. The rarity and scattered occurrence of oect. *pediacus* in Sweden is most probably due to biotype pauperization. A number of species populations were entirely deprived of their lowland ecotypes and are now represented only by arctic and alpine ecotypes. ***Copy seen:*** DLC.

55550. TURESSON, GÖTE WILHELM, 1892– . Ecotypical selection in Siberian *Dactylis glomerata* L. (Hereditas, 1929. bd. 12, häfte 3, p. 335–51, 6 illus., 7 tables.) 6 refs.

Two wild-growing Siberian ecotypes (Altay Mts.) are compared with some commercial strains viz. Danish Olsgaard and Tardus, and strains from Chernigov and the Murmansk station on Kola Peninsula, to elucidate the mechanism of ecotypical changes involving biotic factors. The two Siberian populations are found to represent well defined ecotypes which differ in important particulars from all other investigated *Dactylis* types and to show marked relationship to their Siberian habitats.

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55551. TURESSON, GÖTE WILHELM, 1892– . The selective effect of climate upon the plant species. (Hereditas, 1930. bd. 14, häfte 2, p. 99–152, 25 illus.) 25 refs.

Reports on experimental study of the relation between plant and habitat, based on observations of 31 different species, of which series were collected in different climatic regions in Europe and Asia and grown under controlled conditions. *Fragaria vesca*, *Rumex aquaticus* and *Caltha palustris* from Luleå in Norrbotten, and *Spiraea ulmaria* from Abisko, Swedish Lapland, were used in the experiments. Plant height and earliness were the characters studied. Climate strongly influences the distribution of the biotypes within a species. In aestival species, pronounced earliness combines with rather moderate height in northern regions, while in the southern, lateness combines with great height. Seedling generations of the same species raised in alpine and lowland regions are genotypically lower and earlier in the former than in the latter. ***Copy seen:*** DLC.

55552. TURESSON, GÖTE WILHELM, 1892– . Studien über *Festuca ovina* L., I; normalgeschlechtliche, halb- und ganzvivipare Typen nordischer Herkunft. (Hereditas, 1926. bd. 8, häfte 1–2, p. 161–206, 14 illus., 10 tables.) 37 refs. Text in German. Summary in English. ***Title tr.:*** Studies of *Festuca ovina* L., I; sexual, semi-viviparous and viviparous types of northern origin.

Deals with types of *Festuca ovina* ssp. *eu-ovina* var. *vulgaris* collected in their natural habitat in many localities (including Swedish Lapland and Narvik, northern Norway) and cultivated at the Institute of Heredity, in Sweden, to find how climatic and edaphic factors control the composition of population in various habitats. It was shown that some morphological characteristics, as earliness, size of spikelets, etc. are affected by climatic and geographic factors, and that these characteristics are kept constant in culture. Vivipary in grasses includes phenomena of different kinds and may be "modifactorily induced" or hereditary in nature. A new conception of forms, with subdivisions: forma apomicta ("apomict"), forma amphimicta ("amphimict"), and forma amphi-apomicta ("amphi-apomict"), is introduced and discussed. A survey of apomicts and amphi-apomicts in *F. ovina*

is made, and a classification scheme presented (p. 193), where these types are named and briefly diagnosed. Further parts of this study *infra*.

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55553. TURESSON, GÖTE WILHELM, 1892– . Studien über *Festuca ovina* L., II; Chromosomenzahl und Viviparie. (Hereditas, 1930. bd. 13, häfte 2–3, p. 177–84, 2 illus.) 24 refs. Text in German. ***Title tr.:*** Studies of *Festuca ovina* L., II; chromosome number and vivipary.

Reports on chromosome counts of numerous forms of this grass and study of their vivipary, which may be induced by some modifiers, such as the application of light of various intensity, or may be of hereditary nature. *F. ovina* aapm. *svolvoeriensis*, was grown from seeds from the Lofoten Islands, northern Norway; it is tetraploid and has 2n=28.

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55554. TURESSON, GÖTE WILHELM, 1892– . Studien über *Festuca ovina* L., III; weitere Beiträge zur Kenntnis der Chromosomenzahlen viviparer Formen. (Hereditas, 1931. bd. 15, häfte 1, p. 13–16, illus.) 2 refs. Text in German. ***Title tr.:*** Studies of *Festuca ovina* L., III; further contributions to the knowledge of chromosome numbers of viviparous forms.

Contains data on three forms from Lapland, aapm. *abiscoënsis*, aapm. *lapponica* and aapm. *nuoljoea*, all triploid forms with 2n=21. Another form, *svolvoeriensis* from the Lofotens, has 2n=28.

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55555. TURESSON, GÖTE WILHELM, 1892– . Variation in the apomictic microspecies of *Alchemilla vulgaris* L. (Botaniska notiser, 1943, häfte 4, p. 413–27, illus. table.) 7 refs.

Reports the results of cultivating microspecies of this plant, originating from diverse areas. Three of them are from Abisko and Björkliden, Lapland: *A. filicaulis*, *A. glomerculans* and *A. murbeckiana*. Limits of variation, periods of development, resistance to mildew, etc. are described. ***Copy seen:*** DA.

55556. TURESSON, GÖTE WILHELM, 1892– . Variation in the apomictic microspecies of *Alchemilla vulgaris* L. 2; progeny tests in agamo types with regard to morphological characters. (Botaniska notiser, 1956. v. 109, no. 4, p. 400–404, tables.) 6 refs.

A tabular presentation and analysis of morphological characteristics in agamo types of this species. Stem and leaf dimensions are used. Some of *A. pastoralis* and *A. glomerulans* are of Lapland origin. ***Copy seen:*** DA.

55557. TURESSON, GÖTE WILHELM, 1892– . Variation in the apomictic microspecies of *Alchemilla vulgaris* L. III; geographical distribution and chromosome number. (Botaniska notiser, Dec. 1957. v. 110, no. 4, p. 413–22, 3 tables.) 13 refs.

Contains chromosome counts of 19 agamospecies of the genus *Alchemilla*. There is no marked increase in chromosome number or in the degree of polyploidy with higher latitude. The differentiation is probably due to autosegregation. The prevalence of the high polyploid Alchemillas in disturbed and "man-made" habitats is probably the result of competition and the slow rate of growth. At least six agamospecies from Lapland are included. ***Copy seen:*** DLC.

TURMAN, GEORGE A., *see* Abramson, D. I., *and others*. Relationship . . . tissue temperature and oxygen uptake . . . resting. *1958*. No. 49107.

55558. TURNER, GEOFFREY. Hair embroidery in Siberia and North America. Oxford, University Press, 1955. 83 p. illus., tables, maps, plates. (Oxford University. Pitt Rivers Museum. Occasional papers on technology, 7.) 46 refs.

Describes the techniques, distribution (from western Siberia to eastern Canada) and designs of moose-, reindeer-, and caribou-hair embroidery. Identification of hair, including texture, measurements, microscopic analysis and scale impressions are dealt with, and the use of horsehair, bird and porcupine quills chiefly for moccasin decoration by Chipewyan, Slave, Hare, and other Indians is noted. A West-Siberian, possibly Chinese-imported, origin of hair embroidery is suggested and its diffusion through eastern Siberia across the Bering culture bridge to the Aleutians and finally to eastern Canada is traced. The possibility of independent local inventions and/or adaptations is also considered. The range of reindeer and moose, and location of tribes mentioned are mapped. Hair and quill characteristics and aboriginals' embroidery tech-

niques are tabulated and photos of selected artifacts given on 16 added plates. ***Copy seen:*** DSI.

55559. TURNER, HERMAN. Green grow the gardens. (Alaska sportsman, June 1957. v. 23, no. 6, p. 18–21, 43–44, illus.)

Account of author's tours of remote Alaskan villages as agent for the University of Alaska Extension Service to encourage vegetable gardening. His 1956 activities were concentrated in the Fort Yukon area. ***Copy seen:*** DI.

TURNER, JOHN K., *see* Kuhn, L. A., *and* J. K. Turner. Alterations in pulmonary and peripheral vascular resistance in hypothermia . . . *1957.* No. 52542.

TURNER, JOHN K., *see* Kuhn, L. A., *and others.* The effect . . . cold on resistance to hemorrhage . . . dogs. *1957.* No. 52543.

TURNER, S., *see* Bestelink, P. N., *and* S. Turner. The . . . brittleness testing of polyethylene. *1958.* No. 49706.

TURPAEVA, E. P., *see* Lozina-Lozinskiĭ, L. K., *and* E. P. Turpaeva. Rod *Colossendeis* . . . *1958.* No. 52935.

55560. TURRILL, WILLIAM BERTRAM. *Fritillaria camschatcensis;* Liliaceae. (Curtis's botanical magazine, 1949. n. ser. v. 166, [5] p., illus., text map, plate 63.)

Contains historical remarks, synonyms, a description and notes on cultivation of this plant known both in a wild and cultivated form; it occurs on Kamchatka Peninsula and in southern and western Alaska. ***Copy seen:*** DLC.

55561. TUSHNĬAKOVA, M. M. Rol' temperaturnogo faktora pri rentgenovskom obluchenii. (Zhurnal obshcheĭ biologii, July–Aug. 1958. t. 19, no. 4, p. 265–72, illus. tables.) 15 refs. Text in Russian. Summary in English. ***Title tr.:*** The role of the temperature factor in X-irradiation.

Account of experiments with vetch and oats. Cooling (+2° to −4° C.) the seeds before X-irradiation had no effect on the germination process, or stimulated it, in the vetch. Cooling after irradiation produced death of all seedlings. ***Copy seen:*** DLC.

TUZOVA, A. M., *see* Gerasimovskiĭ, V. I., *and others.* O tsirkonievo-gafnievom sootnoshenii . . . *1958.* No. 51155.

55562. TVING, RASMUS CHRISTEN NIELSEN, 1888– . Den gamle grønlandsfarer briggen „Tjalfe". (Grønland, Nov. 1957, nr. 11, p. 428–29.) Text in Danish. ***Title tr.:*** The old Greenlander, the brig *Tjalfe.*

Built in Denmark in 1853 and bought by the Greenland Trading Company in 1857, the *Tjalfe* was employed in Greenland traffic until 1904. In 1908–1909, fitted with an engine (50 hp.) she was used as a fishery research vessel in the Davis Strait by Adolph S. Jensen. ***Copy seen:*** DLC.

55563. TVING, RASMUS CHRISTEN NIELSEN, 1888– . M/S "G. C. Amdrup". (Grønland, May 1958, nr. 5, p. 197–99, illus.) Text in Danish. ***Title tr.:*** MS *G. C. Amdrup.*

Contains a description of this ship, put into Greenland traffic in 1948. Started in 1943, she was built of wood, length 53.7 m., width 11.6 m., loading capacity 560 tons; had a diesel-electric engine, average speed of 10 knots, and carried 20 passengers. The vessel burned and sank in 1951. ***Copy seen:*** DLC.

55564. TWENHOFEL, WILLIAM STEPHENS, 1918– , *and* C. L. SAINSBURY. Fault patterns in southeastern Alaska. (Geological Society of America. Bulletin, Nov. 1958. v. 69, p. 1431–42, illus., maps incl. 1 fold.) 23 refs.

Reports study of linear features plotted from aerial photographs. They were interpreted as faults, and their patterns were analyzed with reference to the literature and to field relations. They appear to belong to a widespread and well-defined system trending northwest and to three ill-defined systems trending north, northeast and east respectively. Three large zones of parallel or nearly parallel linears, termed lineaments, are described: the Clarence Strait, Chatham Strait and Coast Range lineaments. The last two may be splits from the Denali lineament which extends for 1,600 mi. from southeastern Alaska along the Alaska Range to Bristol Bay. Most of the hot springs of southeastern Alaska are located on linears, but carbonated and sulfur springs do not seem to be. The distribution of mineral deposits in the Juneau gold belt and the Chichagof-Sitka belt may be related to certain faults, particularly those of the northwest trending system. Data supporting this thesis are presented. ***Copy seen:*** DGS.

55565. TWIDALE, C. R. Knob Lake, Central Labrador; seine Entwicklung und seine Funktion. (Geographische Rundschau, June 1957. Jahrg. 9, Heft 6, p. 237–39, text map.) 8 refs. Text in German. ***Title tr.:*** Knob Lake, central Labrador; its development and its function.

Notes the severe climate, difficult terrain, and sparse settlement of Northern Quebec-Labrador. Schefferville at Knob Lake has population of 2,500–3,000 living under modern conditions. Discovery and exploration of the iron ore reserves, airlift of men and material to build the railroad and town, development of hydroelectric power sites, geological character of the ore deposits, mining and ore transport are briefly described.

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55566. TWIDALE, C. R. Recent and future developments in the Labrador Peninsula. (Australian geographer, May 1958. v. 7, no. 3, p. 103–112, illus., text map.) 21 refs.

Reviews exploration noting climate and physiography. The Knob Lake development of the Iron Ore Co. of Canada is described: known reserves of 418 million tons containing 59.53% iron; 1956 production 12 million tons of ore; construction of the railway from the St. Lawrence; the town of Schefferville, etc. Other mineral deposits of possible economic value are mentioned; future development of the entire area is discussed, remarking on relation between Knob Lake and Lake Superior ore, and Grand Falls-St. Lawrence Seaway power.

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55567. TYRTIKOV, A. P. Nekotorye svedeniĭa o rastitel'nosti nizov'ev Indigirki. (Moskovskoe obshchestvo ispytateleĭ prirody. Bŭlleten', otd. biol. Jan.–Feb. 1958. t. 63, no. 1, p. 71–77, text map.) 13 refs. Text in Russian. ***Title tr.:*** Some information on the vegetation of the lower Indigirka River.

The general geography of this region of northeast Yakut A.S.S.R. is outlined, and the succession of vegetation zones between 70°15′ and 70°45′ N. is indicated as tundra, swamps, shrubs, meadows, and woody vegetation. Typical plant species are listed for each. The northern limit of larch (*Larix*) reaches to 71°15′ N. In the valley of the Indigirka there are four zones north of 68° N., viz.: thin forest, forest tundra, shrubby tundra with mounds, and spotty lichen-moss tundra. ***Copy seen:*** DLC.

55568. TYRTIKOV, A. P. Temperaturnyĭ rezhim pochvy v razlichnykh rastitel'nykh soobshchestvakh v raĭone Igarki. (Pochvovedenie, June 1957. no. 6, p. 35–42, diagrs., tables.) 17 refs. Text in Russian. Summary in English. ***Title tr.:*** Thermal conditions of the soil in various plant associations in the Igarka region.

Reports results of an investigation carried out by the author (Institute of Permafrostology) in 1950. The taiga forest soil of the studied area is characterized by low temperature (1.9°–4.6° C.) during the vegetation period (June 10–Sept. 10) as compared with the temperature of ploughed soil (10.3° C.). This is due to the thick (10–20 cm.) peat horizon covered with mosses and lichens. Removal of moss cover and acceleration of mineralization of organic residues (peat horizon) are suggested as basic means for thermal amelioration of the soils in this area. ***Copy seen:*** DLC.

TYSON, E. I., *see* Grice, G. D., *and others.* An unexplained mortality of Canada geese. *1956.* No. 51368.

55569. TYSSØ, JONAS. Demonstrasjonsbeiter i Nord-Norge. (Selskab (Kong.) for Norges vel. Årbok for beitebruk i Norge, 1942–43, nr. 16, p. 42–74, 3 illus., 11 tables.) Text in Norwegian. ***Title tr.:*** Demonstration pastures in North Norway.

Reports on 11 pastures in Nordland and Troms: natural vegetation, cultivation of plot, fertilization, plant cover, management, weather, and production. With good management, improvement of grass cover and production has been customary. Pasturage is limited almost wholly to June, July, and August.

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55570. *USSR.* The first atomic icebreaker. (USSR, illustrated monthly, Washington, D.C., 1957. no. 8, p. 40, illus.) "Abridged from the newspaper *Moskovskaya Pravda.*"

Contains general description of the icebreaker under construction at Leningrad: it is to have displacement of 16,000 tons, atomic power units (with steam turbines) to develop 44,000 hp., and speed of 18 knots. Its machinery and equipment are being built at some 250 different plants in various places. Photos of a

scale model of the vessel, and one of hull construction are included.

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55571. UBIENNYKH, A. Polnee ispol'zovat' pushnye bogatstva Évenkii. (Okhota i okhotnich'e khozi͡aĭstvo, Jan. 1957. no. 1, p. 7–9, illus., col. plate on cover.) Text in Russian. ***Title tr.:*** Make full use of the fur resources of the Evenki National District.

Since the introduction of agriculture and animal husbandry in the Evenki National District and the concentration of the inhabitants in kolkhozes, the natural resources of birds and fur animals have not been utilized. Since 1955 policy has changed and some attention has been directed to hunting and trapping, fur farming and reindeer breeding. Needs of the hunters, fur farmers, and reindeer breeders are outlined.

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55572. UBRI͡ATOVA, ELIZAVETA IVANOVNA. Vzaimodeĭstvie ši͡azykov na materiale vzaimootnosheniĭ ši͡akutskogo i ėvenkiĭskogo ši͡azykov. (Akademiĭa nauk SSSR. Institut ši͡azykoznaniĭa. Doklady i soobshcheniĭa, 1956. no. 9, p. 85–92) 8 refs. Text in Russian. ***Title tr.:*** Mutual influence of languages as reflected by the interrelationship of Yakut and Evenki languages.

Discusses the theory of linguistic substrata (those elements of an original language preserved after the acceptance of a conqueror language by the autochthonous population) on the example of the Yakut dialect now used by the originally Tungus-speaking Dolgans, treated in this article as an Evenki (Tungus) tribe. This dialect, formed at the time when the Dolgans inhabited the region of the Vilyuy-Lena confluence in close proximity with the Yakuts, reflects the evolutionary stage reached by the Yakut language in the 17th century. Though phonetically and morphologically closest to Yakut, its lexical content is selective, complementing Yakut vocabulary with Evenki words. The possibility of a certain counter-influence of the Evenki language on the grammatical development of Yakut is indicated. Paper read at the Feb. 17–19, 1955, session of the Learned Council of the Institute of Linguistics (Uchenyĭ sovet In-ta ši͡azykoznaniĭa) of the Academy of Sciences U.S.S.R. devoted to the discussion of the theory of substrata. ***Copy seen:*** DLC.

UCHITEL', I. I͡A., *see* Krymskiĭ, L. D., *and* I. I͡A. Uchitel'. Morfologicheskie izmeneniĭa . . . *1956.* No. 52531.

55573. UDEL'NOVA, I. M., *and* **M. G. KUPTSOV.** Mikroskopicheskoe izuchenie drozhzhevykh kletok *Endomyces magnusii* v protsesse glubokogo okhlazhdeniĭa i ottaivaniĭa. (Mikrobiologiĭa, May–June 1958. t. 27, vyp. 3, p. 283–86, illus.) 12 refs. Text in Russian. Summary in English. ***Title tr.:*** Microscopical study of yeast cells, *Endomyces magnusii,* during deep cooling and thawing.

Account of experiments performed on a freezing-thawing microscope stage specially constructed and described. Cooling for 10 or 30 minutes under conditions described and down to −52° C. did not affect cellular structures of this yeast. Repeating the freezing-thawing process six times, also had no effect.

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55574. UDEL'NOVA, I. M. O ti͡sitofiziologicheskikh osobennosti͡akh drozhzhevykh organizmov posle glubokogo okhlazhdeniĭa i ottaivaniĭa. (Zhurnal obshcheĭ biologii, Sept.-Oct. 1957. t. 18, no. 5, p. 395–401, tables.) 22 refs. Text in Russian. Summary in English. ***Title tr.:*** Cyto-physiological peculiarities of yeast organisms following deep cooling and thawing.

Study of survival and respiratory activity of two species of yeasts cooled to −192° C. and thawed. Morphological changes were followed by phase contrast and luminescent microscopy. The effects of drying and pre-treatment with 5% and 10% NaCl solutions were also investigated. ***Copy seen:*** DLC.

55575. UDIMOVA, L. I. Vstrecha na Enisee. (Neva, Mar. 1957, no. 3, p. 137–38.) Text in Russian. ***Title tr.:*** Encounter on the Yenisey.

Describes encounter with V. I. Lenin on the Yenisey River in 1897 while he was being transferred by boat from Krasnoyark to his place of exile in Shushenskoye. ***Copy seen:*** DLC.

55576. UDINTSEV, G. B. Napravlenie i osnovnye zadachi issledovaniĭ rel'efa dna dal'nevostochnykh moreĭ i severo-zapadnoĭ chasti Tikhogo okeana. (Akademiĭa nauk SSSR. Okeanograficheskai͡a komissiĭa. Trudy, 1958. t. 3, p. 37–44.) Text in Russian. ***Title tr.:*** Direction and main tasks in the study of bottom relief of the Far-Eastern seas and the northwestern parts of the Pacific.

Information is presented on the influence of the relief upon conditions in the sea, earlier studies of relief in this area, methods and materials, results of the *Vitiaz'* surveys in the Bering and Okhotsk Seas and the Kuril narrows, unusual features of this area, submarine mountains and trenches, etc.

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55577. UDINTSEV, G. B. Osnovnye cherty razvitiia rel'efa dna Okhotskogo moria v chetvertichnom periode. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Trudy, 1957. t. 13, p. 386–91.) Text in Russian. ***Title tr.:*** Basic features in the development of the Sea of Okhotsk bottom relief during the Quaternary period.

Geologic, tectonic, and morphologic factors in development of this sea are outlined with special attention to its bottom features. Appearance of major and minor forms in bottom relief are reviewed. Two uplifts and three trenches are indicated. Development of bottom terraces and erosion type valleys are discussed. Effects of Quaternary glaciers on development of bottom relief are considered. ***Copy seen:*** DLC.

55578. UDINTSEV, G. B. Rel'ef dna Okhotskogo moria. (Akademiia nauk SSSR. Institut okeanologii. Trudy, 1957. t. 22, p. 3–76, illus. tables, maps.) About 130 refs. Text in Russian. ***Title tr.:*** Bottom relief of the Okhotsk Sea.

A study based on bathymetric material collected during 1949–55 by the *Vitiaz'*. Consecutive sections deal with the history of exploration of this sea and its bottom, methods of marine geomorphic studies, and the sea bottom. Basic ideas on the Okhotsk Sea depression are outlined; depth distribution and areal distribution according to depth are discussed. The main forms of the relief, finer forms at various depths, genesis of the coarse and fine forms of the bottom are treated in turn. Several bottom profiles are presented in diagrams and discussed together with general and regional development of the bottom. The tectonics and dynamics of the sea are treated and the basis for marine deposits considered.

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UDINTSEV, G. B., *see also* Bezrukov, P. L., *and others.* Novye dannye . . . stroeniia podvodnogo rel'efa. *1957.* No. 49709.

55579. *UDOBRENIE I UROZHAI.* AMB, tsennoe udobrenie dlia ovoshchei i kartofelia. (Udobrenie i urozhai, July 1958. god 3, no. 7, p. 62–63.) Text in Russian. ***Title tr.:*** AMB, a valuable fertilizer for vegetables and potato.

Notes successful tests on new bacterial fertilizer developed by Soviet scientists; the tests were carried out by the Karelian State Agricultural Experimental Station at state farm "Maiak."

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UDOVENKO, V., *see* Leliukhina, N., *and* V. Udovenko. Ot s"ezda k s"ezdu. *1958.* No. 52742.

UDOVENKO, V., *see* Leliukhina, N., *and* V. Udovenko. Segodnia i zavtra . . . *1958.* No. 52743.

55580. UDVARDY, MIKLOS D. F. Ecological and distributional analysis of North American birds. (Condor, Jan.–Feb. 1958. v. 60, no. 1, p. 50–60, 5 tables.) 36 refs.

Contains notes on ten habitat groups, including arctic sea birds, a distinct group of marine and shore species which feed in the pelagic or littoral zones and nest in coastal locations; tundra birds, land and shore birds that nest in the tundra biome; taiga birds. These are described (p. 55–59). Tables show: results of grouping for non-passerine and passerine families; ecological groups with number of species in each and its percentage of birds breeding in North America; a similar presentation of the European avifauna; and relations of passerine and non-passerine birds in the North American avifauna

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UECKER, E. H., *see* Scheil, M. A., *and others.* Steel for Canadian pipelines. *1957.* No. 54600.

55581. UGGLA, EVALD. Skogsbrandfält i Muddus Nationalpark. Uppsala, Almqvist & Wiksell, 1958. 116 p., 66 illus., 16 tables. (Acta phytogeographica suecica, no. 41.) 153 refs. Text in Swedish. Summary in English. ***Title tr.:*** Forest fire area in Muddus National Park.

The investigation region, some 50,000 hectares, about 20 km. north of the Arctic Circle, is forested over 52% of its area, and has mires over 45%. Spruce (*Picea abies*) occurs mainly within the central and western parts, pine (*Pinus silvestris*) in the southern and eastern;

birches (*Betula pubescens, B. tortuosa, B. verrucosa*) are in abundance over all Muddus. The vegetation and soil of the areas burnt in 1920, 1933, 1941 and 1947 are discussed, also their colonization in the tree layer by individual woody species as spruce, white pine, birches, aspens, etc. The slow rate of regrowth is noted. The colonization in the field layer (*Arctostaphylos uva-ursi, Calluna vulgaris, Vaccinium myrtillus, V. vitis-idaea*, etc.) and in the bottom layer (*Buxbaumia aphylla, Ceratodon purpureus, Hylocomium splendens* and *Pleurozium schreberi*, etc.) is also discussed. ***Copy seen:*** DA.

55582. UHT, CHARLES. Art of aboriginal America. (Natural History, June–July 1958. v. 67, no. 6, p. 330–37, illus.)

Contains 12 photographs of exhibits at the Brussels Fair, including an Eskimo ivory figurine and two masks, Eskimo and Tlingit Indian. ***Copy seen:*** DSI.

ULANOVSKIĬ, I. B., *see* Nikitina, N. S., *and* I. B. Ulanovskiĭ. Nekotorye dannye po . . . korrozii stali . . . *1957*. No. 53589.

55583. ULERI, GASTONE *and* **A. CANTONI.** La diffusione apneica di ossigeno a temperatura normale ed in ipotermia. (Minerva anestesiologica, Apr. 1958. v. 24, no. 4, p. 127–37, illus. tables.) Text in Italian. Summary in English. ***Title tr.:*** The diffusion of oxygen during apnea at normal temperature and in hypothermia.

O_2-diffusion in normal and hypothermic (27° C.) dogs was determined from O_2-consumption, total O_2 and CO_2-content of arterial blood, etc., and from certain electrolytes. It was found that in the hypothermic group, oxygen consumption and arterial accumulation of CO_2 are lowered in comparison with controls. ***Copy seen:*** DNLM.

55584. ULLENIUS, GUNNAR. Älvdal i norr. (Svenska turistföreningen. Årsskrift, 1958. p. 272–93, illus.) Text in Swedish. ***Title tr.:*** River valley in the North.

The Lule River drainage basin above Vuollerim near the Arctic Circle is described. The role of its chief towns, Jokkmokk, Kvikkjokk, Tjomatis, and others, has remained constant since the 17th century when Olaf Rudbeck studied botany there before Linné's time. Some characteristic plant species are noted. The Lapps of the valley have become modernized but reindeer migration and certain folkways persist. Forestry is now the main occupation. Plans for water regulation are outlined and mapped. ***Copy seen:*** DGS.

ULVINEN, ARVI, *see* Kujala, V. V., *and others*. Agaricales. *1953*. No. 52545.

55585. UMBRONN, H., *and* **B. STEIN.** Liste der von Dr. F. Boas gesammelten Pflanzen. (*In:* International Polar Year. 1st, 1882–1883. Deutsche Polar-Kommission. Die deutschen Expeditionen, Bd. 2, *pub.* 1890, p. 97–99.) Text in German. ***Title tr.:*** List of the plants collected by Dr. Boas.

Contains a simple list of 44 phanerogams and vascular cryptogams determined by Dr. Umbronn, and another (by the second author) of some 30 lichens. The collections were made in the Cumberland Sound and east coast regions of Baffin Island. Similar collections from around the polar year base camp at Kingua Fiord were reported in No. 19622. ***Copy seen:*** DLC.

UNANÎANTS, T. P., *see* Gimmel'farb, B. M., *and* T. P. Unanîants. Syr'evaîa baza . . . *1957*. No. 51196.

55586. UNDERWOOD, LUCIEN MARCUS, 1853–1907. The distribution of Hepaticae of North America. (American Association for the Advancement of Science. Proceedings, 1891 (1890 meeting). v. 39, p. 298–304, 2 tables.)

Contains a discussion of the geographic distribution of liverworts in North America, tabulated data on distribution of the genera *Frullania* and *Plagiochila*, a comparison of hepatics of Europe and North America. Five subdivisions of this flora are proposed: boreal, including Labrador, Alaska and Greenland; medial; Austral; occidental, the Pacific coast region from San Diego to Alaska; and Mexican. ***Copy seen:*** DLC.

55587. UNDERWOOD, LUCIEN MARCUS, 1853–1907. The genus *Cephalozia* in North America. (Torrey Botanical Club. Bulletin, Oct. 1896. v. 23, no. 10, p. 381–94.)

Critical revision of 14 species of this hepatic genus, which includes *C. fluitans* and *C. divaricata*, both in Labrador. ***Copy seen:*** DLC.

55588. UNDERWOOD, LUCIEN MARCUS, 1853–1907. Index Hepaticarum,

part I. (Torrey Botanical Club. Memoirs, June 10, 1893. v. 4, no. 1, p. 1–91.)

A bibliography of 1,016 items arranged alphabetically, with a synoptic index. A few papers dealing with liverworts of Spitsbergen, Lapland, Greenland, northern Canada and Alaska, are included. Part I only was published.

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55589. UNDERWOOD, LUCIEN MARCUS, 1853–1907. Notes on our Hepaticae, III; the distribution of the North American Marchantiaceae. (Botanical gazette, Feb. 16, 1895. v. 20, p. 59–71.)

Contains a revised list of 43 species, with diagnoses of three new species and distributional data on others. *Clevea hyalina* (Greenland), *Conocephalum conicum* n. nom., and *Cyathophora quadrata*, both recorded in Alaska, are included. The earlier parts of this paper, and pt. 4 (1896) do not contain arctic material.

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55590. UNGLEY, CHARLES CADY. The immersion foot syndrome. (Advances in surgery, 1949. v. 1, p. 269–336, illus.) 98 refs.

A comprehensive study and review of the disorder, as from 1940, when author saw the first case, a navy casualty; it is described in detail with another similar case. There follow sections on clinical features: vascular, sensory, motor and pseudomotor disturbances; swelling, blisters and gangrene; conditions of bones, joints and tendons, etc. Immersion hand, etiology and degrees of injury, differential diagnosis between frostbite and immersion foot, are treated. The remainder of the account deals with pathological anatomy and pathogenesis; prophylaxis, and therapy at the three stages of syndrome: prehyperemic, hyperemic and posthyperemic. Late sequels are also discussed. ***Copy seen:*** DNLM.

UNGSTRUP, EIGIL, *see* Rybner, J., *and* E. Ungstrup. Nordlysområdets indflydelse . . . *1956.* No. 54465.

55591. U.S.S.R. ARMIÍA. UPRAVLENIE VOENNO-VOZDUSHNYKH SIL. Sbornik materialov po stroitel'stvu i èkspluatatsii zimnikh aèrodromov. vyp. 1. Moskva. Voennoe izd-vo narodnogo komissariata oborony. 1942. 80 p. illus., tables, diagrs. Text in Russian. ***Title tr.:*** Collected materials on the construction and operation of winter airfields.

Contains ten papers on the construction and servicing of snow-covered airfields for winter use of wheeled aircraft and for the protection of airplanes in storage. The first: Vremennaía instruktsiía po zimnei èkspluatatsii aèrodromov VVS Krasnoi Armii (Tentative directives for winter operation of the Red Army Air Force airfields), p. 3–8, illus., outlines general technical requirements for uninterrupted operation of the airfield: runways with safe approaches, good camouflage, rapid snow removal, etc. Maintenance of the runway and of communications after snow storms is described. The local population and party organizations are to be organized for specific tasks.

The next eight papers are described in this Bibliography under the authors' names viz (title tr.):

KOMAROV, N. S. Snow.

KRAGEL'SKIĬ, I. V. Physical and mechanical properties of the snow cover.

MOGILEVSKIĬ, D. A. Winter airfields.

ZAMORIN, P. K. Construction of airfields in deep snow.

KHAR'KOV, V. E. Concealment of aircraft under winter conditions.

SUSOROV, A. I. Winter camouflage of airfields and supplies.

PAVLOV, I. P. Measures for preservation of sod from destruction during winter use of airfields.

ABRAMOV, L. T., *and* N. V. ZAMORINA. Fall maintenance of the airfield drainage system for winter preservation.

The final paper, by A. A. Shakhov, is: Bor'ba so snegom na aèrodromakh za granitsí (Snow control on foreign airfields), a review of the American literature, p. 73–80, illus. ***Copy seen:*** DLC.

55592. U.S.S.R. MINISTERSTVO GEOLOGII I OKHRANY NEDR SSSR. Almazy Sibiri. Moskva, Gos. nauchno-tekhnich. izd-vo lit-ry po geologii i okhrane nedr, 1957. 159 p. illus., diagrs., tables, 8 col. plates, plans, maps, incl. 1 fold. col. in pocket, 33 refs. Text in Russian. ***Title tr.:*** The diamonds of Siberia. Scientific editors: A. P. Burov *and* V. S. Sobolev.

Monographic study of the diamantiferous district in the Vilyuy River basin, approx. 300,000 sq. km. in area, and of its diamonds. Two regions of original occurrence of diamonds in kimberlite diatremes or pipes were found: in the basin of the river Malaya Botuobuya, a right tributary of the Vilyuy at approx.

63°03′ N. 113°30′ E.; and in the basin of the Daaldyn, left tributary of the Markha at approx. 66°16′ N. 113°15′ E. Two pipes were discovered in 1955 and 1956 in the first region, and 22 pipes in 1954–56 in the other. The geology, stratigraphy and tectonics of both regions are outlined and 14 pipes characterized in turn with petrographic and mineralogical data (p. 18–95). Diamonds found in the Vilyuy basin are described with details (p. 96–140); placers, mostly in Quaternary deposits and gravels along the river valleys of the Vilyuy area, are briefly noted (p. 142–46); prospecting methods are discussed with emphasis on the geophysical (magnetic); need of further exploration of the whole, highly promising, area is stressed (p. 147–56). Diamonds have been found in nine of the 24 kimberlite pipes, with the best yield in Mir (p. 7–8), Zarnitsa and Udachnaya. The largest stone found is 32.5 carats, but the diamonds generally are quite small, half less than 10 mg. and 70–90% less than 20 mg., mostly colorless, and the form is predominantly octahedral, rhombododecahedral or in transition between. Peculiarities of form, minute impurities (graphite, etc.), damage of face, etc. are discussed and illustrated; distribution data are given (p. 134–40), but none on output. Besides numerous pyropes, the best indicator in prospecting, the following minerals were found in the kimberlite pipes; ilmenite, magnetite, olivine, diopside, chromdiopside, perovskite, chromite, phlogopite, chlorite, serpentine, calciostrontianite, calcite, and several others in negligible quantities. Contributions of the Amakinskaĭa Expedition and its teams 132, 167 and 204, All-Union Trust No. 2, Scientific Research Institute of Geology of the Arctic, Eastern Geophysical Expedition and the Institute of Geology of the Academy of Sciences' East Siberian Branch are mentioned *passim*. Fold. col. geological map (1:1,500,000, in pocket) shows the diamantiferous district 61–67° N. 108–119° E.; geological text maps of the M. Botuobuya and Daaldyn regions (p. 9, 19) and geological plans of the principal pipes are given. Bibliography (33 items) includes Russian and foreign literature. The book is summarized and reviewed by C. F. Davidson in his paper: *The diamond fields of Yakutia, pub.* in *Mining Magazine*, Dec. 1957, p. 329–38. An extensive summary in German together with reproduction of the main maps, graphs, and illus. was pub. in *Zeitschrift für angewandte Geologie*, 1958, Bd. 4, Heft 10–12, p. 450–58, 497–504, 555–58. ***Copy seen:*** DLC.

55593. U.S.S.R. SOVET MINISTROV. Postanovlenie ob organizat͡sii I͡Akutskogo gosudarstvennogo universiteta. (Yakutsk. Universitet. Uchenye zapiski, 1957, vyp. 1, Seriĭa estestvennykh nauk, p. 5–6.) Text in Russian. ***Title tr.:*** Decree on the foundation of the Yakut State University.

Text of decree no. 1184, issued on Aug. 23, 1956, establishing the University to succeed the Yakut Pedagogical Institute. Facilities and equipment of the Institute are to devolve upon the University; construction of new buildings, laboratories and housing for personnel and students is planned; three million rubles were assigned for new equipment in 1956. The number of students is fixed at 600. ***Copy seen:*** DLC.

55594. U.S.S.R. T͡SENTRAL'NOE STATISTICHESKOE UPRAVLENIE. Otdel statistiki kul'tury. Kul'turnoe stroitel'stvo SSSR; statisticheskiĭ sbornik. Moskva, Gos. statisticheskoe izd-vo, 1956. 332 p. Text in Russian. ***Title tr.:*** Cultural development of the U.S.S.R.; a statistical compendium.

Contains data on primary, secondary, high and higher schools, scientific institutions and scientific workers, public libraries, educational clubs, museums, theatres, motion picture houses, circuses, and on the publication of books and periodicals. The data are presented by union republics and, in part, by provinces. Data relating to the arctic and sub-arctic areas are included under R.S.F.S.R., and under Krasnoyarsk, Kamchatka, Arkhangel'sk, Magadan, Murmansk and Tyumen' Provinces and Yakut A.S.S.R. Data for Jan. 1, 1956 are compared with those for previous years.

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55595. U.S.S.R. VOENNO-MORSKOE MINISTERSTVO. Morskoĭ atlas; tom 3, Voenno-istoricheskiĭ, chast' 1, listy 1–45. Ostvetstvennyĭ redaktor G. I. Levchenko, glav. red. L. A. Demin. Moska-Leningrad, Izd-vo Glavnogo shtaba voenno-morskogo flota, 1958. xv, 1, 23 p. 45 fold. leaves of col. maps. (Ministerstvo oborony So͡iuza SSR.) Text in Russian. ***Title tr.:*** Marine atlas; vol. 3, Military historical, pt. 1. G. I. Lev-

chenko, editor-in-chief; L. A. Demin, main editor.

Continuation of No. 48515, comprising maps of geographic discoveries made by naval and military personnel, economic and political maps, and data on forces and losses of belligerents from antiquity to Feb. 1, 1918. The maps are arranged in four sections: ancient times (1–2), period of feudalism (3–18), of capitalism (19–31) and of imperialism (32–45). Material relating to the arctic seas and areas is included on the following maps: Russian expansion in the North and in Siberia (5); Russian discoveries in the Arctic and North Pacific in the 18th century (13); Russians in Alaska and the North Pacific in 18th and 19th centuries (18); Russian round-the-world voyages (25); military operations in the Russian North in 1914–17 (42); operations of German submarines in the Barents Sea 1916–17 (43). Three indexes (23 p.): general, persons, vessels, facilitate use of this atlas. ***Copy seen:*** DLC.

U.S. AIR FORCE, *see* Dove, W. F. U.S.A.F. survival ration . . . *1948*. No. 50613.

U.S. AIR FORCE, *see* Dyme, H. C. Arctic field trial of USAF survival rations . . . *1950*. No. 50670.

55596. U.S. AIR FORCE. CAMBRIDGE RESEARCH CENTER. GEOPHYSICS RESEARCH DIRECTORATE. Arctic terrain research. Bedford, Mass., Oct. 1958. 26 p. illus. 7 maps. Refs.

Reviews activities and plans in program to study snow, ice, and natural land areas in the Arctic to determine their capabilities for supporting air activities: 1957 field work on ice strength on Angiussaq Lake, 45 miles northeast of Thule Air Base, and 1958 study of Schrader and Peters Lakes southwest of Barter Island, Alaska; tests of sea ice growth, elasticity, and strength on North Star Bugt, Mar. 1957 and Apr. 1958; Ellesmere ice shelf investigations since summer of 1954; snow field research on the Greenland Inland Ice, in cooperation with SIPRE; ice-free land research in northern Greenland, including 1958 work on the Polaris Promontory, Greenland, and near Mt. Chamberlin, Alaska; geophysical studies of the Arctic Ocean from drifting stations; study of past climates using radioactive dating methods. Statistical data, personnel lists of these studies are appended. ***Copy seen:*** DN–HO.

55597. U.S. ARMY, CORPS OF ENGINEERS. Frost penetration in multilayer soil profile. Boston, Mass., Arctic Construction and Frost Effects Laboratory, New England Division. June 1957. 49 p. 16 diagrs., 2 tables. (*Its:* Technical report no. 67.) 9 refs. Prepared by Massachusetts Institute of Technology. Dept. of Civil and Sanitary Engineering Soil Engineering Division, under contract no. DA–19–016–Eng–2743.

Evaluates the effectiveness of an adaptation of the Modified Berggren formula for predicting the depth of frost penetration in multilayer soil profiles; part of an investigation to improve techniques for predicting subsurface temperatures, particularly with reference to frost and thaw penetration below airfield pavements. Results computed by the formula are compared with "exact" solutions for the depth of freezing as determined by the hydraulic analog computer developed under the contract. Test results indicate that the frost depth formula underpredicts by about 3%, an insignificant error. ***Copy seen:*** DN–HO.

55598. U.S. ARMY. CORPS OF ENGINEERS. Greenland ice cap research program, studies completed in 1954. Vicksburg, Miss., Feb. 1957. 2 v. illus., maps, diagrs., tables.

Research and development reports prepared by U.S. Army Engineer Arctic Construction and Frost Effects Laboratory, Research and Development Laboratories, SIPRE, and Waterways Experiment Station. Each report is described in this Bibliography under its author's name, viz.:

Vol. 1

FRYE, F. J. Report on Greenland Operation, 1954.

BENSON, C. S. Scientific work of Party Crystal, 1954.

BENSON, C. S. Operations and logistics of ice-cap Party Crystal, 1954.

RIGSBY, G. P. Study of ice fabrics, Thule area, Greenland.

RULA, A. A., *and others.* Trafficability of snow, Greenland studies, 1954.

Vol. 2

SCHYTT, V. Glaciological investigations in the Thule Ramp Area.

LINELL, K. A., *and others.* Approach roads, Greenland 1954 program.

KARSTENS, C. W., *and others.* Pipeline study, Greenland.

BADER, H., *and others.* Excavations and installations at SIPRE test site, site 2, Greenland.

HANSEN, B. L. Instrumentation of ice-cap stations. *See* No. 45426.

WATERHOUSE, R. W. Structures for snow investigations on the Greenland ice cap. *See* No. 48870.

BADER, H., *and* F. A. SMALL. Sewage disposal at ice cap installations.

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55599. U.S. ARMY. CORPS OF ENGINEERS. Greenland ice cap research program, studies conducted in 1955–56. Vicksburg, Miss., May 1958. Oct. 1958. 2 v., illus., maps, diagrs., tables, refs.

Research and development reports prepared by U.S. Army Engineer Research and Development Laboratories, and by SIPRE, listed in this Bibliography under the authors' names, viz:

Vol. 1

BEIGBEDER, P. A., *and others.* Report on Greenland operation, 1955–1956.

BUTKOVICH, T. R. Strength studies of high-density snow (No. 44211).

MEIER, M. F., *and others.* Preliminary study of crevasse formation.

SKINROOD, A. The effect of snow properties on vehicle trafficability in the Arctic.

DIAMOND, M., *and* R. W. GERDEL. Radiation measurements on the Greenland ice cap (No. 44616).

BENSON, C. S., *and* R. H. RAGLE. Measurements by SIPRE in 1955 on the accumulation markers of Expéditions Polaires Françaises in central Greenland (No. 43965).

U.S. ARMY. CORPS OF ENGINEERS. SIPRE. Resupply of ice-cap expeditions by air drop.

Vol. 2

LANDAUER, J. K. On the deformation of excavations in the Greenland névé.

LANDAUER, J. K. Some preliminary observations on the plasticity of Greenland glaciers.

BISHOP, B. C. Shear moraines in the Thule area, northwest Greenland.

WALLERSTEIN, G. Movement observations on the Greenland ice cap.

RAUSCH, D. O. Ice tunnel, TUTO area, Greenland, 1956.

DIAMOND, M. Precipitation trends in Greenland during the past 30 years (No. 44615).

DIAMOND, M., *and* R. W. GERDEL. Occurrence of blowing snow on the Greenland ice cap.

GERDEL, R. W., *and* M. DIAMOND. Whiteout in Greenland (No. 45080).

FROST, R. E. A reconnaissance for a southern Greenland ice-cap access for military purposes.

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55600. U.S. ARMY. CORPS OF ENGINEERS. List of reports of the Arctic Construction and Frost Effects Laboratory. Boston, Mass., 1958. 36 p. (*Its:* New England Division. Arctic Construction and Frost Effects Laboratory. Miscellaneous paper no. 14. Revised June 1958.)

Lists the more important unclassified reports and other publications of the Laboratory; includes some draft, preliminary, and intraoffice reports of interim value, in pt. I by subjects: including investigations in frost, snow and ice, and arctic construction; pt. II by category: technical reports, bulletins, miscellaneous papers and translations.

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55601. U.S. ARMY. CORPS OF ENGINEERS. POLAR RESEARCH AND DEVELOPMENT CENTER. Design and construction of an undersnow camp on the Greenland ice cap. Fort Belvoir, Va., Nov. 1958. vi, 13 p. 13 diagrs. (*Its:* Report no. 1, issued in U.S. Army. Corps of Engineers. Greenland Ice Cap Research Program. Studies conducted in 1955–56. June 1959, v. 3.)

Describes project carried out May 13–Aug. 24, 1957, following design and planning done in winter 1956–57. Excavation, covering, completion of installations, development of operational techniques and methods are described, and illustrated with diagrams. Electrical, water supply, waste disposal, heating and ventilating systems are included. Camp Fist Clench (Site 2), built at reasonable cost with troop materials, accommodates 100 men plus 50 additional men in above-snow Jamesway huts.

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55602. U.S. ARMY. CORPS OF ENGINEERS. *St. Paul District.* Comprehensive report, investigation of military construction in arctic and subarctic regions, 1945–1948; appendix 1, airfield site studies at Northway Airfield, Alaska. St. Paul, Minn., prepared for Office of the Chief of Engineers, Airfields Branch,

Engineering Division, Military Construction. June 1950. ii, 31 p. incl. 25 plates (part fold.), illus., diagrs., tables, maps. Appendix to No. 48547.

Contains summary of data for soil characteristics, ground temperatures, ground water, foundation design, and other factors which have affected the design and construction at Northway Airfield (62°58′ N. 141°58′ W.). Particular reference is made to permafrost and its associated problems. Included are subsurface investigations (30–50 ft.) to determine the depth of permafrost, and seasonal water-table fluctuations. Results of runway tests indicate that seasonal frost and permafrost join in either late Nov. or early Dec. Building tests were made on a hangar, motor pool, powerhouse, garage, fire station, boiler house, pump houses, water tank, and a utilidor system. ***Copy seen:*** AMAU.

55603. U.S. ARMY. CORPS OF ENGINEERS. SNOW ICE AND PERMAFROST RESEARCH ESTABLISHMENT. Preliminary reports 1957 Greenland field research. Wilmette, Ill., May 15, 1958. 32 p., 4 diagrs.

"The objectives and accomplishments of 19 SIPRE research projects in the Thule and Narsarssuak areas are described; preliminary results are summarized, and recommendations for future studies are made. The projects included: crevasse location and mapping; ramp, snow-structure, patterned-ground, ice-tunnel, whiteout, snowdrift, ice-cliff, and icecap-access studies; the development of icecap-drilling, core-sampling, and aerial-photographic research techniques; drill-hole and icecap site measurements; pile and explosives testing; and the determination of the physical properties of ice and frozen till for applied geophysics purposes."—SIPRE.

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55604. U.S. ARMY. CORPS OF ENGINEERS. SNOW ICE AND PERMAFROST RESEARCH ESTABLISHMENT. Resupply of ice-cap expeditions by air drop. Wilmette, Ill., Nov. 1955. 3 p., 2 diagrs. (*In its:* Greenland ice cap research program 1955–1956, v. 1. SIPRE special report 17.) Ref.

Describes packaging of supplies and air-drop procedure, effectively used on SIPRE expedition "JELLO" 1955, with 100% recovery from all fuel and food drops. Layout of drop zone (evolved from the system used by P. -É. Victor (cf. No. 38071) is shown on diagram.

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55605. U.S. ARMY. CORPS OF ENGINEERS. SNOW ICE AND PERMAFROST RESEARCH ESTABLISHMENT. USA SIPRE list of publications, July 1958. Wilmette, Ill. 16 p.

Lists 215 publications: technical, research and special reports, translations, instructions, manuals, etc.

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U.S. ARMY. CORPS OF ENGINEERS. SNOW ICE AND PERMAFROST RESEARCH ESTABLISHMENT, *see also:*

Benson, C. S., *and* R. H. Ragle. Project "Jello", SIPRE Greenland Expedition. *1957.* No. 49650.

Christie, R. W. Medical notes Greenland . . . expedition. *1957.* No. 50261.

Ragle, R. H. Polar . . . study course. *1958.* No. 54202.

Schmertmann, J. H. A thermally controlled soil freezing cabinet. *1958.* No. 54609.

U.S. Army. Greenland ice cap . . . studies . . . 1954. *1957.* No. 55598.

U.S. Library of Congress. Bibliography on snow, ice and permafrost . . . *1957–58.* No. 55635.

U.S. ARMY. ENGINEER ARCTIC CONSTRUCTION AND FROST EFFECTS LABORATORY, *see* U.S. Army. Greenland ice cap . . . studies . . . 1954. *1957.* No. 55598.

55606. U.S. ARMY. ENGINEER ARCTIC TASK FORCE. Greenland research and development program 1957; after operations report. Fort Belvoir, Va. Nov. 1, 1957. 10 p. text maps, charts.

Outlines general accomplishments of this, fourth, program; 27 projects in engineering in snow, ice, and permafrost regions, in photography and testing equipment, are described. Field work was carried out Apr. 15–Sept. 10, 1957, with camps at Narsarssuak, Thule Air Base, Kanak (New Thule), Camp Red Rock, Blue Ice Valley, Whitehorse (mile 23) and Mile 30 on the trail to Site II (Fist Clench). Scope of the program, its organization, mission, and chronology, are noted; project leaders, objectives, and achievements are indicated; work of supporting operations is summarized, with emphasis on safety, sanitation, supply economy, and detailed project support. For the 1958 report, see No. 55608.

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55607. U.S. ARMY. ENGINEER RESEARCH AND DEVELOPMENT LABORATORIES. Summary of arctic tests, winter 1956–1957, conducted by Corps of Engineers Field Test Team. (Arctic), Fort Churchill, Manitoba, Canada. Fort Belvoir, Va., Mar. 24, 1958. 40 p., illus., table. (*Its:* Technical report 1512–TR.)

Reviews about eleven tests conducted Dec. 1, 1956–Mar. 31, 1957; omitting measurement data, conclusions, recommendations. Objective, test item, procedure, results, and the effect of environmental exposure are noted; illus. are included of some of the items. Appended is tabulated technical information for equipment tested which included three types of generators and a modified M–40 slave kit, four types of engines, four types of heaters, insect screens, and explosives fired in frozen ground; temperature, wind, and windchill conditions for the test period are graphically presented.

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U.S. ARMY. ENGINEER RESEARCH AND DEVELOPMENT LABORATORIES, *see also* Mardoian, M. G., *and others.* Winterization of construction equipment . . . *1957.* No. 53128.

U.S. ARMY. ENGINEER RESEARCH AND DEVELOPMENT LABORATORIES, *see also* U.S. Army. Greenland ice cap . . . studies . . . 1954. *1957.* No. 55598.

55608. U.S. ARMY. POLAR RESEARCH AND DEVELOPMENT CENTER. Greenland research and development program 1958; after operations report. Fort Belvoir, Va. Nov. 1, 1958. 8 p., text map, 2 diagrs.

Outlines general accomplishments of this program, the fifth and most extensive since its inception in 1954. Its 22 projects in engineering in snow, ice, and permafrost regions, medicine and testing equipment are described. Field work was carried out May 10–Sept. 14, 1958, with camps at Narsarssuak, Thule Air Base, New Thule (Kanak), TUTO, Blue Ice Valley, and Site II (Fist Clench). Project leaders, objectives, and achievements are noted; work of supporting operations, with emphasis on safety, supply economy, and preparation for the 1959 program, is briefly treated.

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55609. U.S. ARMY BALLISTIC MISSILE AGENCY. Wind distributions as a function of altitude for Fairbanks, Alaska. Redstone Arsenal, Ala., Sept. 24, 1958. Pagings various, 8 tables, 7 diagrs. (*Its:* Development Operations Division, Aerophysics and Geophysics Branch. DA technical report no. 17–58.)

Based on observational data 1951–54, compiled by the National Weather Records Center. Seven types of frequency distributions are presented; tables and graphs are prepared for the year and four mid-season months from cumulative percentage frequency polygons for each of these distributions.

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U.S. ARMY ENGINEER WATERWAYS EXPERIMENT STATION, *see* U.S. Army. Greenland ice cap . . . studies . . . 1954. *1957.* No. 55598.

55610. U.S. BUREAU OF AERONAUTICS. (Navy Dept.). The arctic weather station. Norfolk, Va., Sept. 1957. 66 p. illus., diagrs., text map, tables (*Its:* Project AROWA, Technical report.)

Contains information on establishing and maintaining a weather station in the Arctic, and description of 31 stations: 22 in Canada, nine in Alaska; prepared by the Naval Research Laboratory and based upon a three-year study conducted at the Laboratory and in Alaska. Information includes environmental considerations; selection, inspection, winterizing, and installation of equipment; maintenance; operation; ice reporting. Practical advice on living in the Arctic is offered, with remarks on effects of wind chill, permafrost, etc.

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U.S. BUREAU OF INDIAN AFFAIRS, *see* U.S. Congress. Alaska native loan program . . . *1958.* No. 55619.

55611. U.S. BUREAU OF LAND MANAGEMENT. Information relative to the use and disposal of public lands and resources in Alaska. Washington, U.S. Govt. Print. Off., 1957. i, 42 p., map, tables. (*Its:* Information bulletin no. 2, rev.)

Presents concise general information on area, climate, topography, transportation, living conditions, public education and health service, industries, etc. Major settlement areas are described in turn with information on local economy and prospects, also, for approx. 45, tabulated climatological data. Regulations are outlined regarding land claims for settlement, mining, commercial, timber or

other uses; counsel is offered on site selection; and public offices listed for further information. ***Copy seen:*** DI.

55612. U.S. BUREAU OF RECLAMATION. Eklutna dam, power plant and tunnel. Technical record of design and construction. Denver, Colo., Mar. 1958. 254 p. illus., tables, 20 refs.

Detailed account of planning, design and construction of this project carried on 1951–55, to furnish Anchorage (35 mi. southwest) with power from a 30,000 kw. hydroelectric development. Pt. 1 contains discussion of general planning and historical data, summary of costs, description of regional and construction geology. No minerals of economic importance were discovered. Pt. 2 deals with design: the existing dam, built in 1941 at the outlet of Eklutna Lake into Eklutna River, is an earth and rockfill structure with wood and steel piling core walls, and is riprapped on the upstream face. Additions and changes to the dam, and design for construction of the tunnel, and power plant are described, illustrated by photos and drawings. Administration, operations and equipment used in construction of tunnel and power plant are described as pt. 3. Weather and labor factors caused only minor delays. Costs summary, government organization chart, project specifications, etc. are appended. ***Copy seen:*** DGS.

55613. U.S. BUREAU OF RECLAMATION. Soil engineering in frost areas, a summary of the summer session given at Massachusetts Institute of Technology, June 11–21, 1957. Denver, Colo., Oct. 3, 1957. 23 p. 12 p. maps, diagrs., graphs, table. (*Its:* Earth Laboratory report, no. EM–510) 10 refs.

Contains notes of H. J. Gibbs on ten lectures by various authorities dealing with present practices and theories of design and construction in frost areas. Areas, frost penetration, growing of ice lenses, frost susceptible soil (cold room studies), design criteria for pavement, highway engineering practices, etc., are treated in turn. Requirements for airfield and highway pavements bearing wheel loads are stressed.

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55614. U.S. CENTRAL INTELLIGENCE AGENCY. Activities in the Arctic and Antarctic. Washington, D.C., Sept. 30, 1958. 9 p. (*Its:* Foreign documents Division, no. 5.)

Summarizes (from foreign sources, mainly newspapers) recent Russian and Scandinavian activities (p. 1–7); Soviet aerial ice reconnaissance; meteorological observations from specially equipped aircraft, achievements in polar aviation and navigation on the Northern Sea Route, etc. Establishment of a Norwegian seismographic station in Spitsbergen is noted. A Swedish expedition to Spitsbergen is to winter at Murchison Bay and continue work in cosmic physics started by the 1957 expedition. A Norwegian-Finnish archeological expedition has returned from Spitsbergen, its work to be continued next summer by a Norwegian-Swedish party. A conference on medical problems of the Arctic opened in Helsinki on Sept. 4, and continued the following day in Oulu, where it is hoped to establish a research institute for arctic medicine. ***Copy seen:*** DGS.

55615. U.S. COAST AND GEODETIC SURVEY. The Coast and Geodetic Survey, 1807–1957; 150 years of history, by A. Joseph Wraight and Elliott B. Roberts. Washington, 1957. 89 p. illus., port.

Chronicle of the Survey's field activities, with information on leading personnel, organization and technical procedures. Work in Alaska and the Aleutian Islands started with the southeast coast in 1807; the systematic survey was begun in 1882 and intensified in 1898. Work on the west and north coasts during and after World War II, also mapping of the northern interior by triangulation and trilateration are dealt with. Magnetic observatories were established at College in 1948 and Pt. Barrow in 1949. Publication of Alaskan charts and coast pilots is discussed among others. The Survey's participation in the Labrador Eclipse (1860) and Polar Year (1881–1884) expeditions and in IGY studies are mentioned among others. Its application and development of new equipment are dealt with; Shoran and E P I (electronic position indicator) in 1957 controlled all hydrographic surveys except those in immediate shore areas. ***Copy seen:*** DLC.

55616. U.S. COAST AND GEODETIC SURVEY. Tide tables east coast North and South America, including Greenland, 1959. Washington, D.C., U.S. Govt. Print. Off., Dec. 1957. 271 p. index map, diagr., tables.

Contains daily tide predictions; list of

reference stations (none arctic); tidal differences and other constants, including Canadian Arctic Islands waters, Greenland Sea-Denmark Strait, Baffin Bay-Davis Strait, Hudson Bay and Strait, Labrador Sea; height of tide at any time; local mean time of sunrise and sunset (to 76° N.); reduction of local mean time to standard time; moonrise and moonset; astronomical data, 1959.

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55617. U.S. COAST AND GEODETIC SURVEY. Tide tables west coast North and South America, including the Hawaiian Islands, 1958. Washington, D.C., U.S. Govt. Print. Off., 1957. 222 p. diagr., tables. Annual publication, new format with this issue.

Contains seven tables: daily tide predictions; tidal differences and other constants; height of tide at any time; local mean time of sunrise and sunset; reduction of local mean time to standard time; moonrise and moonset; and astronomical data. Reference stations include: Anchorage, Cordova, Dutch Harbor, Juneau, Ketchikan, Kodiak, Massacre Bay, Nushagak Bay, Seldovia, Sitka, St. Michael, Sweeper Cove in Alaska. Tidal differences are tabulated for Gulf of Alaska, Aleutian waters, Bering Sea, and Beaufort Sea. Local mean time of sunrise and sunset is tabulated to 76° N. ***Copy seen:*** DN–HO.

55618. U.S. COAST GUARD. International Ice Patrol. Washington, U.S. Coast Guard, Public Information Division, 1956. 20 p. illus.

Reviews floating ice dangers in the North Atlantic and role of I. I. P.: its air and surface operations, communications system, etc., founding and organization. Summary information is given with illus., diagrams, etc. on ocean currents, ice, and icebergs in the I. I. P. area. ***Copy seen:*** DLC.

55619. U.S. CONGRESS. HOUSE. COMMITTEE ON GOVERNMENT OPERATIONS. Alaska native loan program. Twenty-fifth report. Washington, U.S. Govt. Print. Off., May 28, 1958. v, 40 p. (85th Cong., 2d sess. House report no. 1821.)

Reports on the Public Works and Resources Subcommittee investigation of this program's administration by the Bureau of Indian Affairs: a preliminary statement of the problem, the Subcommittee's conclusions and recommendations, narrative statement of the findings, minority report refuting allegations and defending the Bureau's procedures; and four appendixes of evidence presented in the investigations. The report deals mainly with four communities in Southeast Alaska where the salmon canneries, financed by the loan program, have been not completely successful, due primarily to decreasing salmon runs but also to other factors which are discussed. Recommendations include: continued conservation research and management to improve fishery productiveness; loans for more large boats to be used in outside waters when fish runs are poor inside; vocational training of natives for top financial and administrative work in the canneries. New industries and enterprises should be fostered to make the communities less dependent on salmon.

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55620. U.S. CONGRESS. HOUSE. COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE. The International Geophysical Year: the Arctic, Antarctica. Washington, D.C., U.S. Govt. Print. Off., Feb. 17, 1958. 182 p. illus., maps, tables. (U.S. 85th Congress, 2d sess., House report no. 1348.)

Reports on observations by a House Subcommittee of the U.S. International Geophysical Year program. Arctic and Antarctic programs differ. The Arctic, a major ocean basin surrounded by continents containing most of the world's population, requires geophysical information applicable to problems involving transportation, communication, natural resources and economics. Studies at drifting station A (approx. 80° N. 159° W.) were on aurora, geomagnetism, arctic sea ice heat budget, arctic sea ice physics, meteorology, oceanography, and human factors. At Fletcher's Ice Island (station B, approx. 82°50′ N. 99° W.) they were on meteorology, oceanography, gravimetric measurements, ionospheric physics, aurora investigations and thermal budget. Current status and importance of "great circle" routes are considered; operation of a route over the North Pole by an American carrier is recommended for renewed study. A summary of IGY activities and U.S. findings through Nov. 1957, by Dr. H. Odishaw, is appended, also pub. in the Jan. 17, 1958 issue of *Science*.

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55621. U.S. DEPT. OF DEFENSE. OFFICE OF ARMED FORCES INFORMATION AND EDUCATION. The Arctic, a hot spot of free world defense. Washington, D.C., Feb. 21, 1958. 14 p. illus., text map. (*Its:* DOD pam 1–12.) Ref.

Popular outline of conditions encountered by troops on far northern duty; problems of supply and construction; bases of arctic defense: the DEW Line, Mid-Canada Line, White Alice system; peacetime value of this defense net; increased use of arctic airways, etc.

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55622. U.S. DEPT. OF STATE. U.S., Canada, Japan, and U.S.S.R. sign fur seal convention. (*Its:* Bulletin, Mar. 4, 1957. v. 36, no. 923, p. 376–80.)

Notes signing in Washington, Feb. 9, 1957 and gives text of the Interim Convention for the Conservation of North Pacific Fur Seal Herds. Provisions include the establishment of a North Pacific Seal Commission, a six-yr. cooperative research program, prohibition of pelagic sealing except for research, controlled land killing of seals by the United States and U.S.S.R. with Canada and Japan receiving from each annually 15% shares of skins. More permanent arrangements for conserving the herds are to be considered toward the close of the six-yr. period. ***Copy seen:*** DLC.

55623. U.S. DEPT. OF THE INTERIOR. OFFICE OF TERRITORIES. Mid-century Alaska. Washington, D.C., U.S. Govt. Print. Off., 1957. 170 p. illus., maps, tables. New ed. of No. 26946.

Information handbook on present-day Alaska and its potencialities. Surface features, climate, population, history and government, cities and towns, housing, education, employment opportunities, health and health services, industries and resources, agriculture, wildlife, land acquisition and settlement, maps, recreation, transportation, and traveling conditions are treated in turn. ***Copy seen:*** DGS.

55624. U.S. FISH AND WILDLIFE SERVICE. Administration of Alaska Commercial Fisheries. Progress report and recommendations for 1957. Juneau, Alaska, 1956. 34 p. illus., maps, tables.

Contains description of conditions and trends in Alaskan salmon fisheries generally and in the fishing areas; also in herring fisheries, abundance, stock, etc. 1956 statistics of salmon pack, reduced herring, number of fishermen, boats, gear, are given. Tentative proposals are presented (p. 24–34) of 1957 regulatory amendments for the different areas, including areas of fresh-water fisheries.

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55625. U.S. HYDROGRAPHIC OFFICE. Convoying in ice. Washington, D.C., 1957. Sheet 30 x 45 in., text and illus. in verso of H.O. pilot chart no. 1400, Aug. 1957.

Mainly based on Russian accounts of ice convoy operations; the organization of convoys, types, distance between ships, course and speed, etc., are outlined, and procedures of conducting, towing, and breaking out of ships are described. A table of whistle signals is included. The pilot chart of the Greenland and Barents Seas on the reverse side includes information on ice limits, currents, sea and air temperatures, prevailing wind and weather, precipitation, visibility, and sky.

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55626. U.S. HYDROGRAPHIC OFFICE. An evaluation of the "Morskoi Atlas", with translations from volumes I and II. Washington, D.C., Mar. 1958. 441 p., table. (*Its:* Technical report, TR–38.) Refs.

Compares the analysis by Russian environmentalists with others'. Includes a detailed evaluation of volume 2, on oceanography and marine climate, with translations of most of its textual material, and of other important portions of both volumes. The report was prepared by H. W. Dubach and M. A. Slessers. These and a third volume are described as No. 48515 and 55595.

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55627. U.S. HYDROGRAPHIC OFFICE. Oceanographic atlas of the polar seas, part II, Arctic. Washington, D.C., 1958. 143 p., 12½ x 16 in., 132 illus. (*Its:* H.O. Pub. 705.) 124 refs.

Basic reference work, with pt. I, pub. 1957, on the Antarctic, completing the first atlas in a series planned to cover all ocean areas. Review of United States' arctic exploration is followed by charts, mostly completed in early 1957, presenting information by months or seasons: tides and currents, physical properties, ice, wind sea and swell, marine geology, marine biology, distribution of oceanographic and bathythermograph observations, are treated in turn. Reliability

diagrams for some elements are included and principal sources of data are listed. Base chart for most analyses is a polar (equidistant azimuthal) projection which extends at least to 65° N.; a few large scale Mercator charts provide greater detail. Reviewed by H. W. Dubach, in *Arctic*, June 1959. v. 12, no. 2, p. 115–16.
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55628. U.S. HYDROGRAPHIC OFFICE. Oceanographic survey results, Project 572, July–September 1955. Washington, D.C., Apr. 1957. 169 p., photostat, fold. maps, tables. (*Its:* H.O. Misc. no. 16366.)

Contains summary of a hydrographic-oceanographic survey, conducted, summer 1955, by USS *Requisite*, in the Western Arctic. Ship's main track, location of oceanographic, current, and bottom sampling stations between Pt. Barrow in Alaska and Shepherd Bay, Northwest Territories, and special hydrographic survey areas, are shown on maps; tables summarize observations at 99 oceanographic stations, 46 Phleger cores and 85 grab samples, and Ekman current meter observations at 19 locations. Explanation of data is provided in the appendix. Depths in survey areas were shallow; observations were mostly made at 20 meters or less.
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55629. U.S. HYDROGRAPHIC OFFICE. Radio weather aids, v. 2; codes, code forms, international index numbers, miscellaneous. Edited by Naval Aerological Service, Chief of Naval Operations, U.S. Navy, 1954. Washington, D.C., U.S. Govt. Print. Off., 1955. 4 pt.: v, 60 p.; 12 p.; iii, 489 p.; 9 p. diagrs., 3 fold. tables, fold. map. (*Its:* H.O. pub. no. 206.)

Part 1 includes code descriptions of ice types, bearing of ice edge, wind direction at polar stations, orientation of the ice edge, effect of ice on navigation, distance to the ice edge, snow depth, etc. Part 3 contains a list of radio weather stations for aerial navigation, with index number, name, coordinates, and altitude.
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55630. U.S. HYDROGRAPHIC OFFICE. Sailing directions for Baffin Bay and Davis Strait, 2d. ed. 1951; change no. 2–3. Washington, D.C., 1957–1958. loose-leaf. (*Its:* H.O. Pub. no. 76, change no. 2–3.)

Contain additions and corrections to No. 37924, 43023, through Mar. 22, 1958.
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55631. U.S. HYDROGRAPHIC OFFICE. Sailing directions for northern Canada, 2nd ed. 1951; change no. 2–3. Washington, D.C., 1957–1958. loose-leaf. (*Its:* H.O. Pub. no. 77, change no. 2–3.)
Contain additions and corrections to No. 26956, No. 43025, through Apr. 2, 1958.
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55632. U.S. HYDROGRAPHIC OFFICE. Sailing directions for the northwest and north coasts of Norway, fourth edition, 1952; change no. 3, 1/19/57, and no. 4, 4/26/58. Washington, D.C., U.S. Govt. Print. Off., 1957–1958. loose-leaf. (*Its:* H.O. Pub. no. 136, change no. 3–4.)

Contain extensive corrections and additions to No. 37931. Includes *Notice to mariners* no. 17, 1958.
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55633. U.S. HYDROGRAPHIC OFFICE. World port index; locations and general descriptions of maritime ports and shipping places, with references to appropriate sailing directions and charts. Washington, D.C., U.S. Govt. Print. Off., Second ed., 1957. xxv, 201 p., 21 charts. (*Its:* H.O. Pub. 950.) Refs.

Includes data through 1957, with contents and format similar to the first edition (No. 37936) now superseded.
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55634. U.S. INTERSTATE COMMERCE COMMISSION. Alaska transportation problems. Letter to Warren G. Magnuson, chairman, Committee on Interstate and Foreign Commerce, outlining a plan for the economic and safety regulation of transportation to, from, and within Alaska, and analyzing the proposed implementing legislation, S. 1448. Washington, D.C., U.S. Govt. Print. Off., 1957. ii, 10 p. table. (Committee print, 85th Cong., 1st sess. Senate.)

Suggests integrating transportation within Alaska, and the Alaskan system with that of the other states, as far as practicable; the intra-Alaskan transportation to be controlled by Alaskans. Proposed amendments (described and explained) would, generally, extend the Interstate Commerce Act to Alaskan transportation. ***Copy seen:*** DLC.

55635. U.S. LIBRARY OF CONGRESS. SCIENCE AND TECHNOLOGY DIVISION. Bibliography on snow, ice and

permafrost, with abstracts. Washington, D.C., 1957, 1958. 2 v.: 213, 236 p. (SIPRE report 12, v. 11–12, Jan. 1957–Jan. 1958.)

Each vol. contains 1,000 abstracts of papers on snow, ice, perennially frozen ground and related engineering problems. Scope is similar to v. 1–10 (cf. No. 48618), but with v. 11, the publication appears annually and is directed by Thomas E. Hughes.

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55636. U.S. LIBRARY OF CONGRESS. TECHNICAL INFORMATION DIVISION. The polar bibliography, v. 2. Produced for Dept. of Defense. Washington, D.C., Mar. 15, 1957. xii, 235 p. In sequence to No. 48619.

Lists, with abstracts, 2,000 reports, unclassified (for security purposes) and in the same fields as v. 1. ***Copy seen:*** DLC.

55637. U.S. NATIONAL BUREAU OF STANDARDS. Mechanical properties of metals at low temperatures; Proceedings of the NBS Semicentennial Symposium, May 14–15, 1951. Washington, D.C., U.S. Govt. Print. Off., May 7, 1952. iv, 206 p. illus., tables, graphs, diagrs. (*Its:* Circular, 520.)

The nine papers presented are listed in this Bibliography under their authors' names, viz:

ALLEN, N. P. Recent European work on the mechanical properties of metals at low temperatures.

AUSTIN, J. B. Manufacture of steels for low-temperature service.

CRAFTS, W., *and* C. M. OFFENHAUER. Development and application of chromium-copper-nickel steel for low-temperature service.

GEIL, G. W., *and* N. L. CARWILE. Tensile properties of copper, nickel, and some copper-nickel alloys at low temperatures.

JOHNSON, J. B., *and* D. A. SHINN. Application of metals in aircraft at low temperatures.

KRIVOBOK, V. N. Properties of austenitic stainless steels at low temperatures.

MacGREGOR, C. W., *and* N. GROSSMAN. Dimensional effects in fracture.

SMITH, R. L., *and others*. Mechanical properties of high-purity iron-carbon alloys at low temperatures.

WILLIAMS, M. L. Brittle fractures in ship plates. ***Copy seen:*** DI.

55638. U.S. NATIONAL COMMITTEE FOR THE INTERNATIONAL GEOPHYSICAL YEAR. Information manual for the USNC–IGY Arctic Basin Drifting stations. Washington, D.C., June 1957 22 p., diagr., tables. Prepared by the U.S. National Committee for the International Geophysical Year, National Academy of Sciences; in cooperation with Headquarters USAF, the Directorate of Research and Development, AFDRD–OR; the Alaskan Air Command, USAF; and the Northeast Air Command, USAF.

Describes administration and operation of the two drifting stations, A and B, duties of personnel, station facilities, camp routine, etc. For the scientific program (aurora, geomagnetism, glaciology, gravity, meteorology, marine biology and oceanography), the U.S. National Committee for the IGY is responsible; for the establishment and maintenance of the stations, the U.S. Air Force (Project Ice Skate).

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55639. U.S. NATIONAL LIBRARY OF MEDICINE. A bibliography of military medicine relating to the Korean War, 1950–1956, compiled by Charles Roos, head, Document Section. Washington, National Library of Medicine, Reference Division, 1957. iii, 56 l.

Contains 505 references, grouped by subject: cold, communicable diseases, etc. Brief annotations are occasionally added and an alphabetic list of authors is appended. ***Copy seen:*** DLC.

55640. U.S. NATIONAL PARK SERVICE. Glacier Bay National Monument, Alaska. Washington, D.C., U.S. Govt. Print. Off., 1957. 8 p. folder with illus., map.

Contains information for tourists on the glaciers, mountains, forests, islands, history, climatic changes, wildlife of this 3600 sq.-mi. park, 58°10′ N. 135°20′ W. Transportation by air and ship, hazards to small-craft navigation are noted.

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U.S. NATIONAL PARK SERVICE, *see also* Williams, H., *and others*. Landscapes of Alaska . . . *1958*. No. 56055.

55641. U.S. NATIONAL SCIENCE FOUNDATION. A bibliography for the International Geophysical Year. Washington, U.S. Govt. Print. Off., 1957. vi, 51 p. (*Its:* NSF 57–25.) Compiled

by Lee Anna Embrey, of the Office of the Director, with the assistance of Marguerite Christesen, and Elizabeth Hunt.

Presents a summary of the IGY organization and plans; memberships; and listings of approx. 500 articles on the IGY, its programs and disciplinary areas, including the arctic program (p. 29–30) and other listings of arctic interest. The articles, mostly American in origin, and giving news of early phases of the IGY, include press releases.

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55642. U.S. NAVY ELECTRONICS LABORATORY. Current, temperature, tide, and ice growth measurements, eastern Bering Strait-Cape Prince of Wales, 1953–55. San Diego, Cal., Oct. 18, 1956. 25 p. illus., text maps, diagrs., tables. (*Its:* Research report 739.) 13 refs.

Data obtained 1953 through 1955, at Cape Prince of Wales Field Station, Wales, Alaska, are evaluated by G. L. Bloom, part of a program of physical-oceanographic research concerning prediction of ice coverage in the Bering-Chukchi-Beaufort Sea area. Average mass water transport through eastern Bering Strait fluctuates in volume and direction throughout the year. Bottom sea water temperatures in eastern Bering Strait are highest in late August, and are related to north-south shifts in wind direction and current. Growth of fast ice at Wales is related to the total number of degree days below 29° F. Ice usually forms in late Oct.–early Nov. and break-up is usually completed by mid-June. Tides are usually semi-diurnal, ranges in summer average less than 12 inches.

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55643. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. Atlantic-Arctic operations, CTF6 post operation report 1957. Brooklyn, N.Y. Dec. 20, 1957. 1 v., pagings various, illus., diagrs.

Contains description of MSTS resupply of established activities and the sealift of materials for the construction and resupply of the DEW Line and Gap Filler Pinetree projects. Area of operations extended from the east coast of Greenland to 98° W., and nearly to 82° N., and included the coasts of Labrador, Baffin Island, Foxe Basin, Greenland, Ellesmere Island, and through Bellot Strait. Despite severe ice conditions on the Labrador coast and bad weather, 270,179 tons of dry cargo and nearly 3,000,000 barrels of bulk petroleum were transported. The various operations are reported in turn: summary is followed by the commanders' reports, which include ice reconnaissance, navigation, ice operations, helicopter operations, tides, hydrography, health, etc. HMCS *Labrador* provided information on a possible safe route from the central Canadian Arctic Islands eastward through Bellot Strait.

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55644. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. MSTS Arctic operations 1957. Post operation report. Washington, D.C., Mar. 25, 1958. Pagings various, illus., fold. map, tables.

Commander's report on 1957 sea transport of personnel and materials to northern (including DEW Line) posts. Weather and ice conditions were the most severe in many years, 37 ships reporting ice damage; a practical deep-water Northwest Passage via Bellot Strait was proved. In nine parts, the report covers: advance planning and preparation, operations, intelligence, administration and personnel, communications, operational visits, public information, photographs, and fiscal matters. Five tables provide statistical information. ***Copy seen:*** DN–HO.

55645. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. MSTS polar logistics. (*Its:* MSTS magazine, Sept. 1957. v. 7, no. 9, p. 3, illus.)

The MSTS has sealifted more than 2.5 million measurement tons of cargo and over 12 million barrels of fuel and petroleum products to the far North since 1950. Arctic operations during 1957 involved over 100 ships and 12,000 military and civilian personnel. The hazardous nature of the operation is shown by a photograph of a convoy working through ice floes.

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55646. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. MSTS seeks a Northwest Passage. (*Its:* MSTS magazine, June 1957. v. 7, no. 6, p. 8–11, 23, map, photos.)

Discusses attempt to be made during summer 1957 to establish a usable Pacific to Atlantic route for regular cargo vessels. A joint U.S.-Canadian force of ice-breakers and buoy tenders under

Vice-Admiral John M. Will (resupply vessels in Shepherd Bay area) will attempt to pass through Bellot Strait, 12 miles in length between Boothia Peninsula and King William Island. Success of the route depends on depth in the narrows of the Strait. If navigable, it would provide an alternate, eastward route for supply vessels in case of ice blockage around Point Barrow. A brief historical survey of searches for the Northwest Passage is included. ***Copy seen:*** DLC.

55647. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. MSTS shipbuilding program. (*Its:* MSTS magazine, June 1957. v. 7, no. 6, p. 3–7, 22–23, illus., diagrs.)

Four specially designed classes of ships (three of them for ice navigation) approved by Congress in June 1954 for this Service are described and illus. The ships currently under construction include an ice-strengthened cargo ship (dock), two ice-strengthened small tankers, and three ice-strengthened small cargo ships. The cargo ship (dock) is for bulk transportation involving the movement of lighterage and landing craft through ice-filled water. The prototype which resembles the Navy's landing ship dock is over 465 ft. long with a loaded displacement of 9,960 tons. The ship features a reinforced hull, ice-breaker bow, amidships ice belt, and fibrous glass hull insulation. The two tankers answer a special need for delivery of bulk petroleum to the Arctic. They are 302 ft. long and sufficiently strengthened to operate virtually anywhere ice-breakers can go. The small cargo ships are 266 ft. long and feature all-welded steel construction and ice-breaker-type bow.

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55648. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. St. John's has arctic ops prelude. (*Its:* MSTS magazine, June 1957. v. 7, no. 6, p. 20–21, photos, sketch map.)

The unusually heavy ice conditions around Newfoundland during the spring of 1957 and operations of U.S. Military Sea Transportation Service relief ships are described. The ice moved south into the Gulf of St. Lawrence much sooner than usual; tankers and cargo vessels penetrated into ice-locked harbors under ice-breaker escort. ***Copy seen:*** DLC.

55649. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. Six ships will remain in Arctic. (*Its:* MSTS magazine, Sept. 1957. v. 7, no. 9, p. 18, illus.)

Six MSTS ships used in the 1957 DEW Line resupply operations will be leased to the Northern Transportation Co. of Canada and winter (1957–58) at Port Brabant, N.W.T. This company will resupply western sector DEW Line sites served 1955–57 by MSTS.

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55650. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. Skill and experience versus elements and terrain. (*Its:* MSTS magazine, Sept. 1957. v. 7, no. 9, p. 5–13, illus., map.)

Logistic support provided for the DEW Line by MSTS arctic operations during the three seasons of 1955–57 is reviewed in general and assignments for the 1957 project are listed. The latter includes: resupply of sites along the DEW Line from the northwest tip of Alaska to the east coast of Baffin Island; resupply of Air Force bases in the Greenland, Baffin Island, Labrador, and Newfoundland areas; delivery of equipment and supplies to electronic stations in the Labrador and Newfoundland areas; resupply of the Pribilof Islands sealing stations; and hydrographic survey and establishment of navigational aids for the water areas across the northern periphery. Some 100 ships are to move 242,000 measurement tons of cargo and equipment and three million barrels of petroleum products during the 1957 operations. Scientific observations are to be made from some of the vessels in support of the IGY. The ice pack is the most serious hazard affecting operations. Inadequate charts, too much daylight to permit celestial fixes, and low sun add to navigational difficulties. Schematic map shows the areas of MSTS operations, 1950–57 and the approximate locations of the DEW, Mid-Canada, and Pine Tree Lines.

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55651. U.S. NAVY. MILITARY SEA TRANSPORTATION SERVICE. ATLANTIC AREA. Post operation report of MSTS arctic operations (east) 1958. Brooklyn, N.Y. Dec. 22, 1958. 1 v., pagings various, illus., text map, diagrs., tables.

Report of operations, May 1–Dec. 2, 1958, in resupply of U.S. Air Force installations in Greenland, on the east coast of Baffin Island and Labrador; transportation of personnel, equipment and ma-

terials for the construction of the Greenland extension of the DEW Line; and resupply of other stations. Area of operations extended from Labrador, Baffin and Ellesmere Islands on the west to the east coast of Greenland, and northward to Lake Hazen and Polaris Promontory. Resupply of DEW Line sites in the Foxe Basin area was carried out by Canadian Dept. of Transport. Included is Project Polynya Report, describing extension of docking operations at Thule until late October. Release of compressed air under water cleared ice from DeLong pier. Difficulties in the Gap-Pine resupply operation, adverse ice conditions between Kap York and Upernavik, ship damage, gains in ice forecasting, etc., are noted.

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55652. U.S. NAVY. WEATHER RESEARCH FACILITY. Normal 500 mb charts for the Northern Hemisphere. Norfolk, Va., Nov. 1957. 2 p. 29 maps, 13½ x 16 in. (U.S. Navy and University of Wisconsin Dept. of Meteorology, U.S. Air Force Contract AF 19(604)–992, Scientific report no. 8.) Prepared by R. A. Bryson. J. F. Lahey, W. L. Somervell, *Jr.*, and E. W. Wahl.

Atlas of normal charts for the 500 mb level, constructed directly from a card deck of 500 mb heights, punched from reanalyzed charts Oct. 1945 through Jan. 1953, by U.S. Navy Project AROWA, and checked at the Univ. of Wisconsin. Annual, seasonal, and monthly mean 500 mb heights, and monthly standard deviation, in feet, are shown.

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U.S. OFFICE OF NAVAL RESEARCH, *see* Arctic sea ice conference. *1958.* No. 49364.

55653. U.S. PUBLIC HEALTH SERVICE. Eskimo sanitarians. (U.S. Public Health Service. Public health reports, Nov. 1958. v. 73, no. 11, p. 998–1000, illus.)

Describes with excellent illus. the training at the University of Alaska of Eskimo men selected by their village councils. The curriculum and auxiliary subjects are described and field and laboratory work illustrated. ***Copy seen:*** DNLM.

U.S. QUARTERMASTER CORPS, *see* Pedersen, S. Quartermaster subsistence problems . . . *1952.* No. 53913.

U.S. QUARTERMASTER ENVIRONMENTAL PROTECTION RESEARCH DIVISION, *see* De Percin, F. Some . . . effect . . . solar radiation . . . *1958.* No. 50508.

U.S. QUARTERMASTER ENVIRONMENTAL PROTECTION RESEARCH DIVISION, *see* Nelson, R. A. A vegetation transect . . . Thule . . . *1958.* No. 53539.

55654. U.S. QUARTERMASTER FOOD AND CONTAINER INSTITUTE FOR THE ARMED FORCES, *Chicago.* Low temperature test methods and standards for containers; a symposium sponsored by the Quartermaster Food and Container Institute for the Armed Forces, Quartermaster Research and Development Command, U.S. Army Quartermaster Corps, Chicago, December 10, 1953. Edited by Earl C. Myers and Norbert J. Leinen. Washington, D.C., Advisory Board on Quartermaster Research and Development Committee on Packing, Packaging and Preservation, National Academy of Sciences-National Research Council, 1954. 126 p. illus. (*Its:* Surveys of progress on military packaging problems, ser. 1, Research in packaging engineering, 1.)

Contribution to problems of packaging military supplies for use in arctic regions. Low temperature test methods for containers, research facilities available, and problems for further investigation are presented in ten papers and discussed by members of the symposium. The papers are abstracted in this Bibliography under their authors' names, viz:

JACKSON, W. D. Impact of global concepts of military planning.

TRESSLER, D. K. Importance of low-temperature performance in military packaging.

ESPENSCHADE, P. W. Observed facilities for low-temperature research and test of military materiel.

ZSUFFA, L. F. Design and construction of Quartermaster climatic research chambers at Natick, Massachusetts.

BOLLER, K. H. Strength of wood at low temperatures.

SIMERL, L. E. Water vapor permeability of sheet materials.

STOWELL, F. Background of use of multiwall bags by the Armed Forces.

SEITH, R. T. Testing multiwall bags at low termperatures.

FREEMAN, A. J. Toughness and gas transfer characteristics of plastic films at low temperature.

WEINER, H. M. Low temperature degradation of flexible barrier materials.

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55655. U.S. QUARTERMASTER RESEARCH AND DEVELOPMENT COMMAND. Bibliography of publications and technical papers for 1954. Natick, Mass., 1955. 23 p. (*Its:* Technical reports QMRD–3.)

Lists 266 reports, etc. published for the Offices and Divisions, including the Environmental Protection Research Division, with some ten related to cold environment; others relating to the Arctic or cold-weather conditions are found in some other sections.

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U.S. QUARTERMASTER RESEARCH AND DEVELOPMENT COMMAND, *see also* Kennedy, S. J. The Quartermaster Research and Development Center, 5; Textile, Clothing and Footwear . . . *1956*. No. 52234.

55656. U.S. TREATIES, etc., 1953– . North Pacific fur seals. Interim Convention between the United States of America, Canada, Japan and the Union of Soviet Socialist Republics. Signed at Washington, February 9, 1957. Washington, U.S. Govt. Print. Off., 1958. 59 p. (Treaties and other international acts, series 3948.) Text in English, Japanese and Russian.

Text of Convention which entered into force on Oct. 14, 1957 aimed to keep this fur seal population at levels "which will provide the greatest harvest year after year." The 13 articles deal with: definitions; coordination and cooperation in research and investigation; their aims and cost; conservation measures; the North Pacific Fur Seal Commission, its composition, duties, etc.; implementation of sealing regulations; division of yields, etc. The final articles concern duration of agreement (six years, or more) meetings, ratification, etc.

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55657. U.S. WEATHER BUREAU. Climatological data, Alaska. Asheville, N.C., National Weather Records Center, 1957. v. 43, no. 1–12 and summary, each no. approx. 15–20 p.: text, tables, maps. File from 1915, previously listed as No. 26975.

Monthly and annual summary of data collected at approx. 150 stations; also records of daily precipitation, daily maximum and minimum temperatures, daily snowfall and snow on the ground, supplemental (airport) data. Reference notes explain measurements and adjustments made. Monthly and seasonal snowfall and heating degree days for the preceding 12 months appear in the June issue (no. 6). Maps show distribution of monthly precipitation, and of average monthly temperature.

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55658. U.S. WEATHER BUREAU. Monthly climatic data for the world. v. 9–11, 1956–1958. Asheville, N.C., 1956–1958. In sequence to No. 46847. Sponsored by World Meteorological Organization in cooperation with U.S. Weather Bureau.

Monthly issues, each 24–28 p. present tabulated surface data on pressure, temperature, relative humidity, precipitation; upper air data on temperature, dew point, wind direction and speed for seven pressure surfaces up to 100 mb. Data are reported from selected stations, listed by continents and countries, and noting latitude, longitude and elevation. Several arctic stations are included: 11 from Alaska, 21 Canada, 7 Greenland, 11 U.S.S.R (incomplete), etc.

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55659. U.S. WEATHER BUREAU. Severe ice in North Atlantic. (*Its:* Mariners weather log, May 1957. v. 1, no. 3, p. 48.)

Reports of mariners indicate unusually severe ice in the Newfoundland area in early 1957. The sinking of a 134-ft. vessel after striking an iceberg on Feb. 4 about 35 mi. east of Cape Breton Island is reportedly the first vessel sunk by iceberg collison since the *Titanic* (in 1912). By mid-March, the ice pattern was two months ahead of schedule.

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55660. U.S. WEATHER BUREAU. The weather and circulation of 1950–1958, by months. (*Its:* Monthly weather review, Jan. 1950–Dec. 1958. v. 78–85, maps)

Monthly summary and analysis, especially for the United States, but including unusual situations in Alaska, Canada and other parts of the Arctic, and showing the north polar regions on pressure-contour charts and frequency maps.

File seen: DWB.

U.S. WEATHER BUREAU, *see also* Canada. Meteorol. Br. Climatological summary, Isachsen . . . *1958*. No. 50092.

U.S. WRIGHT AIR DEVELOPMENT CENTER, *see* Bonner, C. M. Snow . . . ice removal . . . *1953*. No. 49832.

55661. *UNIVERSUM; NATUR UND TECHNIK.* Admiral Richard Evelyn Byrd; zum Tode des bedeutenden Polarforschers. (Universum; Natur und Technik, Apr. 1957. Jahrg. 12, Heft 7, p. 214–16, illus.) Text in German. ***Title tr.:*** Admiral Richard Evelyn Byrd; on the occasion of the death of the prominent polar explorer.

Appreciation of Byrd is offered, with information on his youth; his flights: over the North Pole (1926), across the Atlantic (1927) and to the South Pole (1929); his meteorological studies at the South Pole (1933); military services, inventions, publications, etc. An outline of his antarctic expeditions, especially the Fifth, closes this tribute.

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55662. *UNIVERSUM; NATUR UND TECHNIK.* 1,500 km vom Nordpol, auf Gletscherforschung in Grönland. (Universum; Natur und Technik, Mar. 1957. Jahrg. 12, Heft 6, p. 170–72, illus.) Text in German. ***Title tr.:*** 1,500 km. from the North Pole; glacier research in Greenland.

Contains a brief review of the glaciological work in Greenland, its importance during the International Geophysical Year. ***Copy seen:*** DGS.

55663. UNTERSTEINER, NORBERT, *and* **F. I. BADGLEY.** Preliminary results of thermal budget studies on arctic pack ice during summer and autumn. (*In:* American Geographical Society. Preliminary reports of the Antarctic and Northern Hemisphere glaciology programs, 1958. pt. XIII, p. 1–9, text map, 3 diagrs.)

Covers some results of initial phase of work (June to Dec. 1957) on drifting station A. The Univ. of Washington Dept. of Meteorology and Climatology, is studying the relative importance of radiative and latent heat transfer for the mass budget of sea ice, as well as the exchange of heat between atmosphere and ocean by conduction through the ice pack. Instruments used, methods of observation, problems encountered are noted. General weather conditions; surface ablation and accumulation are reported; with a few remarks concerning the thermal budget.

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55664. UNTERSTEINER, NORBERT, *and* **F. I. BADGLEY.** Preliminary results of thermal budget studies on arctic pack ice during summer and autumn. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 85–92, text map, diagr., graph.)

Covers some results of initial phase of study of relative importance of the radiative and latent heat transfer for the mass budget of sea ice, as well as the exchange of heat between atmosphere and ocean by conduction through the ice pack. Observations were made on drifting station A, June–Sept. 1957, on a course continuing approximately that of Russian station North Pole–2. Method and results of observations are discussed; practical application of the information, problems, and future plans are noted. ***Copy seen:*** DN–HO.

UPPSALA. LANDSMÅLS- OCH FOLKMINNESARKIVET, *see* Steggos, J. E. Lapska sånger . . . *1958*. No. 55141.

UPPSALA. UNIVERSITET. *Bibliotek, see* Davidsson, Å. Handritade kartor . . . Finland . . . *1957*. No. 50449.

UPTON, B. G. J., *see* Moorbath, S., *and others*. Age of zircon . . . *1958*. No. 53379.

URASTYROV, KIUNNIUK, *see* Novikov, V. M. Severnaîa raduga. *1957*. No. 53664.

55665. URVANTSEV, NIKOLAĬ NIKOLAEVICH. Tektonika severo-zapadnoĭ chasti Sibirskoĭ platformy i perspektivy nikelevogo orudeneniîa i neftenosnosti. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik stateĭ po geologii Arktiki, vyp. 5, p. 87–117, tables (1 fold.), fold. map.) 26 refs. Text in Russian. ***Title tr.:*** Tectonics of the northwestern part of the Siberian platform, the nickel-ore prospects and oil possibilities.

Outlines the basic geologic-tectonic first- and second-order structures of the region north of 64° N. and between the Yenisey on the east and the 92° E. meridian. Rock distortion and rock fracturing zones of the area are reviewed and tectonic effects in ore and oil develop-

ment discussed. For copper, nickel and iron ores the most promising zones are Noril'sk and the Imangda-Gorbiyachin River basins. Signs of oil are indicated: in the regions of Nordvik, Kozhevnikova Bay, Ust'-Yeniseyskiy Port, and the Sukhaya Tunguska River. The oil possibilities of these and other regions are discussed and suggestions made for further studies. ***Copy seen:*** DGS.

55666. USACHEV, P. I. Obshchie cherty raspredeleniia fitoplanktona v dal'nevostochnykh morîakh. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 75–78.) Text in Russian. ***Title tr.:*** General lines of distribution of phytoplankton in the Far Eastern seas.

Species composition of the phyto- and zooplankton, its development and distribution, the effect of the medium on its distribution and location of feeding grounds of fish and whales, these are the main research interests of the Plankton Laboratory of the Institute of Oceanology. Growth of the Laboratory and its shortcomings, practical applications, methods, etc., and the plankton composition of the Okhotsk and Bering Seas are discussed. ***Copy seen:*** DLC.

55667. USHAKOV, P. N. Mezozoĭ Verkhne-Kolymskogo kraîa. Leningrad-Moskva, Gos. ob"edin. nauchno-tekhnich. izd-vo, 1938. 32 p. tables. (Dal'stroĭ, Gostrest [Trudy] Materialy po izucheniîu Kolymsko-Indigirskogo kraîa, seriîa 2, Geologiîa i geomorfologiîa, vyp. 7.) 9 refs. Text in Russian. Summary in English. ***Title tr.:*** The Mesozoic of the upper Kolyma region.

Contains description of Mesozoic sedimentary rocks in the Kolyma basin and adjacent areas, based on material collected by geologists of the Upper Kolyma Expedition, 1933–35, sponsored by State Trust Dal'stroĭ. The Mesozoic sediments were found chiefly in the western part of the region studied, on tributaries of the Kolyma (Ozhogina, Zyryanka, etc.) and the Indigirka (Moma, Nera, etc.); these rocks had a role in formation of the folded region of the Cherskogo Range. Occurrence of Triassic, Jurassic, and Cretaceous rocks is outlined, and faunal fossils found in these strata are noted. Marine transgression and regression in the area during the Mesozoic era are discussed (p. 4 and 26–29).

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55668. USHAKOV, PAVEL VLADIMIROVICH. Bentonicheskie gruppirovki Matochkina Shara. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1931. vyp. 12, p. 5–130, illus., tables, map.) 23 refs. Text in Russian. Summary in German. ***Title tr.:*** Benthonic groupings of Matochkin Shar.

A comprehensive study of the littoral, sublittoral and pseudoabyssal of this strait between the two islands of Novaya Zemlya. It is introduced (p. 5–40) with an outline of the scope of the investigation, earlier studies, topography of the area, nature of bottom, hydrological conditions of the strait, and meteorological observations. The biocoenoses of the three zones are described (p. 41–63), the sublittoral showing the quantitatively and qualitatively richest fauna. The seaweeds of the area, distribution of the benthonic forms and general character of the fauna are treated in turn. Tables are presented indicating, in detail, the distribution of the main animal groups over the area, by a list of dredging and trawling stations and the forms found at them. The study is based on field work conducted during 1923–1929.

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55669. USHAKOV, PAVEL VLADIMIROVICH. Faunisticheskie issledovaniîa Zoologicheskogo instituta AN SSSR na dal'nevostochnykh morîakh. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 102–108.) Text in Russian. ***Title tr.:*** Faunistic studies in Far Eastern seas by the Zoological Institute of the Academy of Sciences, U.S.S.R.

Contains information on relevant activities of the Institute from its earliest times (18th century) to the present. Its (largely taxonomic) work covering the major animal groups is described in detail, and the scientists performing it are indicated. Studies in populations and their distribution, publications, etc. are also discussed. ***Copy seen:*** DLC.

55670. USHAKOV, PAVEL VLADIMIROVICH. K faune mnogoshchetinkovykh cherveĭ (Polychaeta) Arktiki i Antarktiki. (Zoologicheskiĭ zhurnal, Nov. 1957. t. 36, vyp. 11, p. 1659–74, illus., table, map.) 8 refs. Text in Russian. Summary in English. ***Title tr.:*** The polychaete fauna of the Arctic and Antarctic.

Contains brief descriptions of worms collected during 1950–55 in the central Arctic Basin by the Russian drifting stations, North Pole 2–5. Three out of 16 benthal forms are new species: *Macellicephala longipalpa, M. polaris,* and *Melinnexis somovi.* The forms found suggest an Atlantic rather than Pacific origin. A new genus is described from the Antarctic material.

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55671. USHAKOV, PAVEL VLADIMIROVICH. K faune nemertin Belogo moriâ. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniiâ morei SSSR, 1926. vyp. 3, p. 47–71, illus., tables.) Text in Russian. Summary in German. ***Title tr.:*** The nemertine fauna of the White Sea.

Description of 24 forms of these worms from the deep sea and coastal waters. Six of the forms are new species, one of the species also a new genus. Morphology and morphometry, external and internal anatomy, size, color, ecology, etc., are considered. ***Copy seen:*** DLC.

55672. USHAKOV, PAVEL VLADIMIROVICH. K zoogeograficheskoĭ kharakteristike pribrezhnykh zon zaliva Mollera. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniiâ morei SSSR, 1927. vyp. 4, p. 19–80, illus., tables, fold. maps.) 38 refs. Text in Russian. Summary in German. ***Title tr.:*** Zoogeographic characteristics of the littoral zones of Moller's Bay.

Account of investigations directed by K. M. Derîugin, 1924, in this bay (72°25′ N. 52°25′ E.) on the west coast of Novaya Zemlya. Trawling and dredging operations were conducted and also examinations of temperature and salinity; finally conditions in the intertidal zone studied. The species composition of each station is tabulated; ecological zones are defined and discussed. It is concluded that the local fauna is of a mixed zoogeographic character consisting of both arctic and boreal elements. Main representatives of both are listed.

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USHAKOV, PAVEL VLADIMIROVICH, *see also:*

Gur'îanova, E. F., *and* P. V. Ushakov. K faune Chernoĭ guby . . . *1928.* No. 51424.

Gur'îanova, E. F., *and* P. V. Ushakov. Litoral' vostochnogo Murmana. *1929.* No. 51431.

Gur'îanova, E. F., *and others.* Litoral' zapadnogo Murmana. *1930.* No. 51432.

Kreps, E. M., *and* P. V. Ushakov. K gidrologii . . . reliktovykh vodoemov . . . *1935.* No. 52494.

55673. USHKALOV, V. P. O raschete osnovaniĭ sooruzheniĭ na merzlykh gruntakh po predel'nym deformatsiîam. (Stroitel'naîa promyshlennost', Julv 1958. god 36, no. 7, p. 39–41, tables.) Refs. Text in Russian. ***Title tr.:*** Computation of maximum deformation in a foundation on frozen ground.

A new method for designing foundations for houses and industrial constructions in the permafrost region, which is given in the "Standards and Technical Regulations" (NiTU–118–54), is analyzed. Values of thawing depth and rate, sagging rate, tilting, and relative deflection for different types of constructions are given. Conditions for maintaining stability of complex structures are discussed with consideration given to rigidity of construction for certain values of compressibility of ground and foundation, computed values of depths and rates of thawing, certain measures for regulating the rate of thawing and uneven sagging. Permissible deformation is related to rigidity of construction and compressibility of the ground, both of which are dependent upon heat insulating and ventilating provisions. Experience shows that non-rigid and very rigid constructions are subjected to less deformation than those with medium or semi-rigidity. For precise determination of deformation or sagging of buildings in ice-saturated thawing ground, special values of coefficients are recommended (table 2). ***Copy seen:*** DLC.

55674. USINGER, ROBERT L., *and* **R. F. SMITH.** Arctic amber. (Pacific discovery, Mar.–Apr. 1957. v. 10, no. 2, p. 15–19, illus.)

Describes experiences while hunting for Cretaceous amber along the Colville, Kuk and Ketik Rivers of Northern Alaska during summer 1955. Abundant finds were made, including pieces which contained insect fossils of a new species, genus and tribe of the family Eulophidae.

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USINGER, WOLFGANG, *see* Albers, C., *and others.* Blutgase in Hypothermie . . . *1958.* No. 49224.

USINGER, WOLFGANG, *see* Albers, C., *and others.* Der intrapulmonale Gasaustausch . . . *1957.* No. 49225.

USINGER, WOLFGANG, *see* Albers, C., *and others.* Der intrapulmonale Gasaustausch . . . *1958.* No. 49226.

USINGER, WOLFGANG, *see* Brendel, W., *and others.* Der Kreislauf in Hypothermie . . . *1958.* No. 49907.

USINGER, WOLFGANG, *see* Brendel, W., *and others.* Kreislaufregulation . . . *1957.* No. 49908.

USINGER, WOLFGANG, *see also* Brendel, W., *and others.* Die Reaktivität des Kreislaufs . . . *1958.* No. 49909.

55675. USPENSKIĬ, LEV, *and* **K. SHNEĬDER.** Podzemnyĭ muzeĭ Priangar'ia. (Ogonëk, May 1957. god 35, no. 19, p. 23–24, illus.) Text in Russian. ***Title tr.:*** The underground museum of the Angara region.

Popular account of discoveries made by A. P. Okladnikov and other Soviet archeologists on islands of the Angara River. Artifacts, etc., of Paleolithic, Neolithic, early and late bronze and iron ages have been found in five layers excavated. Nephrite stone cutting flourished in this area, which, with the excellent nephrite deposits in basins of the Angara's tributaries and in the Sayanskiy Range, may be regarded as the center of this industry. Stone adzes for hollowing tree trunks found below bone knives for peeling bark indicate the succession of dug-outs > canoes. The Turkic origin of the inhabitants was disclosed by finds in the upper layers. Illus. show metal tools, stone fish lures, stone adze, nephrite ring and rock drawing. ***Copy seen:*** DLC.

55676. USPENSKIĬ, LEV. Slovo na karte. (Vokrug sveta, Oct. 1957, no. 10, p. 19–24, illus., sketch maps.) Text in Russian. ***Title tr.:*** The word on the map.

Discusses the origin of several strange geographic names, including Cape Orangutang on the western coast of Bering Sea (61°35′ N. 173°30′ E.) and Hut Integral (Izba Integral), a small settlement on the Taz River, tributary of the Yenisey. ***Copy seen:*** DLC.

55677. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Bogatstva i okhrana zhivotnogo mira Sovetskoĭ Arktiki. (Problemy Severa, 1958. vyp. 1, p. 221–28.) Text in Russian. ***Title tr.:*** The riches and protection of the animal world of the Soviet Arctic.

Discusses the kinds and economic value of these animal resources; not-exploited and over-exploited species; marine mammals and their conditions; wild reindeer, its utilization; water fowl and their protection; natural reservations and parks; protection of rare forms.

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55678. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Gaga. (Okhota i okhotnich'e khoziaĭstvo, May 1958. god 4, no. 5, p. 25–26, illus.) Text in Russian. ***Title tr.:*** Eider.

Sketch of the distribution and habits of the eider and the economic value of its down: rookeries in the Baltic, White and Barents Seas; nesting and hatching; "live" and "dead" down (i.e., collected from nests or taken from killed eiders) and their difference in quality; the two periods for collecting down from nests. The prohibition of eider-hunting and egg-collecting in the U.S.S.R. and the protection of this duck from predators and enemies are noted. ***Copy seen:*** DLC.

55679. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Nekotorye vidy ptiĉ na severo-vostoke evropeĭskoĭ chasti SSSR. (Moskva. Universitet. Uchenye zapiski, 1958. vyp. 197, Ornitologiia, p. 35–47, illus., table, maps.) 27 refs. Text in Russian. ***Title tr.:*** Some species of birds in the northeastern European part of the U.S.S.R.

Outline of the avifauna of Yugorskiy Peninsula and Vaygach Island based on previous Russian (Klumov, No. 8855, etc.) and foreign (Pleske, No. 13579, etc.) literature and on author's investigations in northern and western parts of the Peninsula and the coast of Vaygach in May–Aug. 1957. Tabular data are given (p. 45) on occurrence in dwarf shrubs, lichen-moss and arctic tundra of 54 species (Russian names only) with notes in the text on the more important (Russian and Latin names): ptarmigan, purple sandpiper, common snipe, gull, kittiwake, barnacle goose, eider, rough-legged hawk, short-eared owl, bunting, and willow warbler. The region is important as a border area of the North Atlantic type of avifauna. ***Copy seen:*** DLC.

55680. USPENSKIĬ, SAVVA MIKHAĬLOVICH, *and* **L. K. SHAPOSHNIKOV.** Okhrana zhivotnogo mira Arktiki. (Pri-

roda, June 1957. no. 6, p. 29–34, 7 illus.) Text in Russian. ***Title tr.:*** Preservation of the animal world in the Arctic.

Contains historical and statistical data on animals threatened with extermination unless more effective measures for their protection are adopted. The data include: polar bears (in 1932–33 about 400 were recorded in the Cape Chelyuskin region, but only three in 1948–49); walrus (only remaining rookeries are in Laptev Sea and the Bering and Chukchi Seas), northern reindeer on Kola Peninsula, Novaya Zemlya (formerly 20,000, now a few hundred), Yamal (formerly 8,000, now 300); the largest herd of reindeer, now greatly depleted, is in northern Taymyr Peninsula. "Bazaars" of arctic aquatic birds in the White Sea region and on Murman coast are also threatened. The situation in other countries is reviewed and a similar depletion noted. Strict measures for the protection of arctic animals by international agreement are recommended.

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55681. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Primenenie massovogo kol'tsevaniia, markirovaniia i ucheta chislennosti morskikh kolonial'nykh ptits pri izuchenii ikh ėkologii. (*In:* Pribaltiĭskaia ornitologicheskaia konferentsiia, 1954. Trudy, *pub.* 1957, p. 349–54, illus.) 2 refs. Text in Russian. ***Title tr.:*** Application of mass banding, marking and statistics of sea colony-forming birds while studying their ecology.

Contains information on the estimated number of auks (guillemots) and other birds and of auk colonies on Novaya Zemlya; utilization of their eggs and meat; banding and banding methods; arrival of nesting birds, nesting habits, growth rate of the young, losses, productivity of the auk colonies, etc.

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55682. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Ptich'i bazary Novoĭ Zemli. Moskva, Izd-vo Akademii nauk SSSR, 1956. 179 p., illus., tables. (Akademiia nauk SSSR. Nauchno-populiarnaia seriia.) About 120 refs. Text in Russian. ***Title tr.:*** Bird rookeries of Novaya Zemlya.

A popular presentation based on years of study in this area. Successive chapters deal with the distribution of the rookeries; species of birds and numbers making them up; possibilities of exploitation (p. 7–30). The thick-beaked murre (*Uria lomvia* L.) most common in the rookeries, its biology, habits, including social habits, distribution, reproduction, development and growth, seasonal movements, food, parasites, mortality (p. 31–85). Similar data are given on less numerous forms, the thin-beaked murre, the guillemot, puffin, darter, etc. (p. 86–145). Exploitation of the rookeries and its prospects are discussed in conclusion.

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55683. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Ptitsy Sovetskoĭ Arktiki. Moskva, Izd-vo Akademii nauk SSSR, 1958. 166 p. 316 illus., 2 col. plates, 2 fold. maps (Akademiia nauk SSSR. Nauchno-populiarnaia seriia.) 34 refs. Text in Russian. ***Title tr.:*** Birds of the Soviet Arctic. G. P. Dement'ev, chief editor.

Comprehensive work for non-specialists. Occurrence, distribution, seasonal life, migration, and the economic importance and utilization of arctic birds are discussed (p. 5–34). A taxonomic account (p. 34–143) deals with nearly a hundred species found in the arctic tundras, deserts and seas: loons, cormorants, guillemots, skuas, terns, petrels, birds of prey, owls, partridges and ptarmigans, swans and geese, ducks and eiders, cranes, snipes, passerine birds. Russian and Latin names, appearance, size, weight, form of bill and legs, plumage, voice, habits, nesting, migration and occurrence are noted for each species. A final chapter on study of arctic birds (p. 144–65) offers advice to beginners on observations, collecting, camera work and drawing, also on banding.

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55684. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Raspredelenie morzha v more Laptevykh i zapadnoĭ chasti Vostochno-Sibirskogo moria v zimne-vesennii period. (Problemy Severa, 1958. vyp. 2, p. 219–21.) 4 refs. Text in Russian. ***Title tr.:*** Distribution of the walrus in the Laptev Sea and in the western East-Siberian Sea during winter and spring.

Notes from own observations and from various sources (fliers, hunters, etc.) on numbers, localities of the walrus. In this area they appear to represent an isolated group, with only limited migrations. ***Copy seen:*** DLC.

USPENSKIĬ, SAVVA MIKHAĬLOVICH, *see also* Rutilevskiĭ, G. L., *and* S. M.

Uspenskiĭ. K biologii lemmingovidnoĭ polevki . . . *1958*. No. 54456.

55685. USTIEV, EVGENIĬ KONSTANTINOVICH. Anʏĭskiĭ vulkan i problemy chetvertichnogo vulkanizma na severo-vostoke SSSR. (Problemy Severa, 1958. vyp. 1, p. 85–96, illus., map.) 28 refs. Text in Russian. ***Title tr.:*** The Anyuyskiy Volcano and problems of Quaternary volcanism in northeastern U.S.S.R.

Describes an extinct volcano discovered by an air survey of the Bol'shoy Anyuy River basin in 1952, and investigated by the writer the next year. The typical, well-preserved crater is located on the upper Monni River (approx. 67°24′ N. 164°30′ E.) at the intersection of several tectonic fractures. The upper part of the Monni is covered by the main lava stream of the volcano, the river water flowing beneath the lava. Stratigraphic, petrographic and botanical studies indicate that the eruption occurred in the late Quaternary, possibly only a few centuries ago. Other Quaternary volcanoes found in northeast Asia are noted: in the Moma valley (66°26′ N. 143°06′ E.), on Taygonos Peninsula (61°20′ N. 161° E.), in the Magadan region, and at Lake Elgytkhyn on the Anadyr Plateau; the considerable tectonic movements evidenced by them are discussed. The volcanoes' locations are indicated on the structural sketch map (p. 94).

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55686. USTIEV, EVGENIĬ KONSTANTINOVICH. Vulkan v Zapolʏ̂r'e; iz istorii odnogo puteshestviʏ̂. Magadan, Oblastnoe knizhnoe izd-vo, 1956. 64 p. illus., map. Text in Russian. ***Title tr.:*** Volcano above the Arctic Circle; from the history of an expedition.

Recounts trip of a four-man party in summer 1953 to a volcano discovered by a 1952 air survey in the unexplored area of the upper Monni River in the Kolyma basin: from Magadan by aircraft to the vicinity of Nizhniye Kresty (68°45′ N. 161°25′ E.), thence 550 km. by boat up the Kolyma, Bol'shoy Anyuy, Angarka, Uyamkunda and Monni Rivers, and the last 55 km. on foot along the barren lava stream filling the former valley of the upper Monni. The party examined the volcano, its cone crater (which they descended to the bottom) and the environs, then returned to the Kolyma River mouth. The cone, red in color, rises 120 m. above the surrounding terrain; the crater is 300 m. in diameter and 90 m. deep. The great amount of ejected lava indicates the force of its eruption estimated at some 300–500 years ago, in view of the absence of vegetation and little weathering. No traces of present-day activity were found. Events of the trip, travel conditions, visit to the settlement of Pyatistennoye (67°58′ N. 161°24′ E.) on the Bol'shoy Anyuy River, abundance of fish and game, etc. are noted. The book is favorably reviewed in *Vokrug Sveta*, 1957, no. 1, p. 62. ***Copy seen:*** DLC.

55687. USTINOV, G. O tipe kapital'nogo zhilogo doma na Severe. (Arkhitektura SSSR, 1957, no. 2, p. 41–42, diagr.) Text in Russian. ***Title tr.:*** The basic type of residential building in the North.

The apartment house for the permafrost region is described; open space in the basement for free air circulation and non-heated storage rooms for food and fuel must be provided. The living area of the apartment must be larger than in the mid-continental zone due to its greater use in the North. Size and arrangement of windows are restricted by heat loss and short, if any, daylight during winter. Heat-insulated inner shutters and better insulated window frames can be used in the case of large windows. With well insulated building walls, the main infiltration of cold air during high wind is by the windows. Selection of the optimum width and height of the building and problems in prevention of freezing of windows and in ventilation openings must also be considered. ***Copy seen:*** DLC.

55688. USTINOVICH, N. Khudozhnik ėvenkiĭskoĭ taĭgi. (Okhota i okhotnich'e khozʏ̂ĭstvo, Sept. 1958. god 4, no. 9, p. 62.) Text in Russian. ***Title tr.:*** An artist of the Evenki taiga.

Notes work of the Tungus (Evenki) engraver, Vladimir I. Meshkov, living in the Evenki National District; his colored engravings adorn the hunters' tents.

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55689. USTINOVICH, N. V ėvenkiĭskoĭ taĭge. (Okhota i okhotnich'e khozʏ̂ĭstvo, Jan. 1957, no. 1, p. 45–46, illus.) Text in Russian. ***Title tr.:*** In the Evenki taiga.

Notes, by name, Tungus hunters in the Evenki National District, the most successful among them a woman; the assistance of experts; acclimatization of

the Barguzin sable to improve the local strain; a gathering of hunters at the town of Tura. ***Copy seen:*** DLC.

55690. USTRITSKIĬ, V. I. Novye dannye po stratigrafii verkhnego paleozoia TSentral'nogo sektora Sovetskoĭ Arktiki. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t. 92, Nefte-gazonosnost' severa Sibiri, 1958. p. 20–35.) Text in Russian. ***Title tr.:*** New data on the stratigraphy of the Upper Paleozoic in the central zone of the Soviet Arctic.

Recent geological mapping at scale 1:1,000,000 and 1:200,000, special stratigraphic studies, numerous collections of Permian fauna, and other data allow more precise statement than hitherto, on these deposits. Their stratigraphy is reviewed in Novaya Zemlya and the Yugorskiy Peninsula, in Taymyr, the northern margin of the central Siberian plateau, and the Kharaulakh Mts.; a stratigraphic division is presented in detail, based on biostratigraphic data; the paleogeography of Permian times is discussed. ***Copy seen:*** DGS.

55691. USTRITSKIĬ, V. I. O kharaktere kontakta permi i karbona na Pai-Khoe. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik statei po geologii Arktiki, vyp. 5, p. 3–14, illus., fold. map.) 15 refs. Text in Russian. ***Title tr.:*** On the nature of the contact between Permian and Carboniferous in Pay-Khoy.

Presents new data on this disputed question based on the author's 1949–52 geologic mapping and field studies in northwest and southwest part of this region (68°50′ N. 63° E.) in northeastern Arkhangel'skaya Oblast': 14 cross-sections were examined throughout and the setting of various strata studied. The folding which took place in Pay-Khoy at the end of Upper Carboniferous times is considered responsible for the inclination of the layers and the brief interruption of sedimentation, and subsequently for clear setting in stratigraphy.

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USTRITSKIĬ, V. I., *see also* Ivanova, A. M., *and others.* Geologicheskoe stroenie . . . *1957.* No. 52013.

UTENKOV, N. A., *see* Mozeson, D. L., *and* N. A. Utenkov. K voprosu ob izuchennosti fiziko-geograficheskikh uslovii Severo-Vostoka SSSR . . . *1958.* No. 53432.

55692. UTKIN, LEONID ANTONOVICH, *and others.* Bibliografiia po lekarstvennym rasteniiam; ukazatel' otechestvennoĭ literatury: rukopisi xvii–xix vv., pechatnye izdaniia 1732–1954. Moskva-Leningrad, Izd-vo Akad. nauk SSSR, 1957. 724 p. (Akademiia nauk SSSR. Botanicheskiĭ institut.) Approx. 400+ 9,085 refs. Text in Russian. *Other authors:* A. F. Gammerman, *and* V. A. Nevskiĭ. ***Title tr.:*** Bibliography of medicinal plants; a guide to the Russian literature; manuscripts of the XVII–XIX centuries and printed publications of 1732–1954.

Over 400 manuscripts (mostly old works) and 9085 published papers are listed, mostly without annotations; they are arranged chronologically and alphabetically (within each year). Some of the papers deal with medicinal plants of northern regions of the U.S.S.R.

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55693. UUSITALO, S. Beobachtungen mit Bezug auf das Meereseis. (Geophysica, 1957. v. 5, no. 3, p. 139–46, illus., diagr.) 2 refs. Text in German. ***Title tr.:*** Observations on sea ice.

"The results of investigations in 1954–1956 on the salt content of various layers of ice collected at six points on the Finnish coast are reported, and the methods of sampling and analysis are described. Parallel-epipedal samples were cut out of the ice cover weekly, measured for thickness, and divided according to the natural stratification of the ice. The salt content of each layer was determined by titration, giving values ranging from 0–2.5%. The growth and structure of the ice were reconstructed on diagrams by taking an ice layer of low salinity as a reference surface. Ice was thicker in areas with a thin snow cover than where snow accumulation was large. Profiles through the ice samples are given."—SIPRE. ***Copy seen:*** DLC.

55694. UVERUD, HELGE. For- og beitedyrking på myr og fastmark i høgreliggende strøk. (Norsk myrselskap. Meddelelser, June 1956. årg. 54, nr. 3, p. 81–95.) Text in Norwegian. ***Title tr.:*** Fodder and pasturage cultivation on bogs and firm ground in higher locations.

Development of forage crops and pastures on land above treeline is discussed. Choice of plant species with low heat requirements and complete fertilization high in nitrogen content are considered essential. From locally produced seed,

timothy, red clover, alsike, fescue, meadow foxtail, and other varieties are recommended. From experiments on upland sites, drainage, cultivation methods, fertilization, length of season, rotation, and production are reported.

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55695. UVERUD, HELGE. Forsøk med stigende kunstgjødselmengder til beiter. (Selskab (Kong.) for Norges vel. Årbok for beitebruk i Norge, 1940–41. nr. 15, p. 154–204, 27 tables.) Text in Norwegian. ***Title tr.:*** Experimentation with increasing amounts of commercial fertilizer on pastures.

Includes (p. 184–85) report on a research project at the Nordland agricultural school, where a sandy bogland soil planted to clover-grass mixture was variously fertilized. Results of fertilization, which are considered good, are tabulated. ***Copy seen:*** DA.

UZELAC, V., *see* Šahović, K., *and others.* Periferna motorna nervna ekscitabilnost . . . *1956.* No. 54498.

UZELAC, V., *see* Šahović, K., *and others.* Uticaj hipotermije . . . *1956.* No. 54500.

55696. UZHIK, GEORGIĬ VIKTOROVICH. Prochnost' i plastichnost' metallov pri nizkikh temperaturakh. Moskva, Izd-vo Akademii nauk SSSR, 1957. 192 p., illus., tables, graphs, diagrs. Akademiîa nauk SSSR. Institut mashinovedeniîa.) 58 refs. Text in Russian. ***Title tr.:*** Strength and ductility of metals at low temperatures.

The subject is developed along three main lines: correlation of previous work, study of metallurgical and metallogical factors, and of the role and influence of different mechanical factors on the strength of metals (concentration of stresses, application of loads, etc.). The physical nature of different phenomena appearing in the processes of deformation and destruction of metals at very low temperature is not yet clearly defined. Some cold-brittle metals of body-centered lattice become very brittle at low temperature, but some non-cold brittle, of side-centered lattice, possess considerable ductility, even at the temperature of liquid hydrogen. The ductility of some nonferrous metals and austenitic steels increases with lowered temperature simultaneously with considerable increase of breaking stresses. All these brittle and ductile conditions are investigated, in relation to suddenly applied and steady loads, with analytical and graphical correlation of results. Analysis of construction crashes apparently due to lowered temperature, indicates the presence of concentrated stress. Three-dimensional distribution of these stresses in loaded specimens is analyzed at various temperatures (+20°, −50°, −196° C.) for brittle and ductile breakdown. Apparatus and method for testing are described in detail (p. 93, 104–108). Resistance to metal fatigue at low temperatures is discussed with graphs and tabulated data (p. 133–37). Appendix contains data tables (35) on mechanical properties of various alloys at low temperatures obtained in the U.S.S.R. (carbon steels 1–6, non-ferrous metals 7–14) and (15–35) abroad.

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55697. VAAGE, JAKOB. Skiforskning gjennom 25 år. (Snø og ski, årbok, 1957. årg. 63, p. 33–37, illus.) Text in Norwegian. ***Title tr.:*** Ski research during 25 years.

Contains a short history of the Norwegian ski museum (Skimuseet), since 1951 at Holmenkollen outside Oslo; it contains a representative collection of skis, snowshoes, etc. from different periods, including prehistoric finds. Ski research on a scientific basis was started in Norway in 1929. ***Copy seen:*** SPRI.

55698. VAARTAJA, OLLI. Alikasvosasemasta vapautettujen männyn taimistojen toipumisesta ja merkityksestä metsänhoidossa. Helsinki, 1951. 133 p., illus. diagrs. (Acta forestalia fennica, 59, 1952.) Text in Finnish. Summary in English. ***Title tr.:*** On the recovery of released pine advance growth and its silvicultural importance.

The ability of Scotch pine (*Pinus silvestris*) to withstand suppression by an overwood and to recover after release was investigated in south and north Finland. Recovery, growth rates and their variations with time, are reported on the basis of age, height, and condition of trees at the time of their release. The effects of injuries and size of neighboring trees, quality of the final product, and relation to the site are considered.

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55699. VÄÄNÄNEN, SULO. Ammattimaisten metsätyömiesten asunto-olot; maaseudun työvoiman tutkimuksia V. Helsinki, 1955. 32 p., map, graphs,

tables. (Acta forestalia fennica, 63, no. 5.) 19 refs. Text in Finnish. Summary in English. ***Title tr.:*** Housing conditions of professional forestry workers; rural labor force studies V.

Housing of Finnish forestry workers is discussed, with emphasis on crowding, high in the dwarf farm areas and among landless men in the North. Two-thirds such workers own their dwellings. In Lapland over half live in houses built in 1940 or after. The high proportion of small dwellings (one-two rooms) is striking. More homes in Lapland than elsewhere have electricity. High birth rate and low economic standing are factors in the higher housing density of this labor group in comparison to other occupations. ***Copy seen:*** DLC.

VÄÄNÄNEN, SULO, *see also* Ristimäki, T. Maaseudun . . . miestyövoiman . . . perusteela . . . *1956*. No. 54322.

VÄISÄNEN, A. O., *see* Steggos, J. E. Lapska sånger . . . *1958*. No. 55141.

55700. VÄLIKANGAS, ILMARI, *and* **G. NORDSTRÖM.** Die Vogelberingung in Finnland im Jahre 1954. (Societas pro fauna et flora fennica. Memoranda, 1955–56, *pub.* 1957. no. 32, p. 21–62.) Text in German. ***Title tr.:*** Bird banding in Finland in 1954.

Lists the volunteers and banding places, also the recoveries: 147 species (21,955 bands) including some localities in Finnish Lapland and the Kuusamo region. ***Copy seen:*** DLC.

55701. VÄLISALMI, T. Leistungsfähige Hochseebergungsschlepper. (Schiff und Hafen, Nov. 1957. Jahrg. 9, Heft 11, p. 941–50, illus., plates, diagrs.) Text in German. ***Title tr.:*** Efficient ocean-going salvage tugs.

Describes prototype of fifteen 1,012 br. reg. t. vessels ordered by the U.S.S.R. in Finland. It is strengthened for navigation in ice and has a 30-day cruising range on full speed (approx. 14 knots). Engines of 1,700 hp. are diesel-electric. Hull, equipment, and accommodations are described in detail. The vessels are constructed to extraordinarily rigid specifications on safety and stability.

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55702. VAGIN, V. L. Dendrogasteridae, Entomostraca Ascothoracida, iz morskikh zvezd Beringova morîa. (Leningradskoe obshchestvo estestvoispytatelei. Trudy, 1957. t. 73, vyp. 4, Otd. zool., p. 58–63, 4 illus.) 2 refs. Text in Russian. Summary in German. ***Title tr.:*** Dendrogasteridae, Entomostraca Ascothoracida, from the starfishes of Bering Sea.

Contains descriptions of *Dendrogaster elegans* from *Hexatesrias polaris, D. astropectinus* from *Psilaster pectinatus* and *D. beringensis* n. sp., from *Eremicaster tenebrarius,* collected by the research vessel *Vitîaz'* on the Pacific Expedition of the Institute of the Oceanology, in Anadyr Bay in 1950. ***Copy seen:*** DLC.

55703. VAGLIANO, M. S. La gelure. (Revue du practicien, Jan. 1957. t. 7, no. 1, p. 63–70.) Text in French. ***Title tr.:*** Frostbite.

Contains information on the physiology and pathological anatomy of cold injury; clinical aspects in the first and second phase; degrees of injury; therapy in the early stage; treatment of nerves, injured vessels and tissues; symptomatic therapy. ***Copy seen:*** DNLM.

55704. VAGNER, G. K. Derevîannoe zodchestvo russkikh starozhilov po îakutskomu traktu. (Sovetskaîa étnografiîa, 1958, no. 6, p. 3–14, illus., diagrs.) Approx. 30 refs. Text in Russian. ***Title tr.:*** The wooden architecture of old Russian settlers along the Yakut post road.

Describes variants of the peasant log-cabin (izba) used by Russian settlers of the 17th to early 19th century in the Angara and Kuda River valleys. The houses usually built along the post road formed drawn-out villages with a geometric ground plan typical for the area. Homesteads erected on substructures consisted of living quarters, one or two enclosed yards, and attached or separate farm buildings (rich households) or storage rooms (middle-class families). A typical local variant of the north Russian log-cabin is the L-shaped house with a protruding one- or two-storied anteroom (tambur), replacing or built as addition to the usual hall (seni), and a covered porch (kryl'îso), an architectural form deriving from the old Angara region barn. Architectural details, decorative motifs, floor plans etc. are discussed.

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VAHOUNY, GEORGE V., *see* Treadwell, C. R., *and others.* Nutrition studies in the cold, 1 . . . *1957*. No. 55506.

VAHOUNY, GEORGE V., *see* Treadwell, C. R., *and others.* Nutrition studies in the cold, 2 . . . *1958*. No. 55507.

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55705. VAHTER, TYYNI. Obinugrilaisten kansojen koristekuosit; Ornamentik der Ob-Ugrier. Helsinki, 1953. xxxiii, 216 p., illus., 200 plates; maps on 3 unnumb. p. (Suomalais-ugrilainen seura. Kansatieteellisiä julkaisuja, no. 9.) Approx. 150 refs. Text in Finnish and German. ***Title tr.:*** Ornamental patterns of Ob-Ugrians.

A discussion of the predominantly geometric decoration (embroidery, weaving, wood incrustation, dyeing, beadwork, designs, etc.) of the Ostyaks and Voguls based primarily on objects collected by A. Ahlqvist, U.T. Sirelius and A. Kannisto, prior to World War I. Over 700 articles of clothing and basketry, cradles, embroidery designs, etc., are described and illustrated (over 800 illus. in text and on plates at end, some in color). Materials and techniques, origin of designs, fur and skin painting, etc. are discussed. ***Copy seen:*** DSI.

55706. VAĬSBERG, N., *and* **IŬ. ZINOV'EV.** Polnee ispol'zovat' rezervy proizvodstva fosfornykh udobreniĭ na Urale. (Planovoe khozi͡aĭstvo, June 1957, no. 6, p. 95–96.) Text in Russian. ***Title tr.:*** Full utilization of Ural resources for production of phosphoric fertilizers.

Production of superphosphate in Ural plants is based today on sulphuric acid produced by Ural copper plants, and on Khibiny apatite concentrate from the Kola Peninsula 3,100 km. away. The possibility is raised of using local apatite ores. ***Copy seen:*** DLC.

55707. VAKAR, V. A. K voprosu o geologicheskom stroenii severo-vostochnogo Prikolym'i͡a. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958. vyp. 8, p. 12–17.) 3 refs. Text in Russian. ***Title tr.:*** On the question of the geologic structure of the northeastern part of Kolyma River region.

Summarizes the geologic, stratigraphic and petrographic observations made in this region with A. P. Ivanov and M. L. Moldavskiĭ (No. 18498, 32675), with suggestion they be taken into account in preparing for publication the geologic map, at scale 1:1,000,000. ***Copy seen:*** DGS.

55708. VAKAR, V. A., *and others.* K voprosu o regional'nykh razlomakh severa Sredneĭ Sibiri. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t, 67, Sbornik stateĭ po geologii Arktiki, vyp. 7, p. 87–93, fold. maps.) Text in Russian. *Other authors:* P. S. Voronov, *and* R. M. Demenit͡skai͡a. ***Title tr.:*** The regional fractures in north-central Siberia.

Outlines the main fractures in the region between Yenisey and Lena Rivers, north of the Arctic Circle. Three meridional fracture zones, western, central and eastern, are almost perpendicularly crossed by three other such zones. The geologic history of these six zones is interpreted. Related volcanic activity and the formation of various rocks are outlined. Prospects of sulphidic and magnetic ore occurrence and rare minerals are mentioned. ***Copy seen:*** DGS.

55709. VAKAR, V. A. K voprosu o veroi͡atnoĭ almazonosnosti Taĭmyra. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bi͡ulleten', 1958. vyp. 8, p. 49–53.) 20 refs. Text in Russian. ***Title tr.:*** The probable diamond - bearing capacities of the Taymyr.

Reviews recent diamond-prospecting reports, and distinguishes three localities with good prospects: the Verkhnyaya Taymyra River region near Byrranga Ridge; the left bank of the lower Pyasina; and the Nizhnyaya Taymyra between Engel'gardt Lake and Taymyrskaya Gulf. Each locality is characterized in turn. ***Copy seen:*** DGS.

55710. VAKAR, V. A. Kratkai͡a istori͡a razvitii͡a tektonicheskikh dvizheniĭ severa Sredneĭ Sibiri. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 274–93.) Text in Russian. ***Title tr.:*** Short history of the development of tectonic movements in north-central Siberia.

Gives results of field investigation by the au hor, P. S. Voronov, and B. Kh. Egiazarov in 1953–1955 on the tectonic developments in the area of the Taymyr geosyncline, and the adjacent Siberian and Kara platforms. Development of the Taymyr geosyncline since the end of the Archeozoic era and its continuance during the Paleozoic is discussed, and its influence on the geologic formation of the region is outlined on the basis of recent field work. Development of the Proterozoic, Caledonian, Hercynian and Alpine tectonic cycles in Taymyr and adjacent regions is discussed. ***Copy seen:*** DLC.

55711. VAKAR, V. A. O printsipakh vydeleniia vozrastnykh strukturnykh edinits i magmaticheskikh obrazovanii na obzornykh tektonicheskikh kartakh. (Leningrad. Nauchno-issledovatel'skii institut geologii Arktiki. Informatsionnyi biulleten', 1958. vyp. 10, p. 47–52.) Text in Russian. ***Title tr.:*** Principles for distinguishing structural age units and magmatic formations in tectonic survey maps.

The All-Union Geological Institute is preparing a tectonic map at scale 1:2,500,000 for the entire U.S.S.R. Basic principles for this work and essentials for the map are discussed. Concepts and methods under consideration among members of the commission working out the final plan are reported. Special attention is given to the problems of defining tectonic structural units and units of magmatic formations and to their representation on such a map.

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55712. VAKAR, V. A. O tektonicheskoi karte Taimyrsko Severozemel'skoi skladchatoi oblasti. (Leningrad. Nauchno-issledovatel'skii institut geologii Arktiki. Informatsionnyi biulleten', 1958. vyp. 9, p. 12–18.) 15 refs. Text in Russian. ***Title tr.:*** On the tectonic map of the Taymyr-Severnaya Zemlya folded zone.

The tectonic map of the U.S.S.R. at scale 1:2,500,000 is to be completed for the 1960 International Geological Congress in Copenhagen. The Institute of the Geology of the Arctic is responsible for preparation of the arctic regions part of this map. Regional models are already made, among them, the Taymyr-Severnaya Zemlya. In reviewing this model, the author, discusses the tectonics of this province and considers how far the map, when drafted, will fulfill its purpose.

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VAKAR, V. A., *see also:*

Atlasov, I. P., *and* V. A. Vakar. Sviaz' plikativnykh strukturnykh form Sibirskoi platformy . . . *1958.* No. 49424.

Markov, F. G., *and others.* Geologicheskoe stroenie Taimyrskogo p-va. *1957.* No. 53144.

Ravich, M. G., *and others.* O stat'e . . . *1958.* No. 54241.

Tkachenko, B. V., *and others.* Geologicheskoe stroenie . . . *1957.* No. 55460.

55713. VAKULOVSKAIA, LIDIIA. Bol'shaia zolotaia medal'. (Na severe dal'nem, 1955, vyp. 2, p. 131–37.) Text in Russian. ***Title tr.:*** Grand gold medal.

Story of the Chukchi reindeer breeder Turel'kot, award-winner at the All-Union Agricultural Exhibition at Moscow in 1954 for work as team head in a collective farm in Chukotka. His achievements are noted also in another article (by O. A. Terent'eva) in the same issue.

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55714. VALENTIN, HARMUT. Die Küste der Erde. Gotha, 1952. 118 p., tables, diagrs., 2 col. fold. maps. (Petermanns geographische Mitteilungen. Ergänzungsheft, no. 246.) 613 refs. Text in German. ***Title tr.:*** The coasts of the earth.

Presents geomorphology of the coasts with special attention to two problems: how far it is possible to include all forms of coasts under one system in order to draft a new coastal morphology; and how far a regional review of the sea coasts may contribute to an explanation of the present state of the coast of the earth. In the first part, the origin and development, form and present state of the coast are reviewed with respect to epeirogenetic, orogenetic, and eustatic movements. In the second part, the general, local and regional states of littoral forms are considered. In conclusion, a scientific approach to possible future changes in coasts and a coastal morphology are discussed. A fold. col. map (scale 1:50,000,000) on the present state of coast classification focuses on coastal forms indicating advance by emergence, contraction or coastal retreat, by submergence or destruction from glaciation or erosion, and by cliff building. This map includes all arctic regions. Another map (same scale) reviews formation of the earth's coasts, including arctic coasts of Canada and Europe. ***Copy seen:*** DGS.

55715. VALETTE, GUILLAUME. La vie et le froid. (Produits pharmaceutiques, Jan. 1957. v. 12, no. 1, p. 23–28, tables.) Refs. in text. Text in French. ***Title tr.:*** Life and cold.

Contains information on absolute, subjective and biological concepts of cold or warm; cellular survival at very low temperatures and survival of embryos and tissues; survival of animals and plants at low temperatures; homeotherms and thermal regulation; physiological

effects of cold environments upon homeotherms; cold injuries; hypothermia, its production, especially through drugs.
Copy seen: DNLM.

VALLIÈRE, M., *see* Abbou, R., *and* M. Vallière. Étude . . . insuline . . . hypothermie . . . *1956.* No. 49098.

55716. VALMARI, ARVI. Kärrfräken, ett för djuren giftigt vallogräs. (Beten, vallar, mossa , Aug. 1955. årg. 7, nr. 7, p. 96–98, illus.) Text in Swedish. ***Title tr.:*** Marsh horsetail, a meadow weed poisonous to cattle.

One of the five *Equisetum* species common in Sweden, *E. palustre,* a bog plant, is described as poisonous to cattle and responsible for decrease in milk production. It is common throughout northern Scandinavia and thrives especially on lime-rich, shallow bogland, but declines in proportion as meadow yields increase. New uses for the land are suggested. ***Copy seen:*** DLC.

55717. VALONEN, NIILO. Ptarmigan trapping in the village of Nuorgam in Utsjoki. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 164–74, illus., sketch maps.) 9 refs.

Deals with the 1954–55 ptarmigan trapping from this Lappish permanent settlement on the south bank of the Teno River. Trapping is carried on from special huts (kota) built 5 km. apart on state land, during the autumn (August–Christmas) and winter (Christmas–Mar. 31) trapping season. The building and furnishing of the kota, trappers' supplies, clothing and equipment, setting of snares (100–200 daily), trapping rights and partnership, etc. are discussed; map shows emplacement of these forest kotas. Similar methods are used by the Finnish Lapps of Inari, in Finnmark and in Swedish Lapland. ***Copy seen:*** DSI.

55718. VALOV, V. S. Skhematicheskaîa karta khozîaĭstvennykh tipov sel'skogo rasseleniîa. (Geografiîa v shkole, July–Aug. 1958. god 21, no. 4, p. 6–15, maps.) 9 refs. Text in Russian. ***Title tr.:*** Schematic map of the economic types of rural settlement of population.

Fifteen main patterns of population distribution in rural areas are distinguished and their occurrence is shown (map); their relation to occupation is discussed. Settlement patterns of fishers, hunters and reindeer breeders in the arctic and sub-arctic areas are outlined (p. 7–11). ***Copy seen:*** DLC.

55719. VAN ALLEN, WILLIAM HOWARD. The story of Canada's airports. (Canadian geographical journal, Nov. 1957. v. 55, no. 5, p. 190–203, 30 illus., text map.)

Northern airports at Churchill, Yellowknife, Norman Wells, Southampton Island, Frobisher Bay, Chimo, Baker Lake, Eureka Sound, and Cornwallis Island are noted; also landing strips at the U.S.-Canadian arctic weather stations and at DEW and Mid-Canada Defence Line stations. Aklavik and Fort Smith, Mackenzie District, have new and improved (respectively) airports. Frobisher on Baffin Island Canada's northernmost civil airport, is to be refuelling and jumping-off place for interhemisphere travel by the polar route.
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55720. VAN ALLEN, WILLIAM HOWARD. Transportation north of sixty. (Canadian geographical journal, Sept. 1958. v. 57, no. 3, p. 112–16, illus.)

Surveys present conditions, and plans for future expansion of air, water, rail and highway transport in northern Canada. There are nearly 120 ports, airports, and landing strips in the area (one, Frobisher, on a trans-polar route). The Dept. of Transport is constructing ice-breakers for arctic use, and considering the application of nuclear power to future ice-breakers. A District Marine Agency was established in 1956, with headquarters at Fort Smith, Mackenzie District, to provide for the increasing transport. Traffic on the 600 mi. Athabasca-Great Slave-Mackenzie waterway rose approx. 300%, 1945–1955. A proposed rail line to Great Slave Lake is noted. Work has started on road and bridge construction: roads in Yukon Territory connecting the Eagle Plain oil area and the Clinton Creek base metals and asbestos deposits with the existing highway system; bridges across the Pelly, Yukon and Stewart Rivers in Yukon Territory; a 550 mi. Great Slave-Great Bear road in Mackenzie District; etc. Map shows existing roads and projected construction.
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55721. Van Den STEENHOVEN, GEERT. Caribou Eskimo legal concepts. (International Congress of Americanists, 32nd. Copenhagen, 1956. Proceedings, 1958, p. 531–38.) Refs.

No Western concept of law or law enforcement (punishment) has been found

by author among the Caribou Eskimos, though definite opinions on right and wrong are prevalent. Custom and common sense regulate interrelationship. Contempt or disapproval and in extreme cases abandonment (moving camp without warning) but never active expulsion seem the only disciplinary measures. Findings based on author's 1955 field-research at Eskimo Point and Ennadai Lake (No. 48679). ***Copy seen:*** DSI.

55722. VANDER, HARRY JOSEPH. Ethnology of the Pacific Basin. Minneapolis, Burgess Pub. Co., 1956. 63 l. fold. map. Refs.

A text book attempting to clarify racial geographic distribution in the Pacific Ocean area, including (p. 55–58) the Aleutian Island group. Geography, geology, climate, agricultural potentials, fishing and fur-farming (blue fox), discovery and history are sketched, the principal settlements cited and the racial characteristics, language, customs and religious affiliation dealt with. Vital statistics are mentioned: 25,000 Aleuts before the advent of the Russians; present total population 816.

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55723. VAN DUZEE, EDWARD PAYSON, 1861–1940. Annotated list of the Pentatomidae recorded from America north of Mexico, with descriptions of some new species. (American Entomological Society. Transactions, 1904. v. 30, no. 1, p. 1–80.)

Of some 260 species treated in the stinkbug family (13 new), three are described from Alaska: *Geotomus punctatissimus*, *Trichopepla atricornis*, and *Pentatoma* (*Chlorochroa*) *ligata*.

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55724. VAN DUZEE, MILLARD CARR, 1860–1934. Preoccupied names of dolichopodid flies and the new names proposed for the species; Diptera. (Entomological news, June 1933. v. 44, no. 6, p. 151–52.)

Includes: Medetera arctica, new name for *M. bicolor* described by the writer, from Alaska (No. 43108). "A *Medetera bicolor* was described from Central Europe in 1838." ***Copy seen:*** DSI.

55725. Van ECKHARDT, H. P. Crevasse detector blazes glacial trails. (Electronics, Jan. 1958. v. 31, no. 3, p. 63–65, illus., diagr.)

Describes a tractor-mounted detector-system used with success in Greenland and the Antarctic. A double-system of electrodes, each consisting of four large dishpan-shaped sled electrodes, is pushed in front of the vehicle in a fan-wise arrangement on wooden booms. In contact with an ice-snow surface, the electrodes set up an electrical field in the ice pack and pick up constant readings when the ice is solid. As the tractor approaches a crevasse, bridged with snow, the flow of electrical current is disrupted and an alarm warns the operator. The detection effect is obtained by using the crevasse walls to simulate a capacitor. Small, hand-towed units have also been tested with fair success. ***Copy seen:*** DLC.

55726. VANGENGEĬM, É. A. O faune mlekopitaûshchikh iz chetvertichnykh otlozheniĭ raĭona nizhnego techeniûa Aldana. (Akademiûa nauk SSSR. Izvestiûa, ser. geog., May–June 1957, no. 3, p. 72–74.) Text in Russian. ***Title tr.:*** The fossil mammalian fauna in Quaternary deposits in the lower Aldan River region.

Three sites of paleontological finds are described: the Chuyskoye 30 km. from the Aldan River mouth, with fossils of rodents and birds of the northern tundras; the Tandinskoye site, immediately below the confluence of the Tanda, with fossils of ancient horses (*Equus* cf. *sanmeniensis*), ancient beaver (*Trogontherium* cf. *cuvieri*), elk (*Alces latifrons*), elephants (*Elephas* cf. *namadicus* and *E.* cf. *meridionalis*) and many bones of animals of the mammoth epoch. The third site, called Mamontovaya Mountain, 360 km. from the mouth of the Aldan, had a great quantity of mammoth and other large-animal bones. The two paleontological types of fauna of the region, Pleistocene and Upper Paleolithic, are distinguished.

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55727. VANÎAEV, N. A. Novyĭ ėtap v razvitii rybnoĭ promyshlennosti Kamchatki. (Rybnoe khozîaĭstvo, Mar. 1958. god 34, no. 3, p. 67–70.) Text in Russian. ***Title tr.:*** A new stage in the development of the fishing industry of Kamchatka.

Data are given on catches, their value in 1957, and on processing. Achievements and shortages as measured by the Five Year Plan are stated. Boats and their maintenance, herring fisheries, whaling, harbor development, research, etc. are reviewed. ***Copy seen:*** DLC.

55728. VANICK, J. S. Nickel-Aluminum-Bronze für Schiffsschrauben in arktischen Gewässern. (Schiff und Hafen, Oct. 1956. Jahrg. 8, Heft 10, p. 843–44, illus., tables.) Text in German. ***Title tr.:*** Nickel-aluminum-bronze for ships' propellers in arctic waters.

No propeller damage was reported on ships fitted with the Ni-Al-bronze propeller in the 1955 DEW Line resupply operations. Data are tabulated on mechanical properties to −129° C.; the alloy has no critical or inversion point at low temperatures. ***Copy seen:*** DLC.

VAN MIDDLESWORTH, L., *see* Intoccia, A., *and* L. Van Middlesworth.

Bile flow . . . cold adaptation. *1958.* No. 51951.

55729. VAN NIE, ROBERTHA, *and* **O. MÜHLBOCK.** The viability of some transplantable tumors stored in a frozen tumor bank. (Transplantation bulletin, Apr. 1958. v. 6, no. 2, p. 64–65, table.) Ref.

Contains data and notes on 16 kinds of mouse tumors isotransplanted after storage of 3–10 or 80–100 days at −79° C. Results indicate that not all tumors are viable after this storage; especially ovarian, adrenal and liver tumors failed to take. ***Copy seen:*** DNLM.

55730. VANSTONE, JAMES WILLARD, 1925– . An archaeological reconnaissance of Nunivak Island, Alaska. (Alaska. University. Anthropological papers, May 1957. v. 5, no. 2, p. 97–117, illus., map.) 36 refs.

Describes and compares the stone, bone and pottery artifacts excavated in five sites on the northern and two on the southern coast of Nunivak in 1952. The fragmentary state of pottery and implements yielded by the test pits prevents an exhaustive comparative study though certain affinities are noted between the recent-prehistoric culture of the Nunivak Eskimos and the archeological material from Hooper Bay village (No. 24907) and late developments in northern Alaska. The discovery and exploration of the island are outlined, and statistical data on its past and present population given. ***Copy seen:*** DLC.

55731. VANSTONE, JAMES WILLARD, 1925– . *Editor.* The autobiography of an Alaskan Eskimo. (Arctic, 1957. v. 10, no. 4, p. 195–210, illus.)

Recollections of Attungoruk, a Point Hope Eskimo born in 1928, of his childhood and school days, early trapping and hunting adventures, adolescent courtships, various short-term jobs at Candle, Kotzebue, Alaska Railroad, Eielson Air Force Base, etc.; his return to Point Hope, marriage and birth of children. It is a life pattern of a typical North Alaska Eskimo who seeks summer employment outside his village to supplement income derived from winter hunting. Attungoruk's narrative is prefaced and annotated by VanStone who conducted areal community studies from Sept. 1955 to Aug. 1956. ***Copy seen:*** DLC.

55732. VANSTONE, JAMES WILLARD, 1925– . Commercial whaling in the Arctic Ocean. (Pacific Northwest quarterly, Jan. 1958. v. 49, no. 1, p. 1–10, illus., map.) 42 refs.

Deals with the American whaling industry in the Bering-Beaufort Seas area, 1848–1914, and its decline. Whale oil and baleen production, hazards of ice and storms, introduction of steam vessels (1880) enabling whalers to winter in the Arctic, methods of catching, etc. are discussed. Financial aspects: costs of outfitting, sharing of proceeds, prices, are considered. Northwest Alaskan Eskimos still carry on some whaling, their equipment similar to the commercial whaler's, but their catch is used chiefly for food. Factors in the decline of the industry were shipping hazards and loss of the baleen market to steel and other substitutes. ***Copy seen:*** DGS.

55733. VANSTONE, JAMES WILLARD, 1925– . An Eskimo community and the outside world. (Alaska. University. Anthropological papers, Dec. 1958. v. 7, no. 1, p. 27–38.) 9 refs.

Study, in a time perspective 1900–56, of the interrelation between the northwest Alaskan Eskimo village of Point Hope (pop. approx. 250) and the outside world through missionary work, schooling and trade. The changing pattern of contacts responsible for the disappearance or decline of aboriginal customs and the introduction or development of a new social order and way of life are discussed: decline of the large family unit, men's house, reindeer herding, commercial whaling, etc., and introduction of a formal community organization, school, health and welfare services, technological devices, modern transportation and communications, curio industry, etc. A gradual acculturation process is preferable to an abrupt change following a sudden

impact of modern civilization. Author's 1955–56 field studies at Point Hope were supported by the Arctic Aeromedical Laboratory, Ladd Air Force Base, Alaska.
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VAN SUMMERN, JANE, *see* American Geographical Society. Geographic study of mountain glaciation. *1958*. No. 49276.

VAN WEELDEN, JAMES W., *see* Clark, G. M., *and others*. An epizootic among eider ducks . . . *1958*. No. 50278.

VARANKIN, V. V., *see* Akademiia nauk SSSR. Institut ėkonomiki. Problemy . . . IAkutskoĭ ASSR. *1958*. No. 49171.

55734. VARFOLOMEEVA, Ė. N. Drevnee oledenenie khrebta Tardoki-IAni; Severnyĭ Sikhotė-Alin'. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Nov.–Dec. 1957. t. 89, no. 6, p. 542–48, illus., diagr., map.) 13 refs. Text in Russian. ***Title tr.:*** Ancient glaciation of the Tardoki-Yani Range, Northern Sikhote-Alin'.

Includes data on present-day glaciation in northeast Asia: 492 glaciers covering 415 sq. km. in the Verkhoyansk area and Cherskogo Range, 461 (185 sq. km.) in the Koryakskiy Plateau, 50 sq. km. of Kamchatka under glaciers; altogether approx. 700 sq. km. of glaciers.
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VARGA-NAGY, I., *see* Donhoffer, S., *and others*. Über die Lokalisation der erhöhten Wärmeproduktion . . . *1957*. No. 50601.

VARGA-NAGY, I., *see* Donhoffer, S., *and others*. Über die Periodizität der chemischen Wärmeregulation . . . *1957*. No. 50602.

55735. VARKOVITSKAIA, LIUDMILA ALEKSANDROVNA. O slovarnom sostave uchebnykh knig po russkomu iazyku. (Russkiĭ iazyk v natsional'noĭ shkole, Sept.–Oct. 1958. god 2, no. 5, p. 29–36.) Text in Russian. ***Title tr.:*** The lexical composition of Russian textbooks.

Criticizes the excessive vocabulary and the inadequate repetition of basic words in Russian textbooks for non-Russian elementary schools, including (p. 30–31): Eveny, Chukchi, Eskimo, and Koryak. The lexical and structural composition of a model primer for the first grade of a Nenets (Samoyed) school is discussed at length (p. 33–37). ***Copy seen:*** DLC.

55736. VARTDAL, KNUT. Vår havfiskeflåte og 12 mils fiskerigrense. (Polarboken 1958, p. 89–94) Text in Norwegian. ***Title tr.:*** Our deep-sea fishing fleet and the 12-mile fishing limit.

General extension of the fishing limit to 12 miles would have a disastrous effect on Norwegian deep-sea fishing: profits would decrease and a large part of the fleet would be idled. Nor would coast fisheries benefit, as claimed: they would face stiffer competition.
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55737. VASIL'EV, B. A. Medvezhiĭ prazdnik. (Sovetskaia ėtnografiia, 1948, no. 4, p. 78–104, illus.) Approx. 80 refs. Text in Russian. ***Title tr.:*** The bear festival.

An analysis of bear rites and bear worship based primarily on author's research among the Orochi (Tungus) in 1927. The rituals connected with: hunting, killing, and skinning of the bear, severing of sex organs, etc., carving and cooking of the carcass, burial of skull and bones to assure the animal's resurrection, raising of bear cubs in captivity and their sacrificial slaughter, etc. are discussed. A chronological cultural development of the bear cult is suggested: the first and older stage (hunting) encompasses the entire north of Eurasia and America, the second and younger (caged bear) is found only among the Pacific coast tribes including the Amur region, coastal Chukchis, Koryaks and Kamchadals. This latter stage is related to cults of southern Asia and spread north with the advance of the Ainus. ***Copy seen:*** DLC.

VASIL'EV, E. K., *see* Korzhinskiĭ, A. F., *and* E. K. Vasil'ev. Nakhodka paralûminita . . . *1958*. No. 52419.

VASIL'EV, GEORGIĬ MITROFANOVICH, *see* Akademiia nauk SSSR. IAkutskiĭ filial. Ocherk . . . iakutskoĭ . . . literatury. *1955*. No. 49169.

VASIL'EV, GEORGIĬ MITROFANOVICH, *see* Akademiia nauk SSSR. IAkutskiĭ filial Revoliûtsionnye sobytiia 1905–1907 . . . *1956*. No. 49167.

55738. VASIL'EV, M. V. Razrabotka miagkikh porod ėkskavatorami v zimnikh usloviiakh. (Biulleten' stroitel'noĭ tekhniki, Nov. 1957. god 14, no. 11, p. 9–13, illus., tables.) Text in Russian. ***Title tr.:*** Excavating soft ground under winter conditions.

Describes method for softening frozen

ground by covering it with insulating materials (slag, sawdust, peat) before onset of the first frost. Time and cost requirements for various conditions are given. The method proved workable at temperatures down to −52° C. in the far North. ***Copy seen:*** DLC.

55739. VASIL'EV, N. Chukotskie kostorezy. (Smena, Aug. 1957. god 34, no. 16, p. 24, illus.) Text in Russian. ***Title tr.:*** Bone carvers in Chukotka.

Note on the regional art exhibition at Magadan and the bone carvings shown; with illus. of two by the Chukchi artist, Tukaĭ. ***Copy seen:*** DLC.

55740. VASIL'EV, S. F. Poluchenie gaza, motornogo topliva i khimicheskikh produktov iz torfa. (Torfîanaîa promyshlennost', 1958. god 35, no. 5, p. 9–14, illus., tables.) 8 refs. Text in Russian. ***Title tr.:*** Production of gas, motor fuel and chemicals from peat.

Processes are described and diagrammed for thermal disintegration of peat to obtain motor fuel, gas of high heat value, ammonium, acetic acid, phenoles, coke, etc. The products' chemical and fractional composition and physical characteristics are tabulated.

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VASIL'EV, S. V., *see* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Za sovetskuîu vlast' . . . *1957*. No. 49170.

55741. VASIL'EV, VIKTOR NIKOLAEVICH, 1890– . Diz'îunktivnye i sploshnye arealy. (Botanicheskiĭ zhurnal, May 1957. t. 42, no. 5, p. 709–727, 4 text maps.) 20 refs. Text in Russian. ***Title tr.:*** Disjoint and continuous distribution.

Contains a study of various types of distributional areas: intraspecific disjoint areas, disjoint areas of related species, continuous areas of related species, and disappearing and disappeared areas. Many examples of such plant distribution in boreal and arctic regions of Eurasia are cited. One of the principal causes of disjunction of areas is the dying-out of plants in the limits of a continuous area under the influence of changing climatic and other environmental conditions. The editorial board of the journal considers this treatment preliminary and inconclusive and invites other plant geographers to join in the discussion of the problem. ***Copy seen:*** DLC.

55741A. VASIL'EV, VIKTOR NIKOLAEVICH, 1890– . Flora i paleogeografiîa Komandorskikh ostrovov. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1957. 260 p. tables. (Akademiîa nauk SSSR. Dal'nevostochnyĭ filial im. V. L. Komarova.) 103 refs. Text in Russian. ***Title tr.:*** Flora and paleogeography of the Commander Islands.

Monographic study based on earlier investigations and collections, including Steller's work in 1741–42, Stejneger's studies of 1882–83 and 1895–97, and A. I. Kardakov and E. A. Kardakova's collections in 1928–31. A systematic list of 345 species is the main part of the book (p. 17–198): 21 Pteridophyta, 2 Gymnospermae (*Pinus pumila* Pall. and *Juniperus sibirica* Burgsd.), 86 Angiospermae monocotyledones and 236 Angiospermae dicotyledones, with Latin and Russian names, description, information on locality, collector, date, etc., and on where the specimen is preserved; data on distribution, type of area of occurrence, and on economic significance. An introductory account of the Commander Islands is given (p. 8–14), their geomorphology, hydrology, the soil types and their vegetation. Comparison of this flora with that of neighboring areas is discussed (p. 202–208); and types of plant associations are analyzed (p. 208–226). The history of the flora and paleogeography of the whole area of the hypothetical ancient continent "Beringia" now covered by the Bering Sea is outlined (p. 237–42). An annotated list of literature, and indexes of the Russian and Latin plant names are added.

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55742. VASIL'EV, VIKTOR NIKOLAEVICH, 1890– . Iskopaemyĭ vodîanoĭ orekh iz îuzhnoĭ ÎAkutii. (Akademiîa nauk SSSR. Botanicheskiĭ institut. Sbornik pam. A. N. Krishtofovicha, 1957. p. 327–30, illus., map.) 2 refs. Text in Russian. ***Title tr.:*** Fossil water chestnut from southern Yakutia.

Description of water chestnuts of a new species, *Trapa jacutensis* V. Vassiliev, sp. nov. found along a shore terrace of the Amga River. The nuts are very well preserved and are related to the end of the Pleistocene or to the Holocene. ***Copy seen:*** DLC.

55743. VASIL'EV, VIKTOR NIKOLAEVICH, 1890– . Klimaticheskie usloviîa Vostochnoĭ Sibiri v pleĭstotsene. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Trudy, 1955. t. 12, p. 22–53, 5 maps.)

43 refs. Text in Russian. ***Title tr.:*** Climatic conditions in Eastern Siberia in the Pleistocene.. Paper delivered at the Conference on the Quaternary period, Moscow Jan. 13–16, 1953, together with author's addition, editorial comments and discussion arising in the conference.

Author challenges the view held by the majority of Russian scientists that the climate in the Pleistocene was rougher than at present. He questions also that the configuration of dry land was the same as at present, and that glaciation in East Siberia was only of mountain glacier character. Re-examination of Pleistocene floral and faunal data is reported from Kamchatka and the basins of Aldan, Indigirka, Kolyma and other rivers. Maps showing dry land and water distribution during different periods are attacked. S. Miki, M. Jakoyama, I. D. Cherskiĭ, I͡U. N. Popov, V. N. Sukachev, N. M. Strakhov and others favor the writer's views but editors' remarks and the discussions indicate that the matter is in dispute.

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55744. VASIL'EVA, Z. V., *and* V. I. KUDRI͡ASHOVA. Apatit iz Sibirskoĭ trappovoĭ format͡sii. (Akademii͡a nauk SSSR. Izvestii͡a, ser. geologicheskai͡a, July 1958. god 23, no. 7, p. 92–97, illus., table.) 5 refs. Text in Russian. ***Title tr.:*** Apatite from the Siberian trap formation.

Describes apatite found east of Tura (approx. 64°10′ N. 100°05′ E.) in the Nizhnyaya Tunguska basin. It appears there in a 50–100 m. thick lavatic and tufaceous stratum. Description is given of the apatite crystals; color, measurements, optical properties are outlined. Results of chemical analyses are presented, physical and other properties dealt with. Various types of apatites are indicated; rare elements lanthalum, yttrium, cerium appear.

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55745. VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– . Drevnie okhotnich'i i olenevodcheskie obri͡ady ėvenkov. (Akademii͡a nauk SSSR. Muzeĭ antropologii i ėtnografii. Sbornik, 1957. t. 17, p. 151–85, illus.) 24 refs. Text in Russian. ***Title tr.:*** Ancient hunting and reindeer-herding rites of the Evenki.

Describes the various ancient religious festivals and taboos, hunting and reindeer-herding rituals, shamanistic practices, etc. still found occasionally among isolated Evenki (Tungus) groups of the remote taiga regions. The origin of these rites is discussed and an attempt is made to mark the Sayan-Altay foothills as ancestral homeland of the Evenki who, later, migrated north along the Angara, Lena and Yenisey River systems.

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55746. VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– . K probleme ėtnogeza tunguso-man'chzhurov; po materialam izucheni͡a kolybeleĭ. (Akademii͡a nauk SSSR. Institut ėtnografii. Kratkie soobshcheni͡a, 1958. vyp. 28, p. 57–61, illus.) Text in Russian. ***Title tr.:*** The problem of the ethnogenesis of the Tungus-Manchus; based on materials of cradle study.

Describes the workmanship and territorial expansion of the Tungus cradle, one of the few material culture elements common to the linguistically related but ethnographically and anthropologically different Tungus-Manchu tribes. Originally made of birch bark, the Tungus cradle has spread north of the Nizhnyaya Tunguska to the Yukaghirs and some northern Yakut groups. Its Yenisey (Evenki) variant equipped with a shoulder strap seems to have originated among foot-hunters during the Serovo stage of the Lake Baykal neolithic.

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55747. VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– . K voprosu o paleoaziatakh Sibiri. (Akademii͡a nauk SSSR. Institut ėtnografii. Kratkie soobshcheni͡a, 1949. vyp. 8, p. 48–52, map.) Text in Russian. ***Title tr.:*** The problem of Paleo-Asiatics of Siberia.

Discusses the geographic distribution of the pre-Tungus population of Siberia who, according to the author, inhabited northern Siberia between the Yenisey and Yana Rivers, and the Amur region. The research, based on linguistic (mainly toponymic), folkloristic and ethnographic studies, discloses four Paleo-Asiatic culture centers: the Yenisey group, linguistically closest to the present-day Chukchis and Koryaks, the upper Lena group of the Vilyuy-Aldan basins linguistically related to the Yukaghirs, the lower Lena group whose language influenced that of the Eveny (Lamuts) and the Primorskiy group of the Amur region. Archeological finds seem to corroborate this theory.

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55748. VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– . Nanaĭtsy, khudozhniki. (Sovetskaĭa ėtnografiia, 1949, no. 4, p. 160–72, illus.) Text in Russian. ***Title tr.:*** Nanai painters.

Outlines the pre- and post-Revolutionary economy and culture of the Golds (5860 in 1926) now living in the kolkhozes of the lower Amur region. Work of two young Gold artists, Andreĭ and Viktor Bel'dy, is discussed and (11) reproduced, mostly hunting scenes and illus. to the fairy-tale "Mergen" (cited in full). Autobiographical notes are included. Both artists, apparently not brothers, are in their thirties and studied at Leningrad art schools. ***Copy seen:*** DLC.

55749. VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– . Toponimika Vostochnoĭ Sibiri. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, July–Aug. 1958. t. 90, vyp. 4, p. 324–35.) 8 refs. Text in Russian. ***Title tr.:*** Toponymics of eastern Siberia.

Discusses the Tungus, pre-Tungus and Chukchi-Koryak origin of river names in the taiga and forest-tundra zone between the Yenisey River and the Sea of Okhotsk. The geographic pattern of the toponymics suggests an ancient occupation by an aboriginal, pre-Tungus, Ural-Altaic population and points to the Tungus migration routes spreading north and northeastward from the Angara-Yenisey region, mainly along minor waterways. The prevalence of Tungus names in the basins of the Yenisey, Nizhnyaya and Podkamennaya Tunguska, and upper Angara Rivers indicates their early occupance by Tungus groups, while the scarcity of Tungus toponymics along the right tributaries of the Lena and Amur Rivers suggests a late penetration into the area east of the Vitim. The presence of Chukchi-Koryak river names in the Podkamennaya and Nizhnyaya Tunguska basins is noted and a prehistoric admixture of local Paleo-Asiatic (Tungus-related) elements inferred in the ethnic composition of present-day reindeer-herding Chukchis and Koryaks. ***Copy seen:*** DLC.

VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– , *see also* Angere, J. Die uralojukagirische Frage . . . *1956*. No. 49327.

VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– , *see also* Levin, M. G. Polevye issledovaniia . . . 1947 g. *1948*. No. 52791.

55750. VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– . Tungusskiĭ kaftan; k istorii ego razvitiia i rasprostraneniia. (Akademiia nauk SSSR. Muzeĭ antropologii i ėtnografii. Sbornik, 1958. t. 18, p. 122–78, illus., map.) Approx. 35 refs. Text in Russian.

Title tr.: The Tungus caftan, its historical development and areal distribution.

Describes the evolution of this garment from a close-fitting, tailed coat with breast-piece, used by ancient foot-hunters, to a loose, open, coat adapted to riding reindeer-back. Originally worn by the Evenki, Eveny and Negidal'tsy of the tundra and taiga zone between the Ob-Yenisey watershed and the Sea of Okhotsk, the Tungus caftan followed the spread of reindeer economy north and northeastward to Chukotka. The study is based on some hundred caftan variants in the Museum of Anthropology and Ethnography. The pelts, patterns and cut, ornamentation, etc. of both tailed and tail-less man's and woman's coats are discussed and illus. Parallels are drawn between this caftan and the similarly tailed garment of the Athapaskans (Copper River) and Eskimos. The traditional ornamental details of the Eskimo parka indicate its evolution from the open, tailed Tungus coat with breast-piece and confirm the Asiatic origin of the Eskimos. ***Copy seen:*** DLC.

55751. VASILEVSKAIA, N. D. Nekotorye novye predstaviteli khvoĭnykh iz nizhnemelovykh otlozheniĭ severnoĭ chasti Lenskogo ugol'nogo basseĭna. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, vyp. 6, 1957. p. 84–93, illus., plate, table.) 14 refs. Text in Russian. ***Title tr.:*** Some new representatives of conifers from the Lower Cretaceous deposits of the northern part of the Lena coal-bearing basin.

Four of the 23 species of conifers found in Lower Cretaceous deposits in the Bulun region are described as new: *Podozamites gracilis, P. ovalifolius, Pityostrobus gusevi* and *Schizolepis angustipeduncularis.* Diagnosis, description, comparison, location, and photo. are given for each in turn. The stratigraphic importance of conifers is stressed. ***Copy seen:*** DGS.

55752. VASILEVSKAIA, N. D. O vozraste iskopaemoĭ flory o. Novaia Sibir'. (Botanicheskiĭ zhurnal, Feb. 1958. t. 43, no. 2, p. 266–69, 3 tables.) 4 refs.

Text in Russian. ***Title tr.:*** On the age of the fossil flora of Novaya Sibir' Island.

Fossil flora discovered in 1886 by E. V. Toll in the Derevyannyye Gory (Wooden Mts.) on Novaya Sibir' (75° N. 149° E.) was identified by Schmalhausen in 1890 (*Aspidium meyeri, Sequoia langsdorfii, Taxodium distichum miocenum,* and 11 others) and corrected by T. N. Baĭkovskaĭa. The flora is probably Tertiary. New specimens collected from the same region in 1955 by O. A. Ivanov have been studied by the writer and the results listed: *Cladophlebis* sp. 1, *Cl.* sp. 2, *Nilssonia*(?) sp., *Ginkgo adiantoides,* etc., in all 22 fossil remains, the age of which is upper Cretaceous.

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55753. VASILEVSKIĬ, M. M. Zonal'nost' i rudnaĭa mineralizat͡siĭa sol'fatarnoizmenennykh porod Bystrinskogo raĭona Kamchatki. (Vsesoi͡uznoe mineralogicheskoe obshchestvo. Zapiski, 1958. ser. 2, chast' 87, vyp. 3, p. 277–89, profiles, diagr.) 12 refs. Text in Russian. ***Title tr.:*** Zoning and ore mineralization of solfataric modified rocks of the Bystraya River region in Kamchatka.

Presents results of an investigation of epithermal ore formation in the narrow 200 km. strip between the Polovinka and Sukharika Rivers, as part of a broad study of epithermal ores in Kamchatka under direction of G. M. Vlasov. Some 60 easily accessible rocks were investigated, of which six were found basically changed by solfataric processes. Geological conditions for such modification of rocks are outlined. The types of processes (chloritization, aluminitization, kaolinization) are characterized. Vertical and horizontal zoning of the ore formation is described. The genesis of the hydrothermal modification of rocks is discussed, with conclusion that the epithermal ones of the Bystraya region (53°–54° N. 156° E.) are of late Pliocene age.

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VASILEVSKIĬ, M. M., *see also* Vlasov, G. M., *and* M. M. Vasilevskiĭ. Zonal'nost' . . . porod . . . *1958.* No. 55848.

55754. VASIL'KOV, BORIS PAVLOVICH, 1906– . Sistematicheskiĭ obzor osinovika, *Krombholzia aurantiaca* (Roques) Gilb., i ego form, vstrechai͡ushchikhsi͡a v SSSR. (Akademiĭa nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1956. t. 11, p. 134–40, plate.) 9 refs. Text in Russian. ***Title tr.:*** A systematic review of the aspen mushroom, *Krombholzia aurantiaca* (Roques) Gilb. and its forms occurring in the U.S.S.R.

Contains a discussion and synonymy of this species of mushroom, a key to the forms and descriptions of seven. *K. a.* f. *arctica* n. comb. and *K. a.* f. *percandida* n. comb., both occurring in Khibiny, Kola Peninsula, are included.

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55755. VASIN, B. N. Morskoĭ kotik i kalan v vodakh Okhotskogo mori͡a i Tikhogo okeana: tezisy doklada. (Akademiĭa nauk SSSR. Okeanograficheskai͡a komissiĭa. Trudy, 1958. t. 3, p. 128–29.) Text in Russian. ***Title tr.:*** The fur seal and sea otter in the waters of the Okhotsk Sea and the Pacific; conclusions of a paper.

Includes data on the decimation of the two species and the causes of it; information on the biology, propagation, migrations, economic value. Russian share in the study and conservation of these animals are noted. ***Copy seen:*** DLC.

55756. VASIN, B. N. Novye materialy po kotiku i kalanu. (Moskovskoe obshchestvo ispytateleĭ prirody. Bi͡ulleten', Nov.–Dec. 1956. nov. ser. Otd. biol., t. 61, no. 6, p. 122.) Text in Russian. ***Title tr.:*** New materials on the fur seal and sea otter.

Summary of report presenting historical notes and statistical data on fur seal herds and rookeries in the Okhotsk Sea, Kuril and Pribilof Islands. Sea otters, formerly abundant in the Commander Islands, Kamchatka and the Aleutians, are now but 4,000–5,000 in number, inhabiting North Pacific coastal waters.

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VASI͡UTIN, V. F., *see* Akademiĭa nauk SSSR. Institut ėkonomiki. Problemy . . . Iakutskoĭ ASSR. *1958.* No. 49171.

55757. VAS'KOVSKIĬ, A. P. Letnie sezonnye i͡avleniĭa na kraĭnem severovostoke. (Priroda, June 1957, no. 6, p. 124–25, table.) Text in Russian. ***Title tr.:*** Seasonal summer phenomena in the far Northeast.

Contains a tabulated summary of plant phenological observations from Magadan on the Okhotsk Sea coast (59°34′ N.) to Nizhne-Kolymsk (68°45′ N.) in Yakutia. The earliest spring and summer phenological phenomena occur not in Magadan (southern end) but in Zyryanka, almost 400 mi. north. So Zyryanka is the central

point of phytophenological inversion of this region. Various dates of phenological importance are discussed and compared with those of Moscow, Leningrad and Yakutsk. ***Copy seen:*** DLC.

55758. VAUGHAN, DAVID A., *and others.* Associated effects of diet, environmental temperature and duration of exposure on the major constituents of the livers of rats. (American journal of physiology, Sept. 1958. v. 194, no. 3, p. 441–45, tables.) 14 refs. *Other authors:* J. P. Hannon and L. N. Vaughan.

Account of the effects of feeding pemmican and a stock diet, and of exposure to cold (5° C.) for one or five months, on rats. Percentages of glycogen, total fat, phospholipid, protein and water in the livers, are studied and discussed. Analysis revealed a certain mutual dependence between diet and cold exposure, and duration modified in some cases the effects of both.

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55759. VAUGHAN, DAVID A., *and* **L. N. VAUGHAN.** The effect of a low environmental temperature on the weight and food consumption of thiamine deficient rats. (Journal of nutrition, Nov. 1957. v. 63, no. 3, p. 417–24, illus., tables.) 6 refs.

Account of experiments with rats kept at 25° and 5° C. receiving adequate and sub-optimal amounts of thiamine in the diet. There were no significant losses or gains in weight between animals kept at both temperatures when the level of dietary thiamine was the same. The animals kept at 5° C. showed an increased uptake of food when compared with the controls. ***Copy seen:*** DLC.

55760. VAUGHAN, DAVID A., *and* **L. N. VAUGHAN.** Effect of cold on thiamine-deficient rats. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 131.)

Rats kept at 5° C. at deficient thiamine levels showed no weight difference from similar animals kept at room temperature. The cold rats used increased food for extra energy requirement, which suggests that thiamine needs in the cold are governed by caloric requirements.

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VAUGHAN, DAVID A., *see also* Hannon, J. P., *and* D. A. Vaughan. Effect . . . prolonged consumption of pemmican . . . rat liver . . . *1958.* No. 51550.

VAUGHAN, LUCILE N., *see* Vaughan, D. A., *and others.* Associated effects of diet, environmental temperature . . . *1958.* No. 55758.

VAUGHAN, LUCILE N., *see* Vaughan, D. A., *and* L. N. Vaughan. Effect . . . cold on thiamine-deficient rats. *1957.* No. 55760.

VAUGHAN, LUCILE N., *see* Vaughan, D. A., *and* L. N. Vaughan. The effect . . . low . . . temperature . . . thiamine-deficient rats. *1957.* No. 55759.

55761. VAURIE, CHARLES. On the validity of *Acanthis flammea islandica* Hantzsch. (Dansk ornithologisk forening. Tidsskrift, Feb. 1957. årg. 51, hefte 1, p. 9–11.) 5 refs. Summary in Danish.

Contains a taxonomic comparative study of this redpoll, based on material from Iceland (*A.f. islandica*) and from Greenland (*A.f. rostrata*). Author's former opinion, that they should be synonymized, has changed, though the two forms are not well differentiated and not constantly separable. The problem requires further study: if the validity of *islandica* is accepted, it can be separated from *rostrata* only on the basis of the differences in coloration.

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55762. VAURIE, CHARLES. Systematic notes on palearctic birds, no. 27, Paridae: the genera *Parus* and *Sylviparus,* with supplementary notes by David Snow; no. 28, the families Remizidae and Aegithalidae; no. 29, the subfamilies Tichodromadinae and Sittinae; no. 30, the Certhiidae. New York, Nov. 29, 1957. 43, 21, 26, 14 p. (American Museum of Natural History. American Museum novitates, no. 1852–1855.)

Includes critical notes (in no. 27) on *Parus montanus kamtschatkensis* from Kamchatka and *P. m. anadyrensis,* Anadyr River basin; no. 28: *Aegithalos caudatus sibiricus* (*kamtschaticus*), type locality Kamchatka; no. 29: *Sitta europaea arctica,* Verkhoyansk in Yakutia and *S. e. albifrons,* Kamchatka; and in no. 30: *Certhia familiaris* occurring in northern Canada and Alaska. Earlier parts of this series were listed, see No. 48701. ***Copy seen:*** DSI.

55763. VAVILOV, P. P. Nauchnaîa deîatel'nost' Komi filiala AN SSSR. (Akademiîa nauk SSSR. Izvestiîa vostochnykh filialov, 1957, no. 8, p. 117–25.) Text in Russian. ***Title tr.:*** Scientific

activities of the Komi Branch of the Academy of Sciences of the U.S.S.R.

The Komi Scientific Research Base of the Academy of Sciences, founded in 1944, was reorganized in 1949 as the Komi Branch of the Academy. Its activities through its eight sections and other scientific institutions are outlined. Geological, pedological, hydrological, biological and economic investigations are noted in the northern Ural and lower Pechora basin, including Vorkuta and Inta coal regions. ***Copy seen:*** DLC.

55764. VAVILOV, P. P. Problemy kompleksnogo ispol'zovaniîa prirodnykh resursov evropeĭskogo Severo-Vostoka. (Akademiîa nauk SSSR. Vestnik, Nov. 1958. god 28, no. 11, p. 126–28.) Text in Russian. ***Title tr.:*** Problems of full utilization of natural resources of the European Northeast.

Account of proceedings of the conference held in Syktyvkar, Komi A.S.S.R., July 3–7, 1958, on resource development in the adjacent regions of the Nentsy National District and the Northern Ural. Papers delivered to the conference and their discussion are noted. The wealth of mineral resources (coal, petroleum and natural gas) in the Pechora River basin and abundance of timber (2.6 billion cu. m.) were stressed; problems in further development of the mining and chemical industries, and improvement of transportation were discussed. ***Copy seen:*** DLC.

VAVILOVA, MARIÎA ALEKSANDROVNA, *see* Krasheninnikov, S. M., *and* M. A. Vavilova. Kartofel' . . . *1958.* No. 52462.

55765. VDOVIN, INNOKENTIĬ STEPANOVICH. Iz istorii obshchestvennogo stroîa chukcheĭ. (Sovetskaîa ėtnografiîa, 1948, no. 3, p. 56–70, illus.) 21 refs. Text in Russian. ***Title tr.:*** History of the social organization of the Chukchis.

Analyzes the family system of the settled and nomad Chukchis. Though traces of an original matriarchate still survive, the basic social organization in historical times has been the patriarchal family group living as one household. The early disappearance of exogamy and the absence of a clan system are noted. Polygamy of the *pater familias*, slavery (prisoners-of-war, mostly Eskimos), wife exchange and group marriage, blood feud, etc., are discussed. The seasonal and temporary (hunting, warfare) or territorial union of blood-related family groups in the 18th century is described, and the transition from the patriarchal family grouping into a territorial neighbor commune explained as a result of Russian colonization; the expansion of reindeer herding, etc., in the 19th century is dealt with. ***Copy seen:*** DLC.

VDOVIN, INNOKENTIĬ STEPANOVICH, *see also* Jakobson, R., *and others.* Paleosiberian . . . bibliographical guide. *1957.* No. 52044.

VDOVIN, INNOKENTIĬ STEPANOVICH, *see also* Levin, M. G. Anthropological types . . . northeastern Paleoasiatics . . . *1958.* No. 52783.

VDOVIN, V. V., *see* Shumilova, E. V. Materialy po mineralogii . . . *1958.* No. 54837.

55766. VE, SØREN. Stig skoggrensa? (Tidsskrift for skogbruk, Sept. 1951. årg. 59, hefte 9, p. 305–317, illus., tables.) Refs. Text in Norwegian. ***Title tr.:*** Is the timber line rising?

Discusses the general rise in temperature in Norway 1890–1940. A Norwegian Agricultural Department survey indicates that the timber line has advanced in most parts of the country. This is attributed not only to climate, but to improved forest care and to reduction in loss of trees through (former) careless cutting, free pasture rights, etc. Birch (Troms and Nordland) and pine (Troms) measurements for the old and new timberline are tabulated. ***Copy seen:*** DA.

55767. VEBAEK, CHRISTEN LEIF. Ten years of topographical and archaeological investigations in the mediaeval Norse settlements in Greenland. (International Congress of Americanists, 32nd. Copenhagen 1956. Proceedings, 1958, p. 732–43, illus., maps.) Ref.

Reviews the post-World War II Danish investigations with special attention to author's 1951 and 1954 field work at Mellembygden (Middle Settlement), the topographical and archeological surveys in Vatnahverfi and excavations of the nunnery in Unartoq Fjord (No. 27072, 48703, 48704). The farmhouses, outbuildings (barns, stables, storehouses), churches, etc. are described and the discovered mass graves ascribed to an epidemic, probably the plague which ravaged Europe in the 14th century. A chance find in 1953 of an as yet

undeciphered runic inscription on a wooden stick near Narssaq led to 1954 excavations, and the unusual find of typical Viking arrowheads made, however, from reindeer antlers. ***Copy seen:*** DSI.

55768. VEBAEK, MALIARAQ. Qivitoq Anda. (Grønland, Aug. 1957. nr. 8, p. 290–94, illus.) Text in Danish. ***Title tr.:*** The qivitoq Anda.

Greenland Eskimo tale about a qivitoq, i.e., a man who left the community and withdrew to the mountains, where he usually acquired supernatural powers.

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55769. VEBAEK, MALIARAQ. Tanker om Grønlands kulturelle skaebne. (Grønland, June 1957. nr. 6, p. 229–35, illus.) Text in Danish. ***Title tr.:*** Thoughts on Greenland's cultural destiny.

Advocates (at a meeting of Det Grønlandske Selskab, i.e. The Greenland Society, in Copenhagen in 1957) that young Greenlanders should be educated and trained in Greenland and not sent to Denmark for further study until adult.

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55770. VEDERMAN, JOSEPH, *and* **R. B. ROSS.** Northern hemisphere normal 1,000-mb. charts. (American Meteorological Society. Bulletin, Jan. 1958. v. 39, no. 1, p. 28–31, 12 graphs.) 6 refs.

Presents charts for each month of the year, showing the normal height of the 1,000-mb. surface in the Northern Hemisphere. A brief introduction explains the method used for graphing the isolines. Where inconsistencies occurred in the graphing, the 1,000-mb. charts were adjusted to fit the more accurate isobar-charts. ***Copy seen:*** DLC.

55771. VEDERNIKOV, V. A. Radiogramma. (Vokrug sveta, Nov. 1957, no. 11, p. 10.) Text in Russian. ***Title tr.:*** Radiogram.

Congratulation from chief and personnel of drifing station North Pole-7, occasioned by celebration of the 40th anniversary of the October Revolution. The station's drift which "unites" the routes of North Pole-2, -3, and -4, and continues in a northerly direction, and current work are noted.

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VEDERNIKOV, V. A., *see also* Kanaki, V. G. Ékspeditsii . . . 1957 godu. *1958.* No. 52155.

55772. VEGARD, LARS, 1880– . Composition, variations and excitation of the auroral luminescence spectra. Bergen, J. Grieg, 1956. 51 p., 4 plates, tables, diagrs. (Norske videnskaps-akademi i Oslo. Geofysiske publikasjoner, v. 19, no. 9.)

Contains tabulated data on analyses of auroral spectrograms obtained at the Tromsø observatory (69°59′ N. 18°46′ E.) 1951–1953, using glass-spectrographs (2) with collimator lens diameters of 178 and 240 mm.; tables include wavelengths, interpretations, and previously measured wavelengths. A number of plates are illustrated together with legends; results of ionospheric temperature determinations from N_2+1 N bands are presented. Auroral features, grouped according to wavelengths, are tabulated; atomic lines and verification of their interpretation are discussed, as are Doppler displacement and proton velocities, variability effects of latitude, altitude, solar activity, etc.

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55773. VEGARD, LARS, 1880– . Recent progress relating to the study of aurorae and kindred phenomena. Oslo, H. Aschehoug, 1958. 16 p. illus., tables, graphs. (Norske videnskaps-akademi i Oslo. Geofysiske publikasjoner, v. 20, no. 4.) 31 refs.

Studies of auroral observations at Oslo and Tromsø (69.7° N. 18.9° E.) showed that the structure of the ionosphere, the zodiacal light, the solar corona, and the bundles of electric rays which produce auroras and most magnetic disturbances, are due to photoelectric effects of solar X-rays of various frequencies and distributions. The rays are formed by photoelectrons from the sunspot area and are neutralized by positive ions, mainly protons with velocities of at least 2×10^8 cm./sec. Recently detected enhancements of atomic lines were found to be due to increase in the relative proton flux. Temperature measurements from N_2+ bands corresponding to altitudes of several hundred km. gave no indication of increase of temperature with altitude. ***Copy seen:*** DGS.

55774. VEGARD, LARS, 1880– , *and others.* Results of auroral observations at Tromsø and Oslo from the four winters 1953–54 to 1956–57. Oslo, H. Aschehoug, 1958. 36 p. illus., plates, diagrs. (Norske videnskaps-akademi i Oslo. Geofysiske publikasjoner. v. 20, no. 9.)

19 refs. *Other authors:* S. Berger, *and* A. Nundal.

Continues work (No. 43146, 43148, etc.) of coordinating the observed facts with a theory of solar terrestrial relationships. Auroral spectrograms, 15, using the "V" spectrograph, characterized by fairly great dispersion, and 139 taken with "F," of very great light power, are discussed. Results confirm previous findings. ***Copy seen:*** DGS.

VÉGHELYI, PETER, *see* Hársing, L., *and others.* The effect of hypothermia on ischaemic changes . . . kidney. *1956.* No. 51606.

55775. VEĬNBERG, BORIS PETROVICH, 1871– . The secular variation of terrestrial magnetism in Siberia. (Terrestrial magnetism and atmospheric electricity, June 1919. v. 24, no. 2, p. 65–86, diagr., 12 tables.) Refs. in text.

Presents tabulated data on secular variations in declination, inclination, and horizontal intensity for the area 45° N.–65° N. in ranges from 60° E. to 135° E., based on recordings by several different observers. Procedures used in interpolating and correcting the data are explained. Data accuracy is evaluated, those on inclination and horizontal intensity are considered the most reliable. ***Copy seen:*** DLC.

55776. VEĬNBLAT, ZINOVIĬ SAMUILOVICH, *and* **M. I. SMORODINOV.** Merzlotnaîa zavesa na stroitel'stve vodoslivnoĭ plotiny Gor'kovskoĭ GÉS. (Gidrotekhnicheskoe stroitel'stvo, Mar. 1957. god 26, no. 3, p. 5–9, diagrs., graph.) Text in Russian. ***Title tr.:*** Frozen curtain in construction of the spillway in the Gor'ky hydroelectric plant.

Method of eliminating filtration and hydraulic pressure of ground water, restricting effective construction at the spillway, is described in detail. Underground formation contains many sand layers at the 10–12 m. levels, carrying water into the excavation for the spillway and channels. Wells (875) were drilled to 12–18 m. depth for cooling columns, which form a "frozen curtain" 740 m. in length, and prevent water filtration into the excavation. The refrigeration plant, operating on calcium chloride solution, has a capacity of 2½ million cal./hr. and by means of these columns it can maintain a five-month average ground temperature of about −18° C., permitting construction of the basic wall to sufficient depth. During dismantling of the freezing arrangement, circulation of steam through the columns for two months was not sufficient to defrost the ground.

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55777. VEĬSBRUT, L. A. Poluchenie shchavelevoĭ kisloty iz nesbrazhivaemykh na spirt uglevodov torfîanoĭ bardy. (Torfîanaîa promyshlennost', 1958. god 35, no. 5, p. 14–18, tables.) Text in Russian. ***Title tr.:*** Obtaining oxalic acid from non-fermentable hydrocarbons in peat distillery residue.

Process of artificial dehydration of peat by thermo-mechanical means to obtain water-soluble hydrocarbons is described in detail. Separation of oxalic acid in oxidation of distillery residue concentrate depends upon the hydrocarbon content, type and degree of the decomposition, for which tabulated data are given. Amount of oxalic acid, thus separated is about 38% of the distillery residue which corresponds to 2.7% of the peat weight.

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55778. VELDKAMP, J. Waar liggen de magnetische polen, en de aardmagnetische stations tijdens het komende geofysische jaar? (Hemel en dampkring, 1956. Jaarg. 54, p. 1–3, maps.) Refs. in text. Text in Dutch. ***Title tr.:*** Where are the magnetic poles located, and the terrestrial magnetic stations during the approaching geophysical year?

Defines the terms magnetic, geomagnetic, and geographic poles. The northern magnetic-axis pole, or geomagnetic pole, is located at 80° N. 83° W.; the wandering magnetic pole at approx. 73° N. 100° W., with a secondary one at 72° N. 95° W. The distribution of ionospheric and terrestrial magnetic IGY stations in the north and south polar regions is indicated in maps. ***Copy seen:*** DWB.

55779. VELICHKO, A. A. P. A. Kropotkin kak sozdatel' ucheniîa o lednikovom periode. (Akademiîa nauk SSSR. Izvestiîa, ser. geog., Jan.–Feb. 1957, no. 1, p. 122–26.) Ref. Text in Russian. ***Title tr.:*** P. A. Kropotkin as a pioneer of the glacial period theory.

The origin and content of Kropotkin's main scientific work *Issledovaniîa o lednikovom periode* (Investigations of the glacial period), 1876, are reviewed on the 80th anniversary of its publication. The influence of Kropotkin's geological obser-

vations in Finland and of H. J. Rink's description of Greenland glaciers is noted.
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55780. VELICHKO, E. A. O paleogeografii Taĭmyra v permskiĭ period. (Nauchnye doklady vysshei shkoly. Geologo-geograficheskie nauki, 1958. no. 4, p. 117–22, graph, map.) 5 refs. Text in Russian. ***Title tr.:*** On the paleogeography of Taymyr Peninsula in the Permian period.

Presents a petrographic outline of the terrigenous complex of the Permian system in the central Taymyr Peninsula between the lower course of the Pyasina River and Lake Taymyr. Lithologic-facies features of the terrigenous complex are outlined and three facies districts are distinguished and characterized. Granulometric data of fragmental and carbonaceous material are evaluated and their origin discussed. Paleogeographic map for the end of Lower Permian period is presented and its features are outlined. Coal accumulation is considered likely, especially in the western part of this area.
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55781. VELICHKO, E. A. Vesnoĭ na Taĭmyre. (Okhota i okhotnich'e khozi͡aĭstvo, May 1957, no. 5, p. 55–57, illus.) Text in Russian. ***Title tr.:*** Spring in Taymyr.

Participant in an expedition encamped on the Pyasina River near the confluence of the Tareya, describes the tundra landscape at the end of May, encounter with a wild reindeer herd, and hunting (from aircraft) the wolfpack following it. Illus. show airplane, the expedition's housing, etc.
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VELIKANJE, R. S., *see* Houston, J. R., *and others*.

55782. VEL'MINA, NINA ALEKSANDROVNA. K voprosu o proiskhozhdenii zamknutykh (alasnykh) vpadin t͡sentral'noĭ I͡Akutii. (Akademii͡a nauk SSSR. Izvestii͡a, ser. geog., Mar.–Apr. 1957, no. 2, p. 97–105, illus.) 9 refs. Text in Russian. ***Title tr.:*** Origin of the closed depressions ("alas") in central Yakutia.

Reports study of the circular depressions and lakes, called by the Yakuts "alas," which occur in great numbers in the interfluvial area between the Lena and Amga Rivers (the latter, a left tributary of the Aldan, approx. 60° N. 128°46′ E.). The geomorphology of these depressions is outlined, and the conclusion is offered that they are formed in three different ways: by the closing up of the ox-bow of a meandering river; by erosion of the soft, dusty soil of a river bank, and by the thawing of permafrost ground (caved-in "alas" or kettle-hole lake).
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55783. VELTISTOV, E. Rel'sy cherez taĭgu. (Ogonëk, July 1956. god 34, no. 29, Sibirskiĭ nomer, p. 25–26, illus.) Text in Russian. ***Title tr.:*** Rails across the taiga.

Impressions from the author's journey on the Tayshet–Ust'-Kut railroad which links the Siberian railroad with the navigable part of the Lena River. The first locomotive reached the bank of the Lena on Nov. 19, 1951; the new big river port, Osetrovo, at Ust'-Kut is noted; the significance of this railroad for supplying the far north is stressed.
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55784. VENDRIK, A. J. H., *and* **J. J. VOS.** A method for the measurement of the thermal conductivity of human skin. (Journal of applied physiology, Sept. 1957. v. 11, no. 2, p. 211–15, illus., table.) 9 refs.

Description and evaluation of a method based on the temperature of the contact surface of two homogeneous solids with different initial temperatures. In the experiments described, a piece of glass of known thermal properties is brought in contact with the skin and the interface temperature, with those of the skin and glass, used for calculating thermal conductivity of the skin.
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VENIAMINOV, IVAN EVSI͡EEVICH POPOV, 1797–1879, *see* Irtel, S. Alaska . . . orthodoxy. *1957*. No. 51956.

VENIAMINOV, IVAN EVSI͡EEVICH POPOV, 1797–1879, *see* Shenitz, H. A. Our . . . Alaskan priest . . . *1957*. No. 54766.

55785. VEPRINT͡SEV, B. N. Zimovka vodoplavaŭshchikh pti͡ts v Kandalakshskom zalive. (Priroda, Feb. 1957, no. 2, p. 126.) Text in Russian. ***Title tr.:*** Wintering of waterfowl in Kandalaksha Bay.

Contains notes on aquatic birds, such as swans, ducks, golden-eye ducks, gulls and terns observed by the author in January and February. The severe cold and the prolonged dark of the polar night

did not seem to affect them and they had little difficulty in finding food.

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55786. VERBECK, GEORGE J., *and* P. KLIEGER. Studies of "salt" scaling of concrete. (*In:* National Research Council. Highway Research Board. Bulletin 150, 1957, *Effects of de-icing chlorides on vehicles and pavements*, p. 1–13, graphs, tables.)

Presents results of laboratory tests of the effect of de-icers on the surface scaling of non-air-entrained and air-entrained concretes, each made with two different coarse aggregates, cured differently, and tested under a variety of procedures. It was found that all the chemically dissimilar materials which function as de-icers also cause "salt" scaling, and that relatively low concentrations produce more surface scaling than higher concentrations or the absence of de-icer. A period of air drying on the concretes prior to the start of scaling tests increased the resistance to surface scaling, and no scaling was produced when the concrete surface had no free water on it during the freeze portion of the cycle. Concrete made with Elgin sand and Eau Claire gravel showed more resistance to surface scaling than concretes made with Dresser trap rock fine and coarse aggregate.

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55787. VERE, D. W. Heat transfer measurement in living skin. (Journal of physiology, Mar. 1958. v. 140, no. 3, p. 359–80, illus.) 17 refs.

Description of a method using very small thermocouples, for measuring heat flow and temperature gradients in the living skin, with minimal local disturbance. Some preliminary observations and results are reported and discussed.

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55788. VERESH, I. Issledovanie povedeniia soderzhashchegosia v Kol'skom fosfate titana v protsesse magnitnoĭ separatsii. (Acta technica, *Budapest*, 1957. t. 19, fasc. 1–2, p. 61–65.) Text in Russian. Summary in German, English, French. ***Title tr.:*** Investigations on behavior of the titanium content of Kola phosphate in a magnetic separation process.

Reports attempt to recover titanium from flotation concentrates of phosphate and apatite of the Khibiny in Kola Peninsula. The tests were made at the Research Institute for the Heavy Chemical Industry at Vesprem, where a process was developed to separate phosphates with nitric oxide and produce fertilizer. Use of the by-products was investigated and by magnetic separation, titanium was recovered. But the material has low susceptibility for magnetic separation and commercial exploitation is not worthwhile.

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55789. VERESHCHAGIN, V. N., *and* A. F. MIKHAĬLOV. K stratigrafii verkhnego mela Kamchatsko-Anadyrskoĭ oblasti. (Akademiia nauk SSSR. Doklady, Sept. 21, 1957. t. 116, no. 3, p. 470–73.) 5 refs. Text in Russian. ***Title tr.:*** On the stratigraphy of the Upper Cretaceous of the Kamchatka-Anadyr province.

Contains brief descriptions and analyses of the fossil ammonites, trigoniids and other bivalves collected by A. F. Mikhaĭlov in the Pontoney mountains (a ridge of the Penzhina Mts.) in 1955. The fossil fauna and geological structure of three subdivisions of this ridge are described, and the structural scheme of the Upper Cretaceous deposits, about 1300 m. thick, is presented (upward): basal conglomerates with pebbles and boulders of granodiorites, Paleozoic sandstones, argillites, etc. (200 m.); loosely schistose with inclusions of *Neocrioceras* cf. *spinigerum, Trigonia* ex. gr. *subovalis, Lopatinia kamtshatica*, etc. (300 m.); loose diagenic argillites with lime concretions, *Brahmaites brahma, Inoceramus* sp. nov., *Mya* sp., etc. (200 m.); limestones with *Inoceramus* sp. nov., *Trigonia* ex. gr. *subovalis, Pecten* sp., and gastropods (250 m.); sandstones, with loose diagenic argillites, *Brahmaites* cf. *vishnu, Inoceramus* sp., etc. (350 m.).

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55790. VERESHCHAGIN, V. N. Osnovnye voprosy stratigrafii mela Dal'nego Vostoka. (Sovetskaia geologiia, 1957. Sbornik. no. 55, p. 124–44, fold. table, 7 sketch maps.) 16 refs. Text in Russian. ***Title tr.:*** Basic problems of the Cretaceous stratigraphy of the Far East.

Outlines stratigraphy of the Cretaceous system and its series in Kamchatskaya Oblast', Magadanskaya Oblast', Kamchatka Peninsula, etc. The problems of widely distributed Cretaceous deposits are still insufficiently explored, many completed studies not yet published, accumulated materials not evaluated. In reviewing the literature, a new stratigraphic division is offered and distribu-

tion of main series is illustrated with paleogeographic maps. The four marine transgressions during the Cretaceous are outlined and their effects discussed. Correlation with Cretaceous deposits of Alaska, Yukon and other areas is noted. Folded table of correlations is added as a summary of the paper. Problems requiring further exploration are enumerated. Numerous useful minerals of the Cretaceous system are mentioned.

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VERESHCHAGIN, V. N., *see also* Anikeev, N. P., *and others.* Mezhvedomstvennoe stratigraficheskoe soveshchanie . . . *1957.* No. 49330.

55791. VERITY, THOMAS W. Gold in Canada 1956; rising costs bring hard times. (Canadian mining journal, Feb. 1957. v. 78, no. 2, p. 127–29.)

The general economics of the gold industry are reviewed, and production data are given for each province. Increase to a new record of 352,645 oz. in the Northwest Territories, and to 73,240 oz. in Yukon Territory is noted, in contrast to the general decrease and poor performance of the Canadian gold mining industry as a whole during 1956. The main producers in the Northwest Territories are Giant Yellowknife Gold Mines, Consolidated Discovery Yellowknife, and Consolidated Mining and Smelting Co.; in the Yukon Territories they are Yukon Consolidated Gold Corp., Yukon-Explorations Ltd., and Yukon Gold Placers.

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VERKHOLANTSEVA, L. A., *see* Makarova, L. A., *and others.* Pochvennoe raionirovanie. *1958.* No. 53063.

VERKHOLANTSEVA, L. A., *see* Polynseva, O. Z., *and others.* Opisanie pochv. *1958.* No. 54069.

VERZÁR, F., *see* Hügin, F., *and* F. Verzár. Versagen der Wärmeregulation . . . *1957.* No. 51841.

VESANEN, EIJO E., *see* Porkka, M. T., *and* E. E. Vesanen. Earthquake in Ranua and Pudasjärvi. *1958.* No. 54099.

VESHNIKOV, GAVRIIL GRIGOR'EVICH, 1918– . *See* Khabyryys, Baal.

55792. VESTERBIRK, CHARLES. Nogle betragtninger vedrørende politi- og retsvaesenet i Grønland ved udskiftningen af det første hold danske politijenestemaend. (Grønland, Dec. 1957. nr. 12, p. 447–53, illus.) Text in Danish. ***Title tr.:*** Some comments on the police service and the judicial system in Greenland on the occasion of the replacement of the first group of Danish police officials.

A new administration of justice act came into effect in Greenland in 1951 and personnel on loan from the Danish police forces, were relieved after six years. Among suggestions for the future: the Danish police should attend special courses on Greenland conditions before taking up appointments there; change of personnel every five years is unsuitable, a different arrangement should be sought; Greenland police officials should have preliminary training in Greenland; police powers to waive a charge in certain cases should be extended; the appointment of a legally trained defense counsel for Greenland is premature; total prohibition of private distilling should be introduced. The remand home at Godthåb for six people, opened in 1956, is described.

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55793. VESTERGAARD, KR. Nekrolog: Johannes Gröntved, 1882–1956. (Grønland, Feb. 1957. nr. 2, p. 80, port.) Text in Danish. ***Title tr.:*** Obituary: Johannes Gröntved, 1882–1956.

Notes on this botanist, interested particularly in the flora of Greenland, which he visited three times.

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55794. *VESTNIK SEL'SKOKHOZÍAÏSTVENNOÏ NAUKI.* Nauchnaía konferentsiía po zimostoĭkosti. (Vestnik sel'skokhozíaĭstvennoĭ nauki, Mar. 1958. god 3, no. 3, p. 154.) Text in Russian. ***Title tr.:*** Scientific conference on winter resistance.

Notes conference called by the Agriculture Dept. of the All-Union Academy of Agricultural Sciences, Jan. 14–17, 1958. Some 250 representatives of scientific institutions and agriculturists attended; 39 papers were delivered to its plenary meetings and to sections.

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55795. VEYRET, PAUL. La neige au Canada. (Revue de géographie alpine, 1951. t. 39, fasc. 3, p. 533–70, text map, 2 tables.) 18 refs. Text in French. ***Title tr.:*** Snow in Canada.

Comprehensive study begun at the Université de Montréal in 1950; based upon summaries from the Meteorological Service of Canada, and other sources. Snow is described: regional and seasonal

distribution, number of days with snow, monthly and annual variation, exceptional snowfall, relative amounts of snow and rain, and effects of wind upon snow. Considerable reference is made to snow in arctic and subarctic regions despite a sparse net of stations. Winters with snow-covered ground are expected in nearly all of Canada. The effect of snow on people in both cities and rural areas, preparations and adjustments to it, also Canadians' ability to continue normal winter activities are discussed. Two critical periods occur in the systematic use of snow for movement or transportation: the time of freeze-up and of break-up. These periods depend closely on: the earliest date of mean daily temperature below freezing (beginning of freeze-up), earliest date in spring when mean maximum temperature goes above freezing (daytime thaw, nighttime freeze), earliest date when mean temperature rises above freezing (rapid break-up). Aesthetic values of snow are noted in conclusion. ***Copy seen:*** DGS.

55796. VÎALOV, S. S., *and* **N. A. T͡SYTOVICH.** Cohesion of frozen soils, by S. S. Vialov and N. A. Çytovich; and: Creep and long-term strength of frozen soils, by S.S. Vialov. Dok. Akad. Nauk, 104, no. 4, p. 527–29; and: no. 6, p. 850–53. Ottawa, Feb. 1957. 8 p. diagrs. (Canada. Defence Research Board. Directorate of Scientific Information Service, T203R.)

English translation by E. R. Hope of *Arctic Bibliography*, No. 43163 and 43162. ***Copy seen:*** CaMAI.

55797. VÎALOV, S. S., *and* **N. I. EGOROV.** Èksperimental'noe opredelenie sil pucheniîâ gruntov. (Akademiîâ nauk SSSR. Institut merzlotovedeniîâ. Trudy, 1958. t. 14, p. 40–55, tables, graphs, diagrs.) 6 refs. Text in Russian. ***Title tr.:*** Experimental determination of ground heaving forces.

Field experiments at Igarka Permafrost Station 1950–1953 are described. Heaving forces were computed from the flexure of a horizontal H-beam (hinged between stationary supports) under the pressure exerted by a wooden stake set in the ground to the full depth of the active layer, or determined directly with a spring dynamometer mounted in one of the stationary supports. Heaving took place only after a frost depth of 8–10 cm. was reached and stopped 20–30 days before the entire active layer had frozen. Some settling of the ground was noted (0.8 cm.) after heaving reached its maximum (11–31 cm.). The heaving forces varied from 70–80 kg. per running cm., measured maximum was 104 kg.—From SIPRE. ***Copy seen:*** DLC.

55798. VÎALOV, S. S. Primenenie èlektrointegratora dliâ opredeleniîâ naprîâzheniî v gruntakh. (*In:* Materialy po laboratornym issledovaniîâm merzlykh gruntov, sbornik 3, 1957. p. 312–21, graph, diagrs.) 5 refs. Text in Russian. ***Title tr.:*** Using an electrical integrator for determining ground stress.

"The calculation of stress distribution in frozen ground by means of the electrical EI–11 and EI–12 integrators is described. Differential equations are given for calculating the stresses from surface, lateral, and point loading. The variables of an equation are represented in the integrator by time-variable currents, and variable resistances are used to obtain the stress-distribution curves, considering frozen ground as a linearly deformed medium."—SIPRE.

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55799. VÎALOV, S. S. Reologicheskie profsessy v merzlykh gruntakh i uslovie ikh predel'nogo ravnovesiîâ. (*In:* Materialy po laboratornym issledovaniîâm merzlykh gruntov, sbornik 3, 1957. p. 234–54, table, graphs.) 14 refs. Text in Russian. ***Title tr.:*** Rheological processes in frozen soils and their stress limit.

"The problem of creep and deformation of frozen ground is examined on the basis of studies made since 1936. Experimental data obtained in 1950–1954 are used to express mathematically the effects of duration and rate of loading on continuous and discontinuous creep and changes of certain other mechanical properties of frozen ground. The efficiency of various methods for controlling the creep and deformation is discussed and formulas for calculating the intensity of the rheological processes are given."—SIPRE. ***Copy seen:*** DLC.

VÎALOV, S. S., *see also* T͡Sytovich, N. A., *and others.* O fizicheskikh îâvleniîâkh . . . v . . . gruntakh. *1957.* No. 55539.

55800. VICKERS, H. R. The care of the skin in winter. (Practitioner, Dec. 1957. v. 179, no. 1074, p. 679–84, tables.) 7 refs.

Contains discussion of symptoms, causes, therapy, etc. of chapping of the

skin, chilblains, erythrocyanosis and erythema induratum; frostbite, chondrodermatitis, cold urticaria, etc. are similarly treated. Skin conditions aggravated by cold are also noted.

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55801. VICTOR, PAUL ÉMILE, 1907– . Le support aérien de l'expédition de Groenland 1948–1951. (Aviation magazine, Jan. 1, 1952. no. 41, p. 15–19, illus.) Text in French. ***Title tr.:*** Aerial supply of the Greenland expedition 1948–1951.

Stores and equipment (225 tons) were airlifted by DC–4's from Keflavík, Iceland, and dropped on the icecap in 1949–1951. Sensitive instruments, etc. were parachuted from an altitude of about 100 m., oil drums, etc. were dropped free from 7–10 m. Airplanes were beamed into the dropping zone by radio beacons and smoke signals and directed by ground radio telephone during the drop run. Damage to the dropped items decreased with decreasing speed of the aircraft.

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55802. *VIE DEL MONDO.* Canada: nuove strade. (Vie del mondo, July .958. anno 20, no. 7, p. 676–77, map.) Text in Italian. ***Title tr.:*** Canada: new roads.

Describes and maps northern road construction planned for 1960–62, to over 31 million dollars: in the Yukon from Flat Creek to Fort McPherson (650 km.) and from Canol highway east of Whitehorse to Ross River; Northwest Territories (800 km.) Great Slave-Great Bear Lake; in Alberta from Peace Point to Fort Smith at the western end of Wood Buffalo Park. ***Copy seen:*** DLC.

55803. *VIE DEL MONDO.* U.R.S.S.: linea aerea Mosca-Pietropavlovsk, Kamciatka. (Vie del mondo, Apr. 1958. anno 20, no. 4, p. 351.) Text in Italian. ***Title tr.:*** U.S.S.R.: air-line Moscow-Petropavlovsk, Kamchatka.

Notes the opening of a new air route Moscow - Omsk - Irkutsk - Khabarovsk - Nikolaevsk-Petropavlovsk by the turbojet Tu–104, completing the round trip of over 18,000 km. in 22 hrs. 45 min.

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55804. VIETS, KARL. Halacaridae von der Murman-Küste, aus dem Weissen Meere und von Novaja-Semlja. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa moreĭ SSSR, 1928. vyp. 6, p. 81–88, illus. tables.) 4 refs. Text in German. Summary in Russian. ***Title tr.:*** Halacaridae from the Murman coast, the White Sea and Novaya Zemlya.

Contains information on earlier records of these marine mites, followed by descriptions of six species; two, *Rhombognathopsis nudus*, n. sp. and *R. contectus* n. sp. are new. Description includes size, anatomy and morphometry, structure of integument, etc.

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55805. VIGERUST, PER. Österreichische Arktisexpedition 1954 nach Spitzbergen. (Alpen, June 1955. Jahrg. 31, No. 6, p. 157–60, illus., map.) Text in German. ***Title tr.:*** Austrian arctic expedition of 1954 to Spitsbergen.

Information is presented on the genesis of the expedition; participants: a six-man party of alpinists led by Hans Gsellmann (four Austrians, a German and the writer, a Norwegian), their base at Fanciullipynten (79°10′ N. 12° E.); their itineraries in northwest Vestspitsbergen July–Aug: climb of Mt. Forel, traverse of Isachsenfonna to Tre Kroner (78°50′ N. 13° E.), etc., and return.

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55806. VIGERUST, YNGVAR. Våre lavheier og deres utnyttelse. (Selskab (Kong.) for Norges vel. Årbok for beitebruk i Norge, 1936–37, nr. 13, p. 68–96, 8 illus., 4 tables.) 21 refs. Text in Norwegian. ***Title tr.:*** Our lichen uplands and their utilization.

Lichens, whose greatest economic importance is as winter pasture for reindeer, differ in southern mountain and in arctic or subalpine locations. Botanical identification, hardiness, plant and soil relationships, harvesting, nutritional content, use for domestic animals and reindeer, other uses, regrowth and export of lichens are noted. Reindeer and stock raising are discussed in relation to forest development. ***Copy seen:*** DA.

VIGNOLO, W. H., *see* Angelis, W., de, *and others.* Action du stress sur l'activité de l'arginase hépatique . . . *1956.* No. 49324.

55807. VIK, ROLF. Studies of the helminth fauna of Norway I, taxonomy and ecology of *Diphyllobothrium norvegicum* n. sp. and the plerocercoid of *D. latum* L. (Nytt magasin for zoologi, 1957. v. 5, p. 26–93, 8 illus., 14 plates, 31 tables.)

120 refs. Contrib. no. 67, Zool. Mus., Univ. of Oslo.

Altogether 2,919 fishes, 313 birds and 593 mammals from different parts of the country were examined for parasites in 1943 and 1950–1957, and results are presented regarding *Diphyllobothrium norvegicum* n. sp. and *Diphyllobothrium latum* (L.). Feeding experiments (111) with different types of plerocercoids were carried out on 14 species of birds, three mammals, and man. *Larus argentatus, L. canus, L. marinus, L. ridibundus, Sterna hirundo, Ardea cinerea, Pica pica,* cat, rat, and man have been found definite hosts of *D. norvegicum* n. sp. In *Mergus serrator, Colymbus arcticus* and *Ardea cinerea,* another *D.* sp. has developed. Infection of *Homo* with *D. latum* plerocercoids from perch and pike from Pasvik proved positive. The *D.* sp. infections in *Homo* are described with pathological effects and treatment. The various development stages of *D. norvegicum* are described; it was found (adult stage) in mammals and birds in natural infection, and only in areas where the plerocercoid was identified in trout or char. The plerocercoid stage of *D. latum* was found in the Pasvik fish and the species established as an endemic parasite of Norway. The second intermediate hosts are discussed. Precautions are given against the spreading of the two human parasites.

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55808. VIKHAMMER, MAGNUS. Herredsskogmestrene i Nordland på utferd. (Tidsskrift for skogbruk, May 1953. årg. 61, hefte 5, p. 207–214, illus.) Text in Norwegian. ***Title tr.:*** Chief district foresters in Nordland province on excursion.

Recounts an excursion to Saltdal (ca. 67° N.) in northern Norway in June 1952. The foresters visited the wild and rugged Junkerdal and protected areas of spruce; they examined experiments in progress with pine seed trees in various densities and subsequent thinning. The lumber produced in the area is used chiefly for boat building. ***Copy seen:*** DA.

55809. VIKHERT, A. V. Triasovye diabazy zapadnogo sklona zapadnogo Verkhoĭan'ia. (Akademiia nauk SSSR. Doklady, May 1, 1957. t. 114, no. 1, p. 169–71.) 5 refs. Text in Russian. ***Title tr.:*** The Triassic diabases of the western slopes of the western Verkhoyansk ridge.

Contains a discussion of Triassic diabases of the region, held to be of effusive origin and synchronous with effusive traps of the Siberian platform. Chemical analysis is given. In respect to petrography, these diabases may be divided into three main groups: (1) those of small-grained hyalo-ophitic and poikilitic texture; (2) diabasic porphyrites with small-grained intersertal and sideritic texture, and (3) diabasic porphyrites with micro-granular intersertal and doleritic texture.

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55810. VIKHIREVA-VASIL'KOVA, V. O prorastanii semian nekotorykh arkticheskikh rasteniĭ. (Botanicheskiĭ zhurnal, July 1958. t. 43, no. 7, p. 1024–1029, 2 illus.) 6 refs. Text in Russian. ***Title tr.:*** On the germination of seeds of some arctic plants.

Account of germination experiments with seeds of 10 species, representative of the upland tundra of the Tiksi Bay region (71°41′ N. 129° W.). Best results were obtained at temperatures of 18–23° C. Germination time varied from 4–10 days, to two years in some beans.

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VILENKIN, A. V., *see* Klimov, K. I., *and* A. V. Vilenkin. Poteri ėnergii . . . transmissii pri nizkikh temperaturakh. *1957.* No. 52325.

55811. VILENSKIĬ, F. P. Proektirovanie fundamentov zdaniĭ na neravnomerno ottaivaiushchikh merzlykh gruntakh. (Stroitel'naia promyshlennost', Apr. 1958. god 36, no. 4, p. 14–17, diagrs., tables.) 4 refs. Text in Russian. ***Title tr.:*** Design of building foundations on unevenly thawing frozen ground.

Difficulties in construction design of industrial buildings on frozen ground are discussed with reference to deformation of foundations. Three formulas, developed by N. I. Saltykov, are given for computing the magnitude of sagging, tilting (inclining) and the distribution of local pressures on the footing of the foundation. These formulas were applied in designing four industrial buildings erected on sites with different geological characteristics. Sagging and tilting of the Noril'sk combine's building foundations are discussed.

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55812. VILENSKIĬ, M. A. Nekotorye voprosy ėkonomicheskogo raĭonirovaniia IAkutskoĭ ASSR. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia, Jan.–Feb. 1958, no. 1, p. 134–43, map.) Text in

Russian. ***Title tr.:*** Some problems of the division of the Yakut A.S.S.R. into economic regions.

Notes great changes in economic life and proposes a new regional division, in connection with the Sixth Five Year plans for Yakutia. The growing coal and iron industry in the south, and several mining developments are reviewed: diamonds in the Vilyuysk region, salt in Olekminsk, coal in the Chay-Tumus region, tin in Deputatskoye, Kestor, Burgochan, Alys-Khaya, Ilin-Taas. Transportation is discussed as a main problem, the importance of the Yana, Kolyma and Indigirka waterways is stressed. ***Copy seen:*** DLC.

VILENSKIĬ, M. A., *see also* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . Îakutskoĭ ASSR. *1958.* No. 49171.

55813. VILKUNA, KUSTAA, 1902– . The "radno" of Lapland. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 41–45.) 16 refs.

A linguistic analysis of the Lappish word "radno", meaning a thick woolen bedspread, to determine the origin of weaving among the Lapps. The word and its derivatives are traced through Finnish to Norse. The vertical loom used for the weaving of "radno" was introduced to the Lapps in the 9th century A.D. (or earlier) from Finland where it had been used since pre-Christian times. ***Copy seen:*** DSI.

55814. VILLAKHOV, E. "Lovt͡sy" kosmicheskikh luchei. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 11, illus.) Text in Russian. ***Title tr.:*** Cosmic ray "hunters."

Work of the Yakut Branch of the Academy of Sciences' cosmic ray laboratory in Yakutsk is sketched, and its apparatus for uninterrupted recording of cosmic rays is described, with photo. ***Copy seen:*** DLC.

VILLAKHOV, E., *see also* P'esy îakutskikh dramaturgov. *1957.* No. 53949.

55815. VILLALOBOS, TULIO J., *and others.* A cause of the thrombocytopenia and leucopenia that occur in dogs during deep hypothermia. (Journal of clinical investigation, Jan. 1958. v. 37, no. 1, p. 1–7, illus., tables.) 7 refs. *Other authors:* E. Adelson, P. A. Riley, W. Crosby *and* H. Glauke.

Experiment with tagged platelets showed that this kind of thrombocytopenia is caused by sequestration of the platelets, with liver and spleen playing a major part in this process. Changes in leucocyte count were apparently due to similar mechanisms; however, they were not as consistent as in the case of platelets. ***Copy seen:*** DNLM.

55816. VILLAMIL, ALBERTO, *and others.* Electrocardiographic changes in artificial hibernation. (American heart journal, Mar. 1957. v. 53, no. 3, p. 365–79, illus., table.) 44 refs. *Other authors:* R. J. Franco, J. Clavijo *and* E. M. Zuviria.

A study of electrocardiograms from ten patients aged 6–47, made hypothermic with "lytic cocktails" and icebags, for periods of 2–6 days; some subjects reached a temperature of 22° C. The morphology of the ECG waves, the P–R, QRS and Q–T intervals were studied; Q–T/T–Q relation and variations in the electric axes were determined. ***Copy seen:*** DNLM.

55817. VILLAUME, ASTRID. Filmsekspedition "Qivitoq". (Grønland, Apr. 1957. nr. 4, p. 131–41, illus.) Text in Danish. ***Title tr.:*** Motion picture expedition "Qivitoq."

Contains actress's impressions from the shooting of a film in the Disko Bugt area in summer 1956, Qivitoq=man who withdraws to the mountains. ***Copy seen:*** DLC.

55818. VIL'SON, A. P. Biologiîa i promysel sel'di Kandalakshskogo zaliva. (Akademiîa nauk SSSR. Karel'skiĭ filial, *Petrozavodsk.* Materialy po kompleksnomu izucheniîu Belogo moriîa, 1957. vyp. 1, p. 90–104, illus. tables.) 21 refs. Text in Russian. ***Title tr.:*** The biology and fishery of herring in the Kandalaksha Bay.

Contains information on herring research in the area and history of the industry, biology and behavior of the fish, its distribution and migration, growth and size, age and size composition of catches, spawning and fry, etc. ***Copy seen:*** DLC.

55819. VIL'SON, A. P. Opyty mecheniîa sel'di v Kandalakshskom zalive v 1953–1954 gg. (Murmansk. Polîarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziîaĭstva i okeanografii. Trudy, 1956. vyp. 9, p. 226–33, illus. tables, map.) 6 refs. Text in Russian. ***Title tr.:*** Tagging experiments of herring

in the Kandalaksha Bay during 1953–1954.

The method used is described and considered efficient, with tagged fish caught 1.5–2 yrs. after release. During the feeding period, herring tagged at the head of the Bay were found to migrate towards the Tersk shores. The high percentage of recaptured fish indicates a scarce population. ***Copy seen:*** DI.

55820. VINBERG, N. A., *and* **V. B. ECHEISTOVA.** Sovetskaîa arkheologicheskaîa literatura za 1950 g. (Sovetskaîa arkheologiîa, 1953. t. 17, p. 329–75.) Text in Russian. ***Title tr.:*** Soviet archeological literature for 1950.

Lists 624 publications and book reviews including approx. 25 (p. 359–62) on northern Siberia and the Far East; author and geographic indexes.

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55821. VINBERG, N. A., *and* **T. N. ZADNEPROVSKAÎA.** Sovetskaîa arkheologicheskaîa literatura za 1952 g. (Sovetskaîa arkheologiîa, 1955. t. 22, p. 275–321.) Text in Russian. In sequence to No. 38077. ***Title tr.:*** Soviet archeological literature for 1952.

Lists 686 publications and book reviews, about 20 of them on northern Siberia and the Far East. Author and geographic indexes are appended.

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VINCENT, EWART ALBERT, *see* Brown, G. M., *and others.* Pyroxenes . . . *1957.* No. 49948.

VINCENT, EWART ALBERT, *see* Wager, L. R. Sulphides . . . Skaergaard . . . *1957.* No. 55906.

55822. VINKMAN, M., *and* **E. IVANOV.** Probuzhdenie bogatyrîa. (Sibirskie ogni, July 1958. god 37, no. 7, p. 90–98.) Text in Russian. ***Title tr.:*** Awakening of a titan.

Describes the discovery of large iron-bearing sandstone deposits during test drillings for oil in the Narym taiga (upper Ob' region). Similar ore finds were reported in 1957 from oil surveys in the Turukhansk district.

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55823. VINOGRADOV, ALEKSANDR PAVLOVICH, 1895– , *and others.* Izotopnyĭ sostav svintsa-primesi v rudakh i mineralakh kak pokazatel' ikh genezisa i vremeni obrazovaniîa. (Geokhimiîa, 1958, no. 6, p. 515–23, tables.) 11 refs. Text in Russian. Summary in English. *Other authors:* S. I. Zykov, *and* L. S. Tarasov. ***Title tr.:*** Isotopic composition of the lead-ingredient in ores and minerals as an indicator of their genesis and time of formation.

Considers the possibility of using the isotopic composition of the lead to identify the ore processes and simultaneously to determine their course. Various sulphide minerals (pyrite, chalcopyrite, sphalerite, tungsten, copper-nickel ores, etc.) from the Noril'sk region, Kola Peninsula, Taymyr Peninsula, Altay, were studied and the lead content measured. Comparison is made of gathered data and value claimed for this method. Isotopic composition of lead can serve as an indicator for the genesis and formation not only for lead itself, but also for other polymere ores. ***Copy seen:*** DLC.

55824. VINOGRADOV, L. G. Ob okhrane zapasov Kamchatskogo kraba. (Rybnoe khozîaĭstvo, Mar. 1957. god 33, no. 3, p. 49–51.) Text in Russian. ***Title tr.:*** Protecting the stock of Kamchatka crab.

A discussion of the Soviet-Japanese Fishing Convention of May 14, 1956, including the protection of the reserves of this crab. The biology of the species, its past and present exploitation, known reserves of the U.S.S.R., United States and Japan, canning industry, and conservation measures are reviewed.

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55825. VINOGRADOV, M. E. Giperiidy, Amphipoda-Hyperiidea, severo-zapadnoĭ chasti Tikhogo okeana. (Akademiîa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 20, p. 186–227, illus., tables, maps.) 54 refs. Text in Russian. ***Title tr.:*** Hyperiides, Amphipoda-Hyperiidea, of the northwestern Pacific.

A study of these crustaceans from an area southwest of Kamchatka, the Kuril Islands and northern Japan. Thirty-four species and four subspecies are described, of which two species and two subspecies are new. Identification keys to families and genera, and details of morphology, distribution, etc. are supplied. The two new species are *Chunala major* n. sp. and *Lanceola laticarpa* n. sp. The material for this investigation was collected from the R/V *Vitiaz'*.

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55826. VINOKUROV, V. Cherez dva okeana i shest' morei. (Sovetskiĭ morflk, July 1957. god 17, no. 14, p. 15–17, illus.) Text in Russian. ***Title tr.:*** Across two oceans and six seas.

Operations of the Soviet submarine *L–15* during World War II: transfer from Vladivostok to Petropavlovsk-in-Kamchatka in June 1941; a 17,000-km. trip from Kamchatka via Dutch Harbor in the Aleutians, Panama Canal, Halifax, England, to Polyarnyy in Kola Peninsula, Sept. 1942–Jan. (?) 1943.

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55827. VIRKETIS, MARIÎA ALEKSANDROVNA. Nekotorye dannye o zooplanktone ûgo-vostochnoĭ chasti morîa Laptevykh. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa morei SSSR, 1932. vyp. 15, p. 105–125, illus., tables, map.) 29 refs. Text in Russian. Summary in German. ***Title tr.:*** Some data on the zooplankton of the southeastern Laptev Sea.

Description of zooplankton collected in August by parties of the Academy of Sciences' Yakut Commission under P. K. Khmyznikov (1926) and (1927) ÎU. D. Chirikhin. The catches near the mouth of the Lena were poor and of a fresh-water character; those of the offshore, more saline area, still poor, but showing more marine representatives. Some local variants are described and northernmost limits for others recorded.

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55828. VIRKETIS, MARIÎA ALEKSANDROVNA. Zooplankton Belogo morîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa morei SSSR, 1925. vyp. 3, p. 1–46, illus., tables, fold. map.) 24 refs. Text in Russian. Summary in German. ***Title tr.:*** The zooplankton of the White Sea.

A study based on several collections made during 1922–1924, with special emphasis on deep-water forms. Some 58 forms were determined with certainty, mainly tintinoids and copepods, and their morphology, occurrence and geographic distribution are outlined. Changes in seasonal appearance and in horizontal and vertical distribution are described. The plankton composition is also compared with that of the Barents Sea.

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VIRTANEN, ERIK ANTON, 1807– , *see* Kannisto, A. Materialien . . . Mythologie . . . Wogulen . . . *1958*. No. 52164.

VISHNEVSKAÎA, V. M., *see* Ganfskaîa, O. A. Sessii . . . issledovaniĭ 1957 g. *1958*. No. 51080.

55829. VISSER, SIMON WILHELM. The Novaya-Zemlya phenomenon. (Akademie van Wetenschappen te Amsterdam. Afdeeling voor de Wissen Natuurkundige Wetenschappen, Proceedings of the Section of Sciences, ser. B., 1956. v. 59, no. 4, p. 375–85.) 9 refs.

Demonstration of the geometrical optics which could explain the phenomenon observed by Dutch sailors Jan. 24, 1597. The sun became visible 14 days early, when it was 4° below the horizon. Examples of similar phenomena are cited and illustrated; nomograms and tables for calculating refraction under different conditions and graphs of inversion lapse rates over Siberia and Greenland are included and discussed.—*From Meteorological abstracts and bibliography*, May 1958. v. 9, no. 5, p. 533.

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VITALE, C. S., *see* Bender, T. A., *and others*. Bibliography . . . climate of Greenland. *1957*. No. 49646.

55830. VITÎAZEVA, VALENTINA ALEKSANDROVNA. O razvitii Pechorskogo ugol'nogo basseĭna. (Planovoe khozîaĭstvo, Nov. 1957, no. 11, p. 79–83, tables.) 3 refs. Text in Russian. ***Title tr.:*** Development of the Pechora coal basin.

Known and probable reserves of the Pechora coal basin are estimated at 262 billion tons, of which 19.2 billion are known; in 1956, the annual output of its 35 coal mines with 37.7 thousand miners and 103.6 auxiliary workers, reached 15.4 million tons. The coal is of various types, ranging from lignite to semi-anthracite, and the seams are convenient for mining. Coal types and output are compared with those of other Soviet coal basins; the slow development and relatively high cost of Pechora production are noted; the possibility is claimed of increasing the annual output to 57–80 million tons. Coal deposits of Vorkuta, Inta, Seyda, etc. are mentioned.

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55831. VITÎAZEVA, VALENTINA ALEKSANDROVNA. Soveshchanie po voprosam kompleksnogo ispol'zovaniîa prirodnykh resursov Ukhty. (Akademiîa nauk SSSR. Izvestiîa, ser. geog., May–June 1957, no. 3, p. 145–48.) Text in

Russian. ***Title tr.:*** Conference on the problems of complex utilization of the natural resources of Ukhta.

Report of the second Conference called by the Komi Branch of the Academy of Sciences in Ukhta, Jan. 8–10, 1957. The industrial importance of Timan-Pechora province with its petroleum deposits, oil shales, natural gas in billions of cu. m. and its great timber resources, is stressed; papers delivered to the Conference are summarized.

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55832. VITKOVSKIĬ, NIKOLAĬ IVANOVICH, *d.* **1892.** Slĕdy kamennago vĕka v dolinĕ r. Angary. (Vsesoĭuznoe geograficheskoe obshchestvo. Vostochno-sibirskiĭ otdel. Izvestiia, 1889. t. 20, no. 1, p. 1–42, table; no. 2, p. 1–31, 5 fold. plates of illus. at end.) 15 refs. Text in Russian. ***Title tr.:*** Traces of the stone age in the Angara River valley.

Sketches the history of the Angara valley, its economic development to the mid-17th century, unsuccessful attempts to increase the river's navigability and its decline as a trade route. Author's 1882–1887 (?) trips along the Angara, archeological discoveries on its upper (No. 48768, 48769), middle and lower course, chance finds (including several stone fish on the Verkholensk mountain, near Irkutsk) are dealt with. The Irkutsk area burials discovered in 1887 are reported and their cranial material described and tabulated. A stratified site was excavated in 1882 at the Chadobets River's confluence with the Angara; the finds are described: chipped and polished stone artifacts (celts or pestels, axes, scrapers, points), ornamented (linear, hole-comb) pottery fragments, bronze and iron implements (axes, arrowpoints, scrapers). Some of the stone and metal finds are illustrated in lithographs.

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55833. VITKOVSKIĬ, V. L. Chernaia smorodina sorta Primorskiĭ chempion v Zapoliar'e. (Sad i ogorod, June 1957. god 95, no. 6, p. 56–57, table.) Text in Russian. ***Title tr.:*** The black currant "Primorskiĭ Champion" in the Arctic.

A cold-resistant, high-yield variety of black currant raised in the Maritime Province by Khudiakov in 1912, was brought to the Polar Experimental Station in Khibiny where it grows satisfactorily yielding good crops. Growth data of this variety are compared with those of the Igarka black currant, and the higher yield of the former (2 kg./bush as compared with 1.5 kg. of the Igarka strain) is noted. ***Copy seen:*** DLC.

55834. VITKOVSKIĬ, V. L. Iagodnye kul'tury na Kol'skom poluostrove. (Sad i ogorod, June 1958. god 96, no. 6, p. 54–57, illus.) Text in Russian. ***Title tr.:*** Small fruit culture on Kola Peninsula.

Survey of the selection and growing of small fruits by the (Kirovsk) Polar Experimental Station of the All-Union Plant Cultivation Institute, occasioned by the 35th anniversary of the station. The most suitable strains of black and red currant, raspberry and strawberry are described and their successful cultivation by the station and in Murmashi, Monchegorsk, Kandalaksha, Murmansk is reported. The achievements of this station have been of first importance for small fruit cultivation in the far North.

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55835. VITOV, M. V. Formy poseleniĭ evropeĭskogo Severa i vremia ikh vozniknoveniia. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1958. vyp. 29, p. 30–37, illus., sketch maps.) 15 refs. Text in Russian. ***Title tr.:*** Settlement types in the European North and the time of their appearance.

Discusses the influence of economic development on village planning patterns in northern Russia, including the White Sea coastal area. Five types are differentiated: street alignments (houses facing each other), lake- or river-oriented house-rows, south-oriented house-rows, planless villages, and ring-formation: dwellings grouped around church or village green. An ethnic explanation for the origin of these village types is rejected due to the comparatively late appearance of village-like settlements in the sparsely populated North. Earliest (16th–17th century) was the planless village (agglomeration of individual homesteads); with subsequent development of river and lake traffic, houses faced the waterways; similarly, overland trade of the 19th century resulted in double rows of houses facing the road.

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55836. VITOV, M. V., Gnezdovoĭ tip rasseleniia na russkom Severe i ego proiskhozhdenie. (Sovetskaia ėtnografiia, 1955, no. 2, p. 26–40, maps incl. fold.) Approx. 30 refs. Text in Russian. ***Title***

tr.: The cluster-type settlement of the Russian North and its origin.

Discusses the tendency of one- or multi-homestead hamlets to group into a large village, typical of Arkhangel'skaya Oblast' and western Karelia settlement since the 15th–16th centuries among both the aboriginals and the Russians. Such village clusters bear a collective name, often of non-Russian (pre-Russian?) origin, as well as individual Russian hamlet names, the latter, usually, with patronymic endings. This seems to confirm the supposition of hamlets being originally unions of family homesteads, and joining other kin groups to form larger village units. An economic-patriarchal origin for this type of settlement is tentatively suggested.

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55837. VITTE, NIKOLAĬ KARLOVICH. Teplovoĭ obmen cheloveka i ego gigienicheskoe znachenie. Kiev, Gos. med. izd-vo USSR, 1956. 148 p. illus., tables. About 200 refs. Text in Russian. ***Title tr.:*** Heat exchange of man and its hygienic significance.

Consecutive sections of this monograph deal with the temperature of the human body and its parts; vascular skin reaction to environmental changes in temperature and humidity, and changes of skin temperature; heat exchange through radiation and convection; heat loss through evaporation; heat production as affected by low and high environmental temperature; heat exchange as a whole and its relation to ambient temperature, irradiation and other meteorological factors; utilization of heat exchange data in health protection, specifically in work and clothing; methods of studying heat exchange in man. References cite Russian literature to 1952, foreign to 1949.

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V'IŪSHINSKIĬ, N. S., *see* Bobrushkin, L. G., *and others.* Obezvozhivanie kontsentrata . . . *1958.* No. 49787.

55838. V'IŪSHKOV, B. P. Tupilīakozavr, novaīa paleontologicheskaīa zagadka. (Priroda, Sept. 1957, no. 9, p. 112–13.) 3 refs. Text in Russian. ***Title tr.:*** *Tupilakosaurus,* a new paleontological enigma.

Contains, in part, a generalization of E. Nielson's paper (No. 41602), describing *Tupilakosaurus heilmani,* n. gen. et n. sp., an interesting batrachomorph from the Triassic of East Greenland. In 1954–55, the geologists V. I. Ignat'ev and G. I. Blom discovered numerous bones of *Tupilakosaurus* in 20 localities in the basin of the Vetluga River, a left tributary of the Volga. These specimens are compared with the Greenland ones. The need of further study is stressed.

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55839. VIZE, VLADIMIR IŪL'EVICH, 1886–1954. Izotermy dlīa poverkhnostnogo sloīa vody v Barentsovom more. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniīa moreĭ SSSR, 1928. vyp. 9, p. 7–33, tables, maps.) 93 refs. Text in Russian. Summary in German. ***Title tr.:*** Isotherms for the surface water of the Barents Sea.

A survey based on ship records from 219 trips, with isotherms reproduced for the months July, August and September. The currents are analyzed on the basis of the temperature records, especially the most numerous ones for August. Thus the North Cape and Pechora currents are traced and evidence found for an Arctic current off Bjørnøya and a branch of the Atlantic current south of Svalbard. ***Copy seen:*** DLC.

55840. VIZE, VLADIMIR IŪL'EVICH, 1886–1954. K voprosu ob ostrovakh v severnoĭ chasti Karskogo morīa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniīa moreĭ SSSR, 1931. vyp. 14, p. 155–69, illus., tables, maps.) 8 refs. Text in Russian. Summary in German. ***Title tr.:*** The problem of the islands in the northern Kara Sea.

Hypothesis is proposed that there exists an undiscovered island between Vize and Uyedineniya Islands (approx. 78° N. 83° E.). Observations of water temperature, ice and bottom conditions during the drift of the *Sv. Anna,* in 1913, and from the *Sedov* 1930 are cited in support of this proposal.

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55841. VIZE, VLADIMIR IŪL'EVICH, 1886–1954. Neskol'ko dannykh k gidrologii Karskogo morīa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniīa moreĭ SSSR, 1931. vyp. 14, p. 19–26, tables.) Text in Russian. Summary in German. ***Title tr.:*** Some data on the hydrology of the Kara Sea.

Report on hydrological observations made by L. L. Breĭtfus from the ice-breaker *Svīatogor* in 1920, when on a trip to rescue the ice-bound *Soloveĭ Budimiro-*

vich. Surface and depth temperatures were taken at a series of stations in June, when, usually, this sea is hardly accessible.
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55842. VIZE, VLADIMIR IÛL'EVICH, 1886–1954. O znachenii sistematicheskogo izucheniia Barentsova moria dlia meteorologicheskikh i gidrologicheskikh prognozov. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia morei SSSR, 1930. vyp. 11, p. 5–20, illus., tables, maps.) 21 refs. Text in Russian. Summary in German. ***Title tr.:*** On the significance of systematic study of the Barents Sea for meteorological and hydrological forecasts.

The relation between the water temperature and ice conditions in the Barents Sea and the air temperature of northern Europe is pointed out. This influence appears to extend over even greater areas and to affect weather in general. In order to enable long-range weather prognosis for Europe, a better knowledge of conditions in the Barents is necessary. To attain it, author advises making oceanographic profiles and reviews of ice conditions at least four times a year and frequent water temperature records from ships. ***Copy seen:*** NN.

55843. VIZE, VLADIMIR IÛL'EVICH, 1886–1954. Ob anomaliiakh temperatury poverkhnostnogo sloia vody v Barentsovom more. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia morei SSSR, 1928. vyp. 9, p. 35–60, illus., tables, maps.) 7 refs. Text in Russian. Summary in German. ***Title tr.:*** On temperature anomalies of the surface water in the Barents Sea.

A study of deviations from the median temperature for the months July–September, and their dependence on barometric pressure in Northern Europe. By studying the latter, the author found that the air pressure of the preceding winter affects the temperature of the water. Increased air circulation generally causes a positive anomaly in water temperature, a reduced air circulation, a negative one. The effect of water temperature upon air pressure is also discussed.
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VLADIMIROV, A. T., *see* Budanov, V. I., *and others.* Present-day vertical movements . . . seacoasts. *1957.* No. 49977.

VLADIMIROV, A. T., *see* Budanov, V. I., *and others.* Sovremennye vertikal'nye dvizheniia beregov . . . *1957.* No. 49978.

55844. VLADIMIROV, I. Nachal'nik 13 tsekha. (Klub, Dec. 1957. god 7, no. 12, p. 14–15, illus.) Text in Russian. ***Title tr.:*** Chief of the 13th workshop.

Describes the improvements made by the new director of an Arkhangel'sk lumber-mill club: movies, lectures, concerts, dances, discussions on work productivity and output, etc.
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55845. VLADIMIRSKAIA, M. I. Kharius iz ozer severo-zapadnogo uchastka basseina ozera Imandra. (Zoologicheskiĭ zhurnal, May 1957. t. 36, vyp. 5, p. 729–36, illus. tables.) 4 refs. Text in Russian. Summary in English. ***Title tr.:*** The grayling from lakes of the northwestern part of the Lake Imandra basin.

Presents information on the distribution of this fish, its size in different lakes and weight; size and weight of males and females; growth rate (higher in males); propagation, food composition at various seasons, body fatness (maximal in winter, minimal in spring), migrations; enemies.
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VLADIMIRSKAIA, M. T., *see* Nikol'skiĭ, G., *and others.* Notes . . . Atlantic salmon investigations . . . *1958.* No. 53605.

55846. VLASOV, G. M. Chetvertichnye vulkany Severnoĭ Kamchatki. (Akademiia nauk SSSR. Laboratoriia vulkanologii. Trudy, 1956, vyp. 12, O vulkanizme, geologii i gidrotermakh Kamchatki, p. 191–96, table, map.) 3 refs. Text in Russian. ***Title tr.:*** Quaternary volcanoes in northern Kamchatka.

Discusses the northern extension of the Kamchatka volcano system, which seems from studies of 1941 and 1951, to go farther north than hitherto considered. The ancient Obrucheva Volcano (approx. 61°20′ N. 165°20′ E.) is described, four others belonging to the same group are noted, and the possibility is advanced of others, Quaternary or Tertiary volcanoes, even farther north. Editor's footnote (p. 191) expresses doubt whether the geologic formations described by the author are volcanoes in the strict meaning of this word. ***Copy seen:*** DLC.

55847. VLASOV, G. M. Novye dannye po geologii Kamchatki i perspektivy ee rudonosnosti. (Sovetskaia geologiia, May 1958. god 1, no. 5, p. 3–18, 2 text maps.) 7 refs. Text in Russian. Summary in

English. ***Title tr.:*** New data on the geology of Kamchatka and its ore prospects.

Presents new views on geology and occurrence of ores in Kamchatka Peninsula based chiefly on recent geologic mapping (at scale 1 : 1,000,000 and 1 : 500,000), field investigations and prospecting. The geologic structure and formation of ore are found to be much younger than was hitherto believed. Kamchatka, it appears, was folded mainly in the Alpine mountain-building period and consists of Upper Cretaceous rocks. The main structure is defined by a central massif and two parallel fold arches which cross the peninsula in a northeasterly direction. Tectonic regions are outlined, and a structural map is presented. Occurrence of ores is mainly bound to the development of geosynclines in the post-Neogene period. The main regional formations are defined, and the regions characterized in turn. Hydrothermal processes in formation of ores are stressed. At present the leading metals of Kamchatka are copper, molybdenum and mercury. Conditions are favorable for gold and silver. Other metals of possible importance for production are barium, antimony, arsenic and selenium. Geologic mapping (at scale 1 : 200,000) of areas with ores indicated and further prospecting are considered of first importance.

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55848. VLASOV, G. M., *and* **M. M. VASILEVSKIĬ.** Zonal'nost' izmenennykh porod sredinnogo Kamchatskogo khrebta. (Akademiia nauk SSSR. Doklady, Oct. 1, 1958. god 26, t. 122, no. 4, p. 679–82, diagr.) 3 refs. Text in Russian. ***Title tr.:*** The zonality of transformed rocks of the central Kamchatka Range.

Reports investigation of hydrothermal rock transformation initiated by the All-Union Geologic Institute in 1956–57. The geologic structure of the range, consisting of magmatic and metamorphic rocks of different age, from Precambrian to the Quaternary, is outlined. Cross-sections (50) of various series in Polovinka, Sukharinka, Kadar, and Kirgunik River basins were examined. The hydrothermal effects and their vertical and horizontal zonality are discussed. Development of zonality in upper, middle and lower series of the structure and development of various facies are graphically presented. ***Copy seen:*** DLC.

55849. VLODAVETS, V. V., *and others.* Sravnitel'naia otsenka metodov bakteriologicheskogo issledovaniia vozdukha pri otritsatel'nykh temperaturakh. (Mikrobiologiia, Sept.–Oct. 1958. t. 27, vyp. 5, p. 646–51, tables.) 12 refs. Text in Russian. Summary in English. *Other authors:* E. Iu Zuĭkova *and* M. A. Motova. ***Title tr.:*** Comparative evaluation of methods for bacteriological investigation of air at negative temperatures.

Report on a survey of apparatus and methods used in Russia, with air temperatures ranging from −8.8° to −23.6°. Krotov's apparatus showed the highest trapping capacity, followed in efficiency by membrane filters, electroprecipitators, Shafir's aerocentrifuge and Zubarev's method. ***Copy seen:*** DLC.

VLODAVETS, VLADIMIR IVANOVICH, *see* Akademiia nauk SSSR. Vulkanologicheskaia stantsiia. Katalog . . *1957.* No. 49187.

55850. VODOP'IANOV, MIKHAIL VASIL'EVICH, 1899– . Puti otvazhnykh. Moskva, Gos. izd-vo geograf. lit-ry, 1958. 119 p. illus., ports, map. Text in Russian. ***Title tr.:*** Ways of courageous men.

Popular account of several notable events of Soviet arctic exploration: investigation and mapping of Severnaya Zemlya by the expedition under G. A. Ushakov in 1930–32 (p. 8–27); passage of the Northern Sea Route by the ice-breaker *Sibiriakov* in 1932 (p. 28–50); foundation of the Main Administration of the Northern Sea Route, expedition of the ice-breaker *Chelius'kin*, her wreck and rescue of those aboard in 1933–34, and several other undertakings of the Main Administration (p. 51–79), among them (p. 75) transfer of a dry dock for fishing vessels from Kaliningrad (former Königsberg) via the Northern Sea Route to Kamchatka in 1956. The first Soviet expedition to the North Pole in 1937, drift of the station North Pole (1) in 1937–38, and the post-war high latitude expeditions and drifting stations North Pole 2–7 (p. 80–117) are reviewed. Explorers, expedition leaders, ice-breaker captains and flyers are characterized. The scientific, economic, and military significance of the successes achieved in the Arctic is stressed. The book is occasioned by the 25th anniversaries of the Severnaya Zemlya expedition, *Sibiriakov* expedition and of foundation of the Main Administration of the Northern Sea Route, and

the 20th anniversary of the first Soviet North Pole expedition.

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55851. VOGEL, GÜNTHER, *and others.* Über den Einfluss verschiedener Temperaturen auf das Aktionspotential des einzelnen Ranvierschen Schnürringes. (Pflügers Archiv für die gesamte Physiologie, 1958. Bd. 267, Heft 4, p. 414–16, illus.) 4 refs. Text in German. *Other authors:* H. John *and* H. Krause. ***Title tr.:*** The effect of various temperatures on the action potential of the single Ranvier knot.

Report of changes in isolated tibial nerves of the frog in the temperature range of 5° to 37° C. Low temperature caused a lengthening of the action potential due exclusively to a change in time of the phase of Na-inactivation.

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55852. VOGT, REIDAR. Inntrykk fra en ekskursjon i Nord-Finland. (Tidsskrift for skogbruk, Oct. 1954. årg. 62, hefte 10, p. 360–62, illus.) Text in Norwegian. ***Title tr.:*** Impressions from an excursion in northern Finland.

Reports field trip during the 8th Scandinavian Forestry Congress in July 1954 in the vicinity of Rovaniemi-Kemijärvi-Salla just north and south of the Arctic Circle. With its low altitude and favorable terrain, northern Finland has large areas in coniferous forest. Regeneration of pine and spruce, also work in the experimental forests were studied on the trip. ***Copy seen:*** DA.

VOĬLOSHNIKOV, V. D., *see* Charushin, G. V., *and* V. D. Voĭloshnikov. Novye naskal'nye risunki . . . *1953.* No. 50187.

55853. VOIPIO, PAAVO. Some remarks on the taxonomy of Finnish squirrels. (Suomalainen eläin- ja kasvitieteellinen seura Vanamo. Tiedonannot (Archivum), 1956. v. 11, no. 2, p. 97–107, 2 illus.) 15 refs.

Deals with two geographical races in Fennoscandia, *Sciurus vulgaris vulgaris* and *S. vulgaris varius;* the latter distributed in the extreme north of the Scandinavian Peninsula and east into Russia. Both races form a clear cline in the degree of greyness of the winter pelage, the greyness corresponding to the diagnosis of *vulgaris* in south and central Finland, and that of *varius* in north Finland. The genetic nature of this cline cannot be proved as yet, the possibility of environmental effect not being excluded. ***Copy seen:*** DLC.

55854. VOĬTIK, P. Dekabristy, prosvetiteli Sibiri. (Sibirskie ogni, May–June 1957. god 36, no. 3, p. 175–76.) 2 refs. Text in Russian. ***Title tr.:*** The Decembrists, enlighteners of Siberia.

Discusses the educational work among Siberian peasants by the participants in the December 1825 Revolution, exiled to Siberia by Tsar Nicholas I. V. F. Raevskiĭ's school at Olonki on the Angara River is mentioned. ***Copy seen:*** DLC.

55855. VOĬTKOVSKIĬ, K. F. Opytnyĭ ledi͡anoĭ sklad. (*In:* Akademii͡a nauk SSSR. Institut merzlotovedeni͡a. Sezonnoe promerzanie gruntov i primenenie l'da dli͡a stroitel'nykh t͡seleĭ. 1957. p. 88–100, illus., tables, graphs, diagrs.) Ref. Text in Russian. ***Title tr.:*** An experimental ice storeroom.

"The construction of a compacted-snow storeroom at the Zagorsk Experimental Station in Jan.–Mar. 1952 is described in detail, and the causes for deformations that appeared between 1952 and 1956 are analyzed. Initial deformation and melting diminished after compaction of the water-saturated snow produced a frozen density of 0.6–0.7. It was necessary to wet and freeze the 1-m. layer of insulating sawdust to prevent an annual melting of 0.5 m. Remarks by the designer of the storeroom, M. M. Krylov, analyzing the causes of deformation are appended."—SIPRE.

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55856. VOKES, FRANK M. The copper deposits of the Birtavarre District, Troms, northern Norway. Oslo, H. Aschehoug, 1957. 239 p. illus., maps (3 fold.), diagrs., graphs, cross-sections, 27 tables. (Norway. Geologiske undersøkelse. Skrifter 199.) 59 refs. Text in English. Summary in Norwegian.

Contains results of investigations during 1952–1955 by the Norwegian Geological Survey in the area 69°30′ N. 21° E. at the head of Kåfjord (inlet of Lyngenfjord). Chalcopyrite-pyrrhotite ores were mined there in 1900–1919, and these investigations were to determine possibility of reviving mining as part of the "North Norway Plan." Physical geography is briefly described; stratigraphy and structure were reported in No. 41752. Geology of the ore deposits is discussed in detail. Types of ore, mineralogy, metasomatic alteration along ore-zones, and origin of the ores are dealt with; also history of mining and economic

factors. Each of the individual workings in the area is described in detail, with brief evaluation of prospects. The copper content (low) does not warrant capital investment necessary for mining in the foreseeable future.

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55857. VOKES, FRANK M. On the presence of minerals of the linnaeite series in some copper ores from the Raipas formation of northern Norway. (Norway. Geologiske undersøkelse. Skrifter 200, *its* Årbok, 1956, *pub.* 1957, p. 112–20, plate.) 7 refs. Summary in Norwegian.

Two minerals, siegenite and carrollite, of the linnaeite series, A_3S_4, have been identified and examined from two localities in the Alta district of Finnmark. Their properties, chemical composition and modes of occurrence are discussed in this first published record of their occurrence in Norwegian ores. Associated minerals are identified.

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55858. VOKES, FRANK M. Some copper sulphide parageneses from the Raipas formation of northern Norway. (Norway. Geologiske undersøkelse. Skrifter 200, *its* Årbok 1956, *pub.* 1957. p. 74–111, 3 plates, text map, 7 diagrs.) 29 refs. Summary in Norwegian.

In the Precambrian Raipas formation in Norway, near 70° N., copper deposits exhibit both the common pyritic and the less common copper parageneses. They are described and their relationships discussed. Different origins are suggested. The presence of a cobalt sulphide suggests the possible occurrence of uranium. Individual mines and occurrences of several minerals are described to clarify the paragenetic relationships.

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55859. *VOKRUG SVETA.* Podvodnye vulkany i nesushchestvuûshchiĭ porog. (Vokrug sveta, June 1958, no. 6, p. 4.) Text in Russian. ***Title tr.:*** Submarine volcanoes and a non-existent threshold.

Notes discovery of a region of submarine volcanoes in the Antarctic made by the expedition on the diesel-electric *Ob'*; and oceanographic work of an expedition on the diesel-electric *Lena* in Greenland Sea. The *Lena* investigated the area between Greenland and Svalbard where the so-called Nansen Rise is believed to extend but did not find it, only several isolated submarine mountains, separated by deep valleys.

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55860. *VOKRUG SVETA.* Postup' uragana. (Vokrug sveta, July 1958, no. 7, p. 32.) Text in Russian. ***Title tr.:*** The path of a hurricane.

Popular outline of a new method to study hurricanes and tornadoes by registering the micro-seismic waves. The method was devised at the Institute of Terrestrial Physics (Institut fiziki zemli) Moscow, by V. F. Bonchkovskiĭ and F. I. Monakhov, who traced the path of a great hurricane raging in the Arctic between Greenland and Scandinavia in Oct. 1957. ***Copy seen:*** DLC.

55861. *VOKRUG SVETA.* Snimki rasskazyvaûT. (Vokrug sveta, May 1958, no. 5, p. 14–15, illus.) Text in Russian. ***Title tr.:*** Photographs report.

Includes photo of a new settlement on the Vogulka River, left tributary of the Severnaya Sos'va, a natural gas site in Khanty Mansi National District.

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55862. VOLIKOV, A. A. O vyvedenii cheloveka iz sostoûniû zamerzaniû. (Vestnik khirurgii, Apr. 1957. t. 78, no. 4, p. 98–100, illus.) 6 refs. Text in Russian. ***Title tr.:*** Management of frozen man.

Discussion and case history of a man, aged 32, found in serious condition after 18 hrs. exposure to cold. Condition at delivery to hospital, early and successive therapy, nervous and mental effects, recovery, etc. are recorded.

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55863. VOLKOV, N. A. Na l'dine cherez okean. (*In:* Burkhanov, V. F. Cherez okean na dreĭfuûshchikh l'dakh, 1957, p. 312–82, illus.) Text in Russian. ***Title tr.:*** Across the ocean on an ice floe.

Account of drifting station North Pole-5 by its head in 1955–56: its purpose, site, personnel; electric station, tents and prefabricated houses; flight and landing on ice at 82°04′ N. 156°52′ E. on Apr. 8, 1955; air lift of equipment and supply, in part from North Pole-3; everyday life and work in camp; struggle with snow and ice water in summer; reconnaissance flights by helicopter and crash landing (fog) in June. Work with a small, portable, 112 kg. echo-sounding device (p. 358); study of heat exchange through the ice cover in the polar night

(D. L. Laĭkhtman); winter living conditions; ice pressure, cracking and storm damage; difficulties in discharging radiosondes; arrival of relief team Apr. 20, 1956 and plans to evacuate the station when it reaches waters between Greenland and Spitsbergen. ***Copy seen:*** DLC.

VOLKOVA, M. I., *see* Bel'kov, I. V., *and* M. I. Volkova. Chevkinit . . . *1958.* No. 49627.

55864. VOLOSHINA, A. P. Nekotoryye osobennosti mikroklimata srednego Priangar'ia. (Moskva. Universitet. Vestnik, ser. biologii, pochvovedeniia, geologii, geografii, 1958, no. 1, p. 221–30, tables, diagrs.) 3 refs. Text in Russian. ***Title tr.:*** Some features of the microclimate of the middle Angara River region.

Presents results of microclimatic investigations, Aug.–Nov. 1956, in connection with a hydroelectric station project at Nizhne-Ilimsk (57° N. 103°30′ E.). The observation localities are described and data on temperature measurements at, and 1.5 m. above the surface are presented in tables and diagrams. Effects of relief and vegetation are considered. Timing of frost and freezing of water is discussed. Special attention is given to clouds and cloudiness, which significantly affect temperature variations and frost occurrence. Clouds as protectors from frost are treated in detail. Data on cloudy days and days with frost are included for various stations in the Angara and Ilim regions. ***Copy seen:*** DLC.

55865. VOLOSIUK, G. K., *and* **F. A. SHAMSHEV.** Pervye itogi primeneniia otechestvennykh almazov dlia bureniia razvedochnykh skvazhin. (Razvedka i okhrana nedr, Apr. 1958. god. 24, no. 4, p. 19–21.) Text in Russian. ***Title tr.:*** First results of the application of native diamonds to drilling bore holes in prospecting.

Outlines a study started in 1957 to utilize diamonds found in Yakut A.S.S.R. for prospecting purposes. In laboratory and field tests, these native diamonds compared favorably with foreign. Data of comparison and characteristics of the native stones as drill bits are given. Further work is required on industrial diamonds for machine tools.

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55866. VOLOSTNOVA, M. B. Slovar' russkoĭ transkriptsii geograficheskikh nazvaniĭ, chast' 1; geograficheskie nazvaniia na territorii SSSR. Moskva, Gos. uchebno-pedag. izd-vo, 1955. 132 p. Text in Russian. ***Title tr.:*** Dictionary of geographic names in Russian transcription, pt. 1; geographic names on U.S.S.R. territory.

Lists approx. 4000 geographic names with geographic identification (republic, province, main river for tributaries, etc.) and coordinates. Features of the Soviet Arctic are included. The dictionary is approved by the Ministry of Education of the R.S.F.S.R. and by the Main Administration of Geodesy and Cartography of the Ministry of the Interior of the U.S.S.R. as obligatory for use by organizations publishing school text books and maps. ***Copy seen:*** DLC.

VOLOTKIN, N. IA., *see* Na promyslakh. *1956.* No. 53476.

55867. VOLOTOVSKAIA, N. A. Magmaticheskiĭ kompleks ul'traosnovnykh, shchelochnykh i karbonatnykh porod massiva Vuori-Iarvi. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski, 1958. ser. 2, chast' 87, vyp. 3, p. 290–303, illus., 4 tables.) 20 refs. Text in Russian. ***Title tr.:*** The magmatic complex of ultrabasic alkaline and carbonaceous rocks of the Vuori-Yarvi massif.

Contains brief outline of intrusive rocks of this massif, an 18 km² area east of Lake Vuori-Yarvi (approx. 67° N. 30° E.) in the southwest section of Murmanskaya Oblast'. Geology and geological structure of the massif are described. Age, metallization and phase development of ultrabasic, alkaline and carbonaceous rocks are characterized. Data on geochemistry of these rocks and their contact zones are given. Occurrence of titanomagnetite perovskites and magnetite ores is mentioned.

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55868. VOLOTOVSKAIA, N. A. Shchelochnyĭ kompleks Malogo massiva. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Materialy, nov. ser., Petrografiia, 1957. vyp. 21, no. 2, p. 22–38, illus., cross-sections.) Text in Russian. ***Title tr.:*** The alkaline complex of the Malyy massif.

Outlines geologic structure and petrographic characteristics of the Malyy alkaline massif in northern Karelia (approx. 66°29′ N. 31°28′ E.). The rocks, mainly Archean gneisses, gneiss-granites and pegmatite veins, are described and their changes by alkaline metasoma-

tism noted. Crack intrusions of trachytic ijolites, trachytic nepheline-syenites and poikilitic nepheline syenites are outlined. The petrography is comprehensively treated; chemical and mineralogic analyses are presented. The magmatic complex of the Malyy massif is considered to be more closely connected with Caledonian than with Herzynian intrusions.

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55869. VOLOVICH, VITALIĬ GEORGIEVICH, 1924– . God na polûse; iz dnevnika polûrnika. (Novyĭ mir, Apr. 1956. no. 4, p. 204–227.) Text in Russian. ***Title tr.:*** A year at the Pole; from the diary of a polar worker.

Contains excerpts from the daily record of the physician of the drifting station North Pole-3, from the take-off at Moscow on Mar. 31, 1954 to the evacuation of the station on Apr. 20, 1955. The main events are chronicled: the flights, setting up camp on the ice, conditions of life in the tents and prefabricated huts, personnel of the station, crossing the North Pole on Aug. 25 (p. 211), the polar night, aerial resupply in Oct.–Nov., troubles caused by ice cracking and pressure in winter, transfer of the camp to new site, reappearance of the sun on Mar. 10, helicopter trips, evacuation of the station in April after a 376-day drift.

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55870. VOL'SOV, V. F., *and* T. ÎA. IVAN'KO. Opyt zalozheniîa fundamentov maloėtazhnykh zdaniĭ vyshe glubiny promerzaniîa. (Stroitel'naîa promyshlennost', July 1958. god 36, no. 7, p. 16–18, illus., diagrs.) Text in Russian. ***Title tr.:*** Experience in preparation of small-building foundations above the freezing level.

Contains a study of damage to walls and foundations of heated and semi-heated houses built according to the government regulations on frozen clay and argillaceous soils. Soil characteristics during freezing were determined at different depths and for different types of construction. Relation between soil plasticity and natural and maximum moisture content are graphically presented (fig. 4). Revisions in the regulations are suggested. ***Copy seen:*** DLC.

55871. VONOG, I. Nekotorye osobennosti proektirovaniîa zhilykh domov dlîa Kraĭnego Severa i Arktiki. (Arkhitektura SSSR, 1957, no. 2, p. 40–41.) Text in Russian. ***Title tr.:*** Certain features in the design of residential buildings for the far North and Arctic.

The effects of arctic climatic conditions are discussed in relation to apartment house construction. Typical designs for the mid-continental zone must be changed for the structure to withstand not only continuous low air temperature (−45° C.), but especially, high winds and snow storms. General arrangement and directional (meridional) orientation of the building to minimize effect of predominant cold winds are discussed, also arrangement and size of windows to provide cross ventilation and maximum illumination, to prevent great heat losses and to offset effects of prolonged light and dark periods of summer and winter. More attention to specific conditions of the North is suggested in development of basic house designs. ***Copy seen:*** DLC.

55872. VOROB'EV, A. Ledîanoĭ plot. (Znanie-sila. Apr. 1957. god 32, no. 4, p. 5, illus.) Text in Russian. ***Title tr.:*** Ice-float.

Project for a polar station on an artificially made ice-island is briefly outlined with illus. A refrigerating plant with a special set of piping is to be landed on drift ice in a region indicated. The assembled pipes are to be arranged as the frame for walls of living quarters, storage and service compartments. Water sprayed over the cold piping will form strong ice walls. The living quarters, laboratory and machinery sections are to be well insulated. The refrigerating plant, which may be operated on atomic energy, will maintain cold temperature in the ice-float without difficulty even when drifting through warm waters.

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55873. VOROB'EV, ÎU. Kitoboi kuril'skoĭ grîady. (Ogonëk, Jan. 1957. god 35, no. 2, p. 14–15, illus.) Text in Russian. ***Title tr.:*** Whalers of the Kuril Range.

Photographs with brief notes on Soviet whaling in the Pacific off the Kuril Islands: sighting whales from shipboard, the kill, towing the carcass with special tugboat to Skalistyy, the station on Shimushiru Island, processing, outstanding workers in this industry, etc.

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55874. VOROB'EV, K. A. K biologii razmnozheniîa nekotorykh predstaviteleĭ arkticheskoĭ i amerikanskoĭ ornitofauny v severo-vostochnoĭ ÎAkutii. (Akademiîa

nauk SSSR. Doklady, 1958. t. 119, no. 3, p. 609–612.) Text in Russian. ***Title tr.:*** To the biology of propagation of certain representatives of arctic and American bird fauna of northeastern Yakutia.

In spring and summer 1957 author explored the area between the lower Kolyma and the Chukoch'ya (70° N. 159° E.) Rivers, collected 60 species of birds, 31 of them characteristic for the area. He describes five in detail as having been noted for the first time to nest in this area. Two, *Grus canadensis* L. and *Macrorhamphus griseus scalopaceus* Say, are American. Occurrence, type of nest, eggs and young are considered in addition to morphology, color, flights, etc.

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55875. VOROB'EV, K. A. Nekotorye rezul'taty ornitologicheskikh issledovaniĭ v ŭzhnoĭ Iākutii. (Zoologicheskiĭ zhurnal, Mar. 1958. t. 37, vyp. 3, p. 465–69.) Text in Russian. Summary in English. ***Title tr.:*** Some results of ornithological investigations in southern Yakutia.

Summary of observations made by author in the summer of 1955 and 1956 in the Aldano-Uchurskiy mountain range and the Olekmo-Charskoye uplands (56°–60° N. 119°–132° E.). Nesting is recorded for the first time in seven species. Important zoogeographical findings are recorded for four species and considerable material is presented on reproduction of some little known forms.

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VOROB'EVA, OL'GA ANISIMOVA, *see* Akademiîa nauk SSSR. Kol'skiĭ filial. Shchelochnye granity . . . *1958*. No. 49178.

VOROB'EVA, S. I., *see* Mironov, S. I., *and others*. Asfal'topodobnyĭ bitum . . . *1958*. No. 53318.

VOROB'EVA, S. I., *see* Putsillo, V. G., *and others*. Nefti i bitumy devonskikh otlozheniĭ o-va Severnaîa Zemlîa . . . *1958*. No. 54175.

VOROB'EVA, S. I., *see* Putsillo, V. G., *and others*. Sibirskaîa platforma. *1958*. No. 54177.

VOROB'EVA, T. A., *see* Novosibirsk. Oblastnaîa biblioteka. Pisateli Sibiri . . . *1956*. No. 53669.

55876. VORONETS, N. S. Novyĭ rod *Virgatoptychites* iz severnykh raĭonov Sibiri. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1958. vyp. 9, p. 68–74, illus., plate.) 4 refs. Text in Russian. ***Title tr.:*** A new genus *Virgatoptychites* from northern Siberian regions.

Describes an ammonite from Lower Cretaceous deposits collected in 1951 by G. A. Ermolaev in the lower Anabar basin, near the Khangalakh-Yuëlya River (approx. 71°30′–73°30′ N. 116°15′ E.). This ammonite previously reported as a *Virgates* genus is now considered to be new, *Virgatoptychites changalassensis* Voronetz gen. nov. Type, description, diagnosis, measurements, location and age are given. This ammonite is compared with *Virgatoptychites*(?) *pachsaensis* sp. nov., described by T. P. Emel'îanîsev and E. S. Ershova, found on Cape Nordvik in 1953. Both are considered to be of Lower Cretaceous-Valanginian age.

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VORONETS, N. S., *see also* Demokidov, K. K. Osnovnye cherty . . . Leno-Olenekskogo raĭona. *1956*. No. 50496.

55877. VORONIN, P. F. Osobennosti vodosnabzheniîa v usloviîakh kholodnogo klimata. (Voenno-medîsinskiĭ zhurnal, Feb. 1956, no. 2, p. 55–60.) Text in Russian. ***Title tr.:*** Features of water supply in cold-climate conditions.

Information is presented on water sources in arctic areas, open and underground; chemical and biological characteristics of such waters; utilization of the various kinds of water resources during military operations; sterilization by heating or chemicals; utilization of snow, ice or sea water; water containers.

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55878. VORONOV, P. S., *and* **I. S. EGOROVA.** Analiz orientirovki sprîamlennykh uchastkov rechnykh dolin ŭgovostochnogo Taĭmyra dlîa izucheniîa neotektoniki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki, 1958. t. 80, Sbornik stateĭ po geologii Arktiki, vyp. 5, p. 139–48, diagrs.) 5 refs. Text in Russian. ***Title tr.:*** Analysis of the orientation of adjustments in river valley courses in southeast Taymyr applied to study of recent tectonics.

The method of analysis consisted of compiling from a map, in scale 1:500,000, the azimuthal directions of tributary course segments measuring 5 km. or more on both sides of the Khatanga, in all 174

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such measurements on the left and 128 on the right of the stream. The azimuthal directions were plotted on a rose diagram which was compared with a similar diagram representing the courses of main tectonic fractures in the eastern part of the Taymyr Peninsula depression (approx. 71°40′–72°20′ N. 102°–106° E.). The main tectonic fracture lines were detected by aero-magnetic survey. Comparison of the diagrams reveals that river valleys show accommodation to the tectonic fractures and therefore it is concluded that study of river valley courses serves to reveal recent tectonics.

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55879. VORONOV, P. S. Biostratigraficheskai͡a kharakteristika razreza permskikh otlozheniĭ ra͡ĭona Syndasko, ûgo-vostochnoe poberezh'e Khatangskogo zaliva. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1958. vyp. 9, p. 21–53, tables, diagrs., map.) 12 refs. Text in Russian. ***Title tr.:*** Biostratigraphic characteristics of cross-sections from Permian deposits of the Syndasko district on the southeast coast of Khatanga Bay.

Describes in detail cross-section of Permian deposits from a well (73°08′ N. 107° 42′ E.) drilled in 1953 in connection with prospecting for oil in the Nordvik region. Geologic structure is briefly reviewed and lithology and mineralogic properties of the deposits outlined. A new stratigraphic division for these deposits is presented (table, p. 23) based on microfauna, predominantly foraminifera. From Permian deposits over 1,700 m. thick, the foraminifera have been studied and are characterized according to the horizons distinguished. ***Copy seen:*** DGS.

55880. VORONOV, P. S. K voprosu o tektonike dna Karskogo mori͡a. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1957. vyp. 5, p. 36–40, map.) 16 refs. Text in Russian. ***Title tr.:*** On the question of the tectonics of the Kara Sea bottom.

A pre-Hercynian massif is believed to have existed on the bottom of the Kara Sea. Its extent is described; the geophysical, paleogeographic, paleontologic and morphologic traces, which support its existence are evaluated. This Tobol'sk-Kara massif is said to help explain the tectonics and facies composition of deposits not only of the Kara Sea region, but also of Novaya Zemlya, Pay-Khoy, Northern Ural and other areas.

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55881. VORONOV, P. S. O proi͡avlenii izostazii v predelakh Grenlandii i Antarktiki. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958. vyp. 9, p. 29–35, map, diagr.) 9 refs. Text in Russian. ***Title tr.:*** On manifestation of isostasy in the limits of Greenland and Antarctica.

Reviews recent studies on the great ice-sheet distribution in Greenland and in eastern Antarctica where the author has worked, and considers the isostatic effects. G. M. Ignat'ev and French-British expeditions' work on thickness of accumulated ice in Greenland is noted with comment. The effects of enormous ice sheets on land surface and shelf level are discussed. The shelves of Greenland and the eastern Antarctic are about 200–300 m. lower than in adjacent areas and this can be best explained in considering the isostatic effects of deposited ice. ***Copy seen:*** DGS.

55882. VORONOV, P. S., *and* **IÛ. N. KULAKOV.** O svi͡azi konfigurat͡sii gidroseti severa Sibiri s noveĭsheĭ tektonikoĭ. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958. vyp. 9, p. 47–52.) 19 refs. Text in Russian. ***Title tr.:*** On the relation between the configuration of river nets and new tectonics in the northern part of the Siberian platform.

Recent studies on new tectonic movements and topographic relief indicate the important role of endogenous power in shaping river valley nets. The rivers of northern Siberia are reviewed. They are of two types: some keep the same direction for long distances, e.g., the Dudypta, Boganida, Kotuy, Kureyka, Lenivaya, etc.; others are winding rivers: the Yenisey north of Igarka, the Tanaya, Pyasina, Agapa, Kheta, Anabar, etc. The two river types are discussed; new tectonic movements are considered, and their influence on the development of river valleys or their parts is examined. More extensive investigations are required. ***Copy seen:*** DGS.

55883. VORONOV, P. S. O svi͡azi nekotorykh zakonomernosteĭ rel'efa severa Sredneĭ Sibiri s prot͡sessami neotektoniki. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy,

1958. t. 67, Sbornik stateĭ po geologii Arktiki, vyp. 7, p. 94–103, fold. map.) Text in Russian. ***Title tr.:*** On the link of some relief features of north-central Siberia with neotectonic processes.

Presents a comparison between recent, mostly Quaternary, tectonic movements and the river network configuration in the Soviet Arctic, approximately between the Ob and Khatanga Bays. Structural tectonic lines and the directions of principal rivers and main tributary valleys are mapped, and the apparent correlation outlined. Three geomorphic regions are distinguished: the Taymyr Peninsula mountains, the Taymyr lowland, and the central Siberian plateau.

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55884. VORONOV, P. S. O vozmozhnosti nakhozhdeniĭa devonskikh kaliĭnykh i bornykh soleĭ v raĭone Khatangskogo zaliva. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 80, Sbornik stateĭ po geologii Arktiki, vyp. 5, p. 182–88, maps.) 9 refs. Text in Russian. ***Title tr.:*** On a possible find of Devonian potassium and boric salt in the region of Khatanga Bay.

Salt domes on Kozhevnikova (eastern arm of Khatanga) Bay, 73°40′ N. 100° E., and in adjacent areas and the possibility that potassium and boric salt might be found there are discussed. A salt dome found by M. F. Lobanov in 1940–41 is studied and its structure and geologic characteristics are outlined. Indicated Devonian sediments are described and their geochemical composition given. Stages of salt dome development and the climatic conditions are discussed. ***Copy seen:*** DGS.

55885. VORONOV, P. S. Obshchie zakonomernosti strukturnogo plana severa Sredneĭ Sibiri. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 250–73 4 maps, incl. 1 fold.) Text in Russian. ***Title tr.:*** General features of the structural plan of north-central Siberia.

Distinguishes four geostructural units in the arctic region 80°–114° E.: the folded region of Taymyr and Severnaya Zemlya, Taymyr lowland, Siberian platform, and the Kara platform. The tectonic development is described on the basis of recent (cited) investigations of each of these main geostructures in turn; and depicted upon the maps.

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VORONOV, P. S., *see also* Vakar, V. A., *and others.* K voprosu o regional'nykh razlomakh . . . *1958.* No. 55708.

55886. VOROPINOV, V. S. Petroglify u der. M. Vorob'evo na verkhneĭ Lene. (Sovetskaĭa arkheologiĭa, 1958. no. 2, p. 243–44, illus.) Ref. Text in Russian. ***Title tr.:*** Petroglyphs at Maloye Vorob'evo village on the upper Lena.

Describes neolithic rock engravings discovered at 15 m. elevation on the rocky right bank of the Lena River in the Zhigalovo area. Stylistically they show analogies to the petroglyphs found by A. P. Okladnikov in the Markha River valley. The representation of a man feeding an elk and of a harnessed deer confirm Okladnikov's supposition that neolithic tribes in Yakutia engaged in animal husbandry in addition to hunting and fishing. ***Copy seen:*** DLC.

55887. VORREN, ØRNULV. Samefolket i nordnorsk samfunn. Tromsø. 15 p., illus. (Ottar, Jan. 1957. nr. 11 (1956, nr. 4).) Text in Norwegian. ***Title tr.:*** The Lapps in north Norwegian society.

In 1930 there were 18,842 Lapps in north Norway. Hunting, sealing and fishing were the most important occupations prior to the development of reindeer nomadism in the 16th–18th centuries. The Lapps' utilization of their territories has taken three main forms: sea Lapp culture, forest Lapp culture and reindeer nomadism. Development from contact with neighbouring civilizations, and the disintegration of Lapp culture as the bases of the old way of life disappeared, are indicated. Some steps to help the Lapps fit into a specialized and industrialized society are mentioned: the building of schools and of slaughter and freezing plants for reindeer, the founding of agricultural societies, etc.

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55888. VORREN, ØRNULV. En stallostein. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4), p. 26–28, illus.) Text in Norwegian. ***Title tr.:*** A Stallo stone.

Describes a stone raised near Karlebotn (approx. 70°10′ N. 28°40′ E.) on the Varanger fjord, north Norway, with details on the Lapps' mythical figure of Stallo, and some stallo myths.

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55889. VORREN, ØRNULV. Tinntrådbroderier. (Ottar, Oct. 1957. nr. 15 (1957 nr. 4), p. 16–19, illus.) Text in

Norwegian. ***Title tr.:*** Tin thread embroidery.

Tin thread embroidery as practiced among the Lapps in Norway prior to this century, the tools and technique are described. ***Copy seen:*** DLC.

55890. VORUM, KJELL. Ny nordgrense for fire meisearter. (Naturen, 1949. Årg. 73, nr. 10, p. 314–15.) Text in Norwegian. ***Title tr.:*** New northern limit for four titmouse species.

Reports: Aegithalos caudatus caudatus at 71°05′ N., and *Parus cinctus cinctus, P. atricapillus,* and *P. caeruleus caeruleus* at 71°03′ N. in Finnmark, northern Norway. *Parus cinctus cinctus* could live where it was seen, but the others, on sites of sparse vegetation, were probably transients. ***Copy seen:*** DGS.

VOS, J. J., *see* Vendrik, A. J. H., *and* J. J. Vos. A method . . . measurement . . . thermal conductivity . . . skin. *1957.* No. 55784.

55891. VOSKOBOĬNIKOV, MIKHAIL GRIGOR'EVICH. Chukotka v sovetskoĭ khudozhestvennoĭ proze. (Na severe dal'nem, 1957. kniga 7, p. 198–205.) Refs. Text in Russian. ***Title tr.:*** Chukotka in Soviet literature.

Reviews the main novels and stories about Chukotka by the Russian writers N. I. Maksimov, T. Z. Semushkin, N. Pugachev, and N. E. Shundik; notes work of the Chukchi poet ÎÛ. S. Rytkhéu. ***Copy seen:*** DLC.

55892. VOSKOBOĬNIKOV, MIKHAIL GRIGOR'EVICH. Narody sovetskogo Kraĭnego Severa o Lenine i Staline. (Sovetskaîâ ėtnografiîâ, 1949, no. 4, p. 94–106.) 26 refs. Text in Russian. ***Title tr.:*** Lenin and Stalin in the literature of the peoples of the Soviet far North.

Discusses the glorification of Lenin and Stalin in the literature of the so-called "small peoples" of the North, except the Yakuts. Its folkloristic and mythological treatment by writers and poets is stressed and some excerpts from poems and songs are cited. ***Copy seen:*** DLC.

VOSKOBOĬNIKOV, MIKHAIL GRIGOR'EVICH, *see also* Zakharov, N. V. Evenkiĭskiĭ poėt . . . *1957.* No. 56152.

55893. VOSKRESENSKIĬ, A. I., *and others.* Primenenie tverdoĭ uglekisloty dlîâ rasseivaniîâ oblakov v Arktike. (Problemy Arktiki, sbornik stateĭ, 1957. vyp. 2, p. 133–39, illus., table.) Ref. Text in Russian. *Other authors:* V. G. Morachevskiĭ *and* V. ÎÂ. Nikandrov. ***Title tr.:*** Using solid carbon dioxide for cloud dispersal in the Arctic.

Reports results of fog- and cloud-seeding experiments with dry ice: 21 were carried out in summer 1956 by the Arctic Institute; two are described in detail; one in the Gydan Peninsula area on Sept. 23, the other on Sept. 22 in the region of Tadibe-Yaga, a polar station on Obskaya Guba at 70°22′ N. 74°08′ E. Cloud or fog to 500 m. thickness with wind to 10 m./sec. and temperature −4° C. or lower could be dispersed for one hour on a 50 sq. km. area by spraying 20 kg. dry ice. The spraying operation and clearing process take about an hour. Technical details are discussed. Number of days with fog each month May–Oct. are tabulated (p. 133) for the chief polar stations along the Northern Sea Route. ***Copy seen:*** DLC.

55894. VOSKRESENSKIĬ, S. Desîât' tysîâch. (Neva, June 1957, no. 6, p. 125–30, illus.) Text in Russian. ***Title tr.:*** Ten thousand.

Short story describing a reindeer-mounted geological survey party crossing the scorched taiga in Yakutia during summer, and their flight from a devastating taiga fire. ***Copy seen:*** DLC

55895. VOSKRESENSKIĬ, S. V taĭge. (Neva, Mar. 1958, no. 3, p. 47–54, illus.) Text in Russian. ***Title tr.:*** In the taiga.

Relates the adventures of a geological survey party crossing the taiga in summer on reindeer-back. ***Copy seen:*** DLC.

55896. VSEARMEĬSKOE VOENNO-OKHOTNICH'E OBSHCHESTVO. Osnovy sportivnoĭ okhoty; okhotminimum. Moskva, Voen. izd-vo, 1957. 311 p. illus., tables. 41 refs. Text in Russian. ***Title tr.:*** Fundamentals of sport hunting.

A manual published by the army and prepared by over a dozen experts. Following a general outline of the state and rules of Soviet hunting, information is presented on Russian game animals, including northern forms like sable, elk, wolf, white hare, white partridge, wild ducks and geese; also on fishes, including cold-water forms (trout, salmon). Technical problems are treated in detail (p. 107–258): equipment, particularly firearms, their use and care; hunting dogs;

removal and treatment of skins; camping, fire-making and first aid; hunting societies, etc. ***Copy seen:*** DLC.

55897. VSESOIUZNOE GEOGRAFICHESKOE OBSHCHESTVO. Akademik Andreĭ Aleksandrovich Grigor'ev, k 75-letiiu so dnia rozhdeniia. (*Its:* Izvestiia, Sept.–Oct. 1958, t. 90, vyp. 5, p. 405–410, port.) Text in Russian. ***Title tr.:*** Academician Andreĭ Aleksandrovich Grigor'ev, the 75th anniversary of his birth.

Biographical sketch of this noted Russian geographer and review of his scientific and academic activities, with the staff of the Geographic Institute Leningrad, 1918–1935, as professor of geography at Moscow University 1935–1939, etc. His work on the North: Kola Peninsula, Bol'shezemel'skaya Tundra, Yakutia, and on permafrost is mentioned among other, but his publications are not listed.

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55898. VSESOIUZNOE GEOGRAFICHESKOE OBSHCHESTVO. K 70-letiiu professora A. I. Andreeva. (*Its:* Izvestiia, May–June 1957. t. 89, vyp. 3, p. 262–64, port.) 20 refs. Text in Russian. ***Title tr.:*** The 70th anniversary of Professor A. I. Andreev.

Tribute to Aleksandr Ignat'evich Andreev for his contribution to the fields of history and ethnography. His works on early Russian explorations in Kamchatka, Alaska and other Pacific areas and on the history of Siberia, also his activity in the Institute of Peoples of the North are noted, with references to his main publications.

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55899. VUORINEN, JOUKO. Lantbrukets försöks- och forskningsverksamhet i Finland. (Nordisk jordbrugsforskning, 1949–50, häfte 2, p. 109–122, map.) Text in Swedish. ***Title tr.:*** Agricultural research and experimentation activities in Finland.

The organization of research by agricultural departments, experimental farms and stations is summarized. The station at Rovaniemi and the farm at Inari are mentioned, among others. Agricultural associations, their specific interests, publications, etc., are listed.

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55900. VYSOTSKIĬ, A. Al'manakh "Eniseĭ." (Ogonëk, July 1956. god 34, no. 29, Sibirskiĭ nomer, p. 13.) Text in Russian. ***Title tr.:*** The *Eniseĭ* yearbook.

The *Eniseĭ* yearbook published in Krasnoyarsk and devoted to Krasnoyarskiy Kray problems is characterized, and contents of its no. 17, published in 1956, reviewed by the chief editor of the magazine *Sibirskie ogni*. ***Copy seen:*** DLC.

55901. VYSOTSKIĬ, BORIS PETROVICH. "Poiushchiĭ" pesok na reke Viliuĭ. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, July–Aug. 1958. t. 90, vyp. 4, p. 390.) 5 refs. Text in Russian. ***Title tr.:*** "Singing" sand on the Vilyuy River.

Reports occurrence of singing sand on the sand bar in the Vilyuy valley near its tributary the Tyung, Aug. 8–13, 1952. The sand bar, composition of the sand, and kind of "singing" are briefly characterized and compared with similar phenomena, described by V. K. Malfarevskiĭ in Kola Peninsula (No. 10814) and by others elsewhere. ***Copy seen:*** DLC.

55902. W., E. Utnyttelse av vannkrafften i Pasvikelven. (Teknisk ukeblad, Dec. 25, 1958. årg. 105, nr. 48, p. 1121–22, map.) Text in Norwegian. ***Title tr.:*** Water-power development on the Pasvik River.

Notes ratification by the governments of U.S.S.R. and Norway of a plan to construct four hydroelectric plants on the 110 km. stretch of this river where it forms their common border. The Russians are to utilize Tangefoss (18,000 kw.), Hestefoss (17,000 kw.), and Boris Gleb (45,000 kw.); Norwegians: Skogfoss (64,000 kw.). One Norwegian dam will extend 5 km. into Soviet territory; by the agreement each party has free access to the other's territory for construction and operation of the facility. The Russians' Boris Gleb plant is to be construction by a Norwegian company, Norelektro & Co. ***Copy seen:*** DLC.

55903. WÅLSTEDT, LENNART. Mikroklimat och väg- och vattenbyggnader. (Teknisk tidskrift, Aug. 27, 1957. årg. 87, nr. 30, p. 669–72, diagrs.) 2 refs. Text in Swedish. ***Title tr.:*** Microclimate and road and waterway constructions.

Discusses influence of topographic changes on local frost frequency in Norrland. The bottom layer of cold air in a valley, ordinarily kept in motion by rivers and drafts, may be closed in by regulation of water courses and by con-

struction of high bridges, dams, etc. This may cause frost more frequently than formerly in some localities.

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55904. WAAS, *Ministerialrat.* Die Wirkung von Stampfanlagen bei Eisbrechern. (Schiff und Hafen, Dec. 1958. Jahrg. 10, Heft 12, p. 1048–50, diagrs., table.) Text in German. ***Title tr.:*** The effect of stamping-installations in ice-breakers.

Summarizes results of experiments with German ice-breaking tugs (*Wisent, Emshörn, Eisfuchs*) fitted with installations for generation of vertical vibration of the hull. The tugs' ice-breaking capabilities were far superior to those obtained by conventional methods; a suitable frequency was 120 c./min. The method is believed applicable also to larger ice-breakers. ***Copy seen:*** DLC.

55905. WACHTMEISTER, CARL AXEL. Studies on the chemistry of lichens. (Svensk kemisk tidskrift, 1958. årg. 70, no. 3, p. 117–33.) 66 refs.

A review of eight papers on the subject, five of them by the author, dealing mainly with structural investigations of certain phenolic lichen acids. After a discussion of their biogenetic relationship the following are dealt with: porphyrylic acid; picrolichenic acid, ocellatic acid, and carbohydrate constituents.

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WADDELL, J. L., *see* Brebner, D. F., *and others.* The relation . . . heat exchange by convection . . . evaporation . . . *1958.* No. 49900.

WÄZTE, J., *see* Diede, G., *and others.* Motorfracht . . . "Finnmarken." *1956.* No. 50557.

55906. WAGER, LAWRENCE RICKARD, 1904– . Sulphides in the Skaergaard intrusion, East Greenland. (Economic geology, Dec. 1957. v. 52, no. 8, p. 855–95, tables, microphotos, cross-sections, diagrs.) 43 refs.

Previous reports on this intrusion (No. 19034, 38141) deal with the general geology, structure, petrology, mineral composition and formation. This study, following discussion of the sequence and origin of the chief rock types of the intrusion, describes in detail the textural relations and distribution of the sulphides, found in small quantities throughout the six rock types. The Skaergaard intrusion, originally a pool of basic magma about 300 km.^{3} in volume, was markedly differentiated by strong crystal fractionation to produce a range of rock types from ultrabasic to acid. Sulphide minerals, in general inconspicuous, occur in certain horizons. In the layered complex up to the latest ferrogabbros, sulphides occur in small units about 0.4 mm. across and form about .02% by weight of the rock. They are bornite, digenite and chalcopyrite with some covellite replacing the digenite. In melanocratic bands, copper sulphides are ten times as abundant as in average rock. In the ferrogabbros at the top of the layered series droplet-shaped patches of pyrrhotite with a little chalcopyrite but no bornite make up about 2% of the rock. The composition of latest pyrrhotite is determined and the composition of earlier immiscible copper sulphide and iron sulphide liquid is indirectly estimated. The amounts of cobalt, palladium, indium and gold has been determined in selected rocks. The petrology of this differentiated intrusive is discussed in detail.

Appendix by Paul Bartholomé, E. A. Vincent and A. A. Smales: *Theoretical considerations on the separation of the sulphides and their crystallization* (p. 895–903, diagrs., 13 refs.) states that the sulphide globules of the Skaergaard gabbros have a fairly simple mineralogical composition, and on the basis of thermodynamic calculations, confirms the results in the main paper concerning the sulphur and copper contents of the magma during differentiation. ***Copy seen:*** DGS.

55907. WAGNER, GERHART. Die Brutvögel von Röst, Lofoten. (Stavanger, Norway. Museet. Sterna, May 1958. bd. 3, hefte 2, p. 59–72, 4 illus., 2 tables.) 11 refs. Text in German. Summary in Norwegian. ***Title tr.:*** Breeding birds from Røst, Lofoten.

Lists 81 species (43 breeding) observed in 1956–57 on this island group (67°30′ N. 12° E.), with ecological and bio-ecological notes on some species. Breeding data of *Fulmarus glacialis, Ardea cinerea* and remarks on frequency of the bridled guillemot (*Uria aalge aalge*) are added.

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55908. WAGNER, GERHART. Verbreitung und Überwinterumg des Stars, *Sturnus vulgaris,* nördlich des Polar-Kreises in Norwegen. (Stavanger, Norway. Museet. Sterna, May 1958. bd. 3, hefte 2, p. 73–89, 2 illus., 4 tables.) 7 refs. Text in German. Summary in Norwegian. ***Title tr.:*** The distribution

and wintering of the starling, *Sturnus vulgaris*, north of the Arctic Circle in Norway.

The European starling is the commonest breeding bird near human habitation on Lofoten and Vesterålen, and along the Norwegian coast to 70° N. The frequency increases from south to north and from west to east between 70° and 71° N. This bird was not observed breeding in Honningsvåg and Vardø. Lofoten and Vesterålen seem to be its winter headquarters. ***Copy seen:*** DI.

55909. WAGRET, PAUL. Le climat se rechauffe-t-il? (Nature, *Paris*, Jan. 1958. no. 3273, p. 19–23, illus., table.) Text in French. ***Title tr.:*** Is the climate warming up again?

Reviews evidence indicating a warmer climate: melting ice islands, retreat of ice packs, glaciers; longer ice-free periods on northern rivers, and at sea; retreat of the permafrost limit; rise in registered air temperatures; etc. Effects of the warmer climate on plant and animal life are noted: new appearances, longer sojourns of birds in the North; northward advance of fish, e.g., cod, and northward retreat of polar bears, seals and narwhales; recession of the tundra before encroaching taiga; and northern extension of grain cultivation (partly result of new techniques). Reasons for these changes as evidenced in various northern areas are discussed, and some theories elucidated; but the basic causes, and whether the amelioration is a long-term trend or merely a cyclic variation are not known.

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55910. WAHL, EBERHARD W. Mean monthly 300- and 200-mb. contours and 500-, 300- and 200-mb. temperatures for the Northern Hemisphere. Bedford, Mass., Apr. 1958. 80 p. text map, 63 charts. (U.S. Air Force. Cambridge Research Center. Geophysical research paper, no. 57.) 5 refs.

Mean monthly pressure height and temperature charts were prepared, using chiefly U.S. Weather Bureau's Monthly climatic data for the world. Data for Jan. 1950–Dec. 1955, and for the area south to 20° N. were tabulated, analyzed and plotted. Normal monthly pressure height charts for the 300- and 200-mb. levels are given; temperatures are charted for the 500-, 300-, and 200-mb. levels, though in some areas, isolines of pressure and temperature are only approximate. Sources, reliability and distribution of data, method of chart construction are discussed in text. Remarks on each set of charts, include explanation of extrapolation of isolines into areas of sparse data. ***Copy seen:*** DGS.

WAHL, EBERHARD W., *see also* U.S. Navy. Weather Research Facility. Normal 500-mb. charts . . . *1957*. No. 55652.

55911. WAHLGREN, EINAR, 1874– . Aphidologiska notiser, II. (Opuscula entomologica, Oct. 1957. bd. 22, häfte 2–3, p. 126–36.) 20 refs. Text in Swedish. ***Title tr.:*** Notes on aphids, II.

Contains a systematic annotated list of about a hundred plant lice, with data on distribution and hosts. At least seven of the species are native to Swedish Lapland. Pt. I (1955) of this paper does not include any arctic species.

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55912. WAHLSTEDT, JENS. Fågelnytt från Torne lappmark, Torneträsk-Paittasjärvi. (Fauna och flora 1957, häfte 1–2, p. 19–33, illus.) Text in Swedish. ***Title tr.:*** Bird news from Torne Lappmark, Torneträsk-Paittasjärvi.

Deals with 62 species observed during a week's tour in June 1956, in the area (approx. 68° N. 19° E.) between lakes Torneträsk and Paittasjärvi in northern Sweden. ***Copy seen:*** DLC.

55913. WAHLSTEDT, JENS. Pessijärvi, en fjällfågellokal i Torne Lappmark. (Fauna och flora 1958. årg. 53, häfte 5, p. 177–94, illus., map.) Text in Swedish. ***Title tr.:*** Pessijärvi, a mountain bird locality in Torne Lappmark.

Lists birds observed during six visits in 1955–1957, to the Pessijärvi area, immediately south of lake Torneträsk (68°22′ N. 19°05′ E.) in north Sweden; 57 species were noted. ***Copy seen:*** SPRI.

55914. WAHRHAFTIG, CLYDE ADOLPH, 1919– , *and* R. F. BLACK. Engineering geology along part of the Alaska Railroad. Washington, D.C., U.S. Govt. Print. Off., 1958. p. 69–118, illus., 29 text maps, diagrs. 3 tables. 6 fold. plates in pocket. (U.S. Geological Survey, Professional paper 293–B.) 26 refs.

A study (following 1947 earthquake) of landslides, icings, frost heaving and settling, and of their effect on the maintenance of track bed along a 63-mile

stretch of the Alaska Railroad, mile 322–385. Effects of permafrost are noted in detail: examples, case histories of problems, ways of dealing with them. Also described are bedrock and surficial deposits and their engineering aspects. Maintenance problems resulting from slumps and earthflows, rockslides and rockfalls, frost heaving and settling, and icings are discussed; individual landslides are described and illustrated.

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55915. WAHRHAFTIG, CLYDE ADOLPH, 1919– . Quaternary geology of the Nenana River valley and adjacent parts of the Alaska Range. Washington, D.C., U.S. Govt. Print. Off., 1958. 68 p., 8 fold. plates in pocket, 29 illus., 5 tables. (U.S. Geological Survey, Professional paper 293–A.) 40 refs.

Outlines glacial history of the region (63°30′ N.–150° W.). A strip 5–8 mi. wide along the Alaska Railroad and Nenana River was studied in detail. Landslides between McKinley Park station and Healy have hindered operation of the railroad almost since its opening. Extensive study of geologic features along the route has been carried out since 1947. Evidence is recognized of four distinct glacial advances along the Nenana; during each advance, the ice moved northward from the Alaska Range to its northern foothills. Alaska was never completely covered by glacial ice during the Pleistocene; a great driftless area included most of the Yukon and Kuskokwim drainage basins. The geographic setting is sketched, and the bedrock geology of the Nenana valley outlined; the Pleistocene history of the region is summarized, including events leading to the glacial advances; the four glaciations are described; deposits and landforms younger than the latest ice advance are noted. Diagrams and photos amplify the text. ***Copy seen:*** DGS.

WAHRHAFTIG, CLYDE ADOLPH, 1919– , *see also* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055

WALDEN, DAVID D., *see* Walden, R. G., *and others.* Buoy telemeters ocean temperature data. *1957.* No. 55918.

55916. WALDEN, HANS. Ein Tief mit Warmsektor über dem Grönlandmassiv. (Zeitschrift für Meteorologie, *Berlin,* 1958. Bd. 12, Heft 4–6, p. 147–54, tables, map.) 26 refs. Text in German. ***Title tr.:*** A low with warm sector over the Greenland massif.

Contributes to the disputed question of whether a low can pass over the Greenland massif and the influence of such air masses. Various opinions are briefly evaluated, and data on wind, air pressure and temperature from the icecap station "Victor" (75°55′03″ N. 40°38′22″ E.) of the Expéditions polaires françaises, 1948–1953, are analyzed and illustrated by maps. The opinion of W. Kopp and R. Holzapfel support the view that lows, limited to the higher air layer, pass over the Greenland massif. Some data are given on development of warm sector, but as far as the effects of such passes are concerned, several stations in simultaneous operation over a period of time are required for conclusive data.

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55917. WALDEN, HENRIK W. Notes on some Siberian slugs, especially on the type of *Limax hyperboreus* Westerlund. (Arkiv för zoologi, 1956. ser. 2, bd. 10, no. 5, p. 347–66, 22 illus., plate.) 33 refs.

Contains a critical revision of agriolimacid material, collected by the Swedish Expedition to Novaya Zemlya and the Yenisey River in 1876, with special reference to *Limax hyperboreus* from Sopotochnoy Island, on the lower Yenisey (70°05′ N.) which was found to be *Agriolimax laevis.* Another species described as *Agriolimax hyperboreus* by Simroth (type locality: Yakutsk) is renamed *A. sibiriensis* n. nom. Specimens from the Yenisey valley, recorded as *Agriolimax agrestis* by Westerlund have to be assigned to *A. altaicus,* on anatomical grounds, and as a distinct race, to be given the name *A. altaicus transitorius.* ***Copy seen:*** DLC.

55918. WALDEN, ROBERT G., *and others.* Buoy telemeters ocean temperature data. (Electronics, June 1, 1957. v. 30, no. 6, p. 164–67, illus., diagrs., graph.) *Other authors:* D. D. Walden *and* D. N. Frantz, *Jr.*

Describes telemetering system which, when triggered by audio-modulated signal in the 2–3 Mc-band, transmits code signal, two standard tones (for accuracy control of multivibrator), and a third tone which is a function of the transistor-measured temperature. Transistor-receiver of narrow band-width responds only to distinctive trigger-signal of less than a few cycles' deviation in modula-

tion frequency. Transmitter of 30-w. input operates on the receiving frequency; operational range is 300–600 mi. Transmitted signals are received on standard communications receiver, recorded on magnetic tape, and the tone frequency measured with an eput meter. Other quantities than temperature can be measured by substituting the transistor with different transducers.

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55919. WALDERHAUG, KJELL. Skaz o norvezhskoĭ sel'di. (Ogonëk, Nov. 1957. god 35, no. 47, p. 12, illus.) Text in Russian. ***Title tr.:*** Story about Norwegian herring.

Sketches of the Norwegian herring fisheries' transition from coastal to pelagic operations, herring migration; importance of this industry, employing 25,000, to the Norwegian economy.

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55920. WALFORD, LIONEL ALBERT, 1905– . Living resources of the sea; opportunities for research and expansion. New York, Ronald Press Co., 1958. 15, 321 p. illus., maps. About 200 refs.

A study of food resources of the sea with emphasis on problems and areas as yet unexplored, and hence open to research and possible exploitation. Part 1 (p. 3–206) deals with the problem of food needs and available resources; geography as related to the fishing industry; species of economic value, their conservation, environment, ecology and behavior; the possibility of harvesting plankton; farming in brackish waters; diseases of marine animals; poison; improvement of fishing vessels and gear. The second part (p. 209–288), *Resources of the sea*, covers successively the major groups of animals and their utilization, viz: invertebrates, fishes, reptiles, mammals, and seaweeds. Potential resources of the seas are considered briefly. Subarctic regions, as location of major fisheries resources are referred to throughout the study.

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WALKER, DAVID, *see* Hooker, J. D. An account . . . plants . . . Walker . . . *1861*. No. 51803.

55921. WALKER, DUARD L., *and* **W. D. BORING.** Studies on the alteration of coxsakie virus infection in adult mice by environmental temperature. Bethesda, Md. Nov. 1957. p. 815–24, illus., tables. (U.S. Naval Medical Research Institute. Research report, project NM 005 048.23. 06.) 12 refs.

A two-week period of adaptation to cold (of adult mice) prior to infection with this virus did not abolish the resistance-reducing effect of cold environment. By contrast, an environment of 36° C. inhibited viral invasion, and increased its suppression and elimination.

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55922. WALKER, EGBERT HAMILTON, 1899– . Additional introduced plants in the Aleutian Islands. (Torrey Botanical Club. Bulletin, Mar.–Apr. 1946. v. 73, no. 2, p. 204–205.)

Contains data on some introduced plants not included in notes by D. Bruce, and A. Court (No. 2347). *Brassica napus*, rape, and *B. juncea*, brown or Indian mustard, were collected by Lt. G. B. Van Schaack and R. Morehouse on Attu Island in 1944; they appeared to have sprung from seeds dropped from military stores during Japanese occupation of island. Fifteen woody and herbaceous plants sown on Amchitka Island during May 1945 on bone-heap mounds left by the Aleuts, were reported by Lt. S. Nelson; mostly southeastern plants, they may not survive, but one, the red osier *Cornus stolonifera*, does occur commonly in Alaska. ***Copy seen:*** DLC.

55923. WALKER, HARLEY J. Snow and ice as sources of water in the American Arctic. (Association of American Geographers, Annals, Sept. 1958, v. 48, no. 3, p. 296.)

Abstract of the paper presented at the annual meeting of the Association, Los Angeles, 1958. Notes availability and characteristics of snow and ice as potential water source; improvement in methods of conversion from the solid state; techniques still too costly.

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WALKER, J. B., *see* Simpson, C. J. W., *and others*. North ice . . . *1957*. No. 54901.

55924. WALKER, JOHN CHARLES, 1893– . A study of resistance to *Fusarium* wilt in Alaska peas. (American journal of botany, Dec. 1935. v. 22, no. 10, p. 849–57, 7 tables.) 9 refs.

Two strains of Alaska pea (*Pisum sativum*) were studied as to the effect of root extracts upon the wilt organism, one strain homozygous for resistance and the other for susceptibility to pea wilt. The pea-wilt fungus (*Fusarium orthoceras* var. *pisi*) restricted to certain

strains and varieties of the garden pea, invades through the young roots and after the early stages of penetration becomes a vascular parasite. The pea root-rot fungus (*Fusarium martii* var. *pisi*) is non-selective and attacks wilt-resistant and wilt-susceptible strains equally; it invades and parasitizes primarily the cortex of root and lower stem. When extracts from fresh and dried roots were used as a medium for the fungus, growth was usually greater in the extracts from susceptible roots. When the pea root-rot fungus to which both strains of pea are equally susceptible, was compared with the wilt fungus on root extracts, reduced growth in resistant-root extract occurred with the wilt but not with the root-rot fungus.

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55925. WALKER, LLOYD. First Learstar makes transpolar flight. (Skyways for business, Apr. 1958. v. 17, no. 4, p. 12–13,+, illus., map.)

Contains a chronological account of a flight with a business plane from Los Angeles over the polar route to Düsseldorf, Germany, in Nov., 1957. The twin-engined Learstar Mark I carried only standard equipment, and no modifications were made for the polar flight, which was made in 23 hrs. 58 min. with only one refueling stop of an hour at Frobisher. ***Copy seen:*** DLC.

WALKER, P. T., *see* Meier, M. F., *and others.* Preliminary . . . crevasse formation . . . *1957.* No. 53215.

55926. WALL, W. ARTHUR. Milling practice at United Keno Hill Mines. (Precambrian, Mar. 1957. v. 30, no. 3, p. 6–11, 6 illus., diagrs., 12 tables.)

Flotation concentrator of 500 tons/day capacity and cyanide plant 400 tons/day have been in operation since 1949 and 1952 respectively. Minerals and processing are outlined as in No. 43236. ***Copy seen:*** DGS.

WALLACE, IDA LUCILLE, *d.* 1957? *see* Fournelle, H. J., *and others.* A bacteriological and parasitological survey . . . *1958.* No. 50960.

WALLACE, J. A., *see* Bender, T. A., *and others.* Bibliography . . . climate of Greenland. *1957.* No. 49646.

55927. WALLACE, JOHN M., *and* **E. A. STEAD.** Spontaneous pressure elevations in small veins and effects of norepinephrine and cold. (Circulation research, Nov. 1957. v. 5, no. 6, p. 650–56, illus., tables.) 4 refs.

Norepinephrine infusions raised the average small vein pressure by 4.2 mm. Hg, and that of large veins by 0.9 mm. Immersion of hand and forearm in cold water caused a striking (up to 50 mm.) increase in small vein pressure and a small increase of pressure in the large veins. The influence of these changes on capillary pressure and blood drainage from the skin is discussed.

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55928. WALLÉN, CARL CHRISTIAN, 1917– . Inlandsisens ablationsförhållanden under avsmältningsskedet i de nordvästra fjälltrakterna. (Geologiska föreningen, Stockholm. Förhandlingar, 1957. bd. 79, häfte 3, no. 490, p. 529–41, diagr., table.) 12 refs. Text in Swedish. Summary in English. ***Title tr.:*** Ablation conditions of the inland ice during deglaciation in the northwest mountain regions.

Considers problems of estimating the greatest possible ablation rate in the Torneträsk valley during the boreal period while ice remained in the mountains to the west, and of determining mountain glaciers' activity at the time. The estimated climate optimum, based on northern limits of hazelnut growth, and a stationary high pressure system over eastern Europe providing flow of southerly air over Scandinavia, are postulated to provide highest summer temperatures. Precipitation is calculated at 300 mm. in Torneträsk and 3,000 mm. in the mountains. By means of a formula including wind, radiation, time, and other pertinent factors, it is concluded that ice may have diminished at an annual rate of 10–12 m. in the Torneträsk valley and 2 m. in the mountains where glaciers may have shown some erosive activity.

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55929. WALLÉN, CARL CHRISTIAN, 1917– . Nederbörden i Sverige, medelvärden 1901–1930. Stockholm, 1951. 48 p., tables, diagrs., 3 fold. col. maps. (Sweden. Meteorologiska och hydrologiska institutet. Meddelanden ser. A, nr. 4.) 12 refs. Text in Swedish. Summary in English. ***Title tr.:*** Precipitation in Sweden, mean values 1901–1930.

Contains a statistical analysis based on data obtained from 721 stations, 200 of which (nine in Norrbotten) were in operation throughout the period. The mean

values of all the other stations (some fifty in Norrbotten) were reduced by common methods to the period 1901–30 with the help of adjacent normal station records. Calculation of mean values and/or reduction with the aid of normal stations was made for each month and for the year. Information is given concerning the location, height above sea level and length of period with screen equipment for all normal stations as well as mean values of precipitation during different months, the year and half-years for the complete set of stations. Maximum and minimum amounts of precipitation recorded at some 50 Swedish stations, since the stations began operation are tabulated. Mean annual precipitation values and station locations are mapped. ***Copy seen:*** DWB.

55930. WALLER, ROGER M. Riverbank erosion and ground-water conditions at Beaver, Alaska. Washington, D.C. Oct. 1957. 6 p., text map. (U.S. Geological Survey. Reports, open file series, no. 433.) 4 refs.

Reports investigation June 12–13, 1957, for the Alaska Rural Development Board, to determine if erosion threatened this village (66°22′ N. 147°30′ W.) and to locate a ground-water supply at the proposed new site. Physical setting of the village, the meandering Yukon River, and evidences of permafrost are briefly noted. Several factors tend to accelerate the bank erosion: character of the bank material, direction and volume of current, scarcity of binding vegetation, change in the river channel. Villagers have chosen a new site a short distance downstream. Water supply from wells along the riverbank is suggested.

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55931. WALLERSTEIN, GEORGE, *and* **D. CLARKE.** Mountains of the midnight sun. (Pacific discovery. May–June 1958. v. 11, no. 3, p. 4–11, illus.)

Describes experiences, summer 1957, of a six-man party of mountaineers in the unmapped northeast corner of the St. Elias Range, Canadian Yukon. From a base camp near Mt. Wood (61°11′ N. 140°31′ W.) glaciological studies were made, and mountains climbed, six for the first time. Heights of the summits and names suggested for them by the group are Snowfield, 13,400 ft.; Mt. Fermi, 13,800 ft.; South Gemini, 11,500–12,000 ft.; Angeles, 12,000 ft.; Avalanche, over 10,000 ft.; and two other approx. 10,000 ft. peaks. Snow samples were taken for study at the California Institute of Technology; information obtained from them may provide a new method of dating snow layers. ***Copy seen:*** DGS.

55932. WALLERSTEIN, GEORGE. Movement observations on the Greenland ice cap. Wilmette, Ill., Aug. 1957. 4 p., text map, 2 tables. (*In:* U.S. Army. Corps of Engineers. Greenland ice cap research program, 1955–56, v. 2. SIPRE special report 24.) 5 refs.

Describes, with summary table, relocation of 14 of 19 possible accumulation stakes, on the trail of the Expéditions polaires françaises 1951 from Central Station 190 miles westward. Observations were part of Project "Jello" 1955. Additional stakes were placed in 1955 to facilitate further work. Location of stakes in 1951 and 1955, estimated error, amount and direction of movement are tabulated. Map shows route, and indicates stations. ***Copy seen:*** CaMAI.

55933. WALLIN, BROR. Resa i Norrland. (Beten, vallar, mossar, Oct. 1952. årg. 4, nr. 8, p. 99–107, 18 illus.) Text in Swedish. ***Title tr.:*** Journey in Norrland.

A summer trip through Swedish Lapland from south to north, to Karesuando, and southward along the Torne valley to Haparanda and the coast, is described from an agriculturalist's viewpoint. Low growing-temperatures, decrease in forest pasturage, emphasis on good farming practices, and the general well-being of low-arctic agriculture are noted. At Övertorneå (66°22′ N. 23°40′ E.), tomatoes, cucumbers, melons, and even fruit trees are grown at a large greenhouse, in part for the Stockholm market.

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55934. WALLIN, THURE. Återväxtproblem i Norrland. (Skogen, *Stockholm,* Apr. 1, 1955. årg. 42, nr. 7, p. 130–131, +) Text in Swedish. ***Title tr.:*** Regeneration problems in Norrland.

Recommends measures for regeneration following clear-cutting in Norrland pine forests: 20-hectare cutting areas are the most economic; the site should be completely cleared (including aspen, birch, etc.) and burned over. Planting, though it requires more seed, yields better results than sowing; plantings should be watched and controlled.

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55935. WALLSTRÖM, SIGVARD. Studier i övre Norrlands språkgeografi med utgångspunkt från Arjeplogmålet. Uppsala, Almqvist & Wiksells boktr., 1943. x, 162 p., 16 maps, table. 127 refs. Text in Swedish. ***Title tr.:*** Studies in the speech geography of upper Norrland with the Arjeplog dialect as point of departure.

Speech differences in northernmost Sweden are analyzed with reference to Arjeplog (66°04′ N. 18° E.), first Lappish community penetrated (about 1635) by Swedes, mining silver at nearby Nasafjäll. Individual words are analyzed on the basis of phonology, distribution, significance or meaning, and syntax. Relationships are established between the Arjeplog dialect and those of the Ume, Pite, and Skellefte river valleys of northern Sweden, also that of Ångermanland in southern Sweden whence the earliest colonists migrated, and of Nordland in Norway. While the colonists were relatively few, Lappish was the common language, but Swedish is now spoken almost exclusively. Influences of Lappish are traced in phonology and borrowed words; 63 words are individually discussed and differences in 16 are mapped according to phonology in upper Norrland. ***Copy seen:*** DLC.

WALTER, R. D., *see* Gunter, R., *and others.* Physiologic changes . . . anoxia with anesthesia and hypothermia. *1958.* No. 51421.

55936. WALTON, A. Cold shock of spermatozoa. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 508–509, illus.) 4 refs.

Brief information on "cold shock" as different from "natural death" of protozoa; avoiding it by step-wise, slow cooling; microscopic criteria of "shocked" spermatozoa, etc. ***Copy seen:*** DNLM.

55937. WALTON, E. W. K. Crevasse rescue. (Polar record, Sept. 1957. v. 8, no. 57, p. 514–518, diagrs.)

Precautions against crevasse accidents, preparations for rescue, and rescue procedures are discussed. The knots and loops to be used in rescue, the various methods and devices for anchoring the rope and pulling up a victim, and the mechanics of lifting and lowering are described, and instructions to the victim are given. A 200 ft. length of 1 in. nylon rope, an ice axe and piton, and a whistle should be carried on each sled; each party should be equipped with a lightweight snatch block and lengths of good rope.—From SIPRE.

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WALTON, MATT SAVAGE, *Jr.,* **1915– ,** *see* Rossman, D. L., *and others.* Reconnaissance total intensity aeromagnetic map . . . Prince of Wales Island, Alaska. *1956.* No. 54414.

55938. WAMBERG, KJELD. Hvad bliver der gjort for slaedehundene? (Grønland, Apr. 1958, nr. 4, p. 130–36, illus.) Text in Danish. ***Title tr.:*** What is being done for the sledge dogs?

Discusses his suggestion, under consideration by the Ministry for Greenland, that medical practitioners in Greenland undertake the care of sledge dogs, with the possibility of consulting a veterinary surgeon in special cases. Castration of the male dogs and filing of the canine teeth is to be carried out on a voluntary basis. Reports on cruelty to dogs in Greenland are often exaggerated; efforts are made to prevent it.

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55939. WAMBERG, KJELD. Kan faren for hundeoverfald i slaedehundedistrikterne formindskes? (Atuagagdliutit: Grønlandsposten, Nov. 21, 1957. Ukiut 97-iaŋ, nr. 24, p. 8–9.) Text in Danish. ***Title tr.:*** Can the danger of attacks by dogs be reduced in the sledge dog districts?

Recommends castration and filing of the canine teeth as precautionary measures. ***Copy seen:*** DLC.

WARCHOL, E. J., *see* Strong, E. M., *and others.* Microwave radio . . . *1957.* No. 55205.

WARD, P. G., *see* Lewis, H. E., *and others.* The food value of biltong . . . *1957.* No. 52800.

55940. WARD, RICHARD T. Some ecological notes on the alpine tundra in the area of the Juneau Ice Field. (Iowa Academy of Science. Proceedings, 1957. v. 64, p. 113–26, illus., map.) Condensation of M.A. thesis to Univ. of Minnesota 1951.

A study of major plant species on several nunataks and related areas of the Juneau Ice Field, made during the summer of 1949. The meteorological conditions were recorded and compared with other years. The time and manner of nunatak invasion are analyzed. Under present conditions it is very difficult,

except for a few species fitted for long-distance travel by wind; animals are negligible as transport agents. A major invasion probably took place during the Xerothermic period. ***Copy seen:*** DGS.

WARD, S. H., *see* Meen, V. B. Chubb. . . meteor crater. *1957.* No. 53205.

55941. WARMING, EUGENIUS, 1841–1924. Über die Biologie der Ericineen Grönlands. (Botanisches Centralblatt, 1886. Bd. 25, No. 1, p. 30–32.) Text in German. ***Title tr.:*** On the biology of the Ericineae of Greenland.

Contains observations on *Pyrola grönlandica, Arctostaphylos uva ursi, Phyllodoce caerulea, Cassiope tetragena* and other heath plants studied in West Greenland in the summer of 1884.

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WASHA, G. W., *see* Saemann, J. C., *and* G. W. Washa. Variation of mortar and concrete . . . temperature. *1957.* No. 54492.

WASHBURN, ALBERT LINCOLN, 1911– , *see* Efimov, A. I. Merzlye gornye porody Alîaski i Kanady . . . *1958.* No. 50694.

55942. WASHBURN, HENRY BRADFORD, 1910– . Alaskas Hochgebirge. (Atlantis, Apr. 1955. Jahrg. 27, Heft 4, p. 143–47, illus.) Text in German. ***Title tr.:*** Alaska's high mountains.

Contains eight photographs with notes on Mt. McKinley: its name, altitude, climbers, photographers and explorers, and writer's own work in the latter fields.

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55943. WASHBURN, HENRY BRADFORD, 1910– , *and others.* Doctor Cook and Mount McKinley. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 1–30, illus.) 21 refs.

Shorter version of an exhaustive illustrated report submitted to the American Alpine Club at the same time that Mrs. Elliott J. Vetter, Dr. Cook's daughter, made a presentation of Cook's case (cf. No. 3387, 3390). Discussion and photographs indicate that Cook did not climb Mt. McKinley in 1906, but climbed a peak presently identified as "8450", 19.48 miles from the summit of Mt. McKinley. ***Copy seen:*** DGS.

55944. WASHBURN, HENRY BRADFORD, 1910– . Mount McKinley, Alaska. (*In:* Mountain world, 1956–57. p. 58–81, 8 illus. on fold. plates.)

Contains a physical description of the mountain, noting mountaineering problems arising from subarctic climate, isolation and terrain. Principal summits are listed with height, and number of ascents. Climbing on the mountain is reviewed, 1913–1954; with comment on weather hazards, unusual equipment needed, use of radio, air support, etc. Various routes are evaluated.

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55945. WASHBURN, HENRY BRADFORD, 1910– . Snow blindness. (American alpine journal, 1958. v. 11, no. 1, issue 32, p. 69–71.) 3 refs.

Non-technical description of symptoms of snow blindness; means of obtaining relief (few and temporary); preventive measures (good sun glasses or goggles worn constantly). Advice based upon 30 years' experience, and one acute case of snow blindness. ***Copy seen:*** DGS.

WASHBURN, HENRY BRADFORD, 1910– , *see also* Williams, H., *and others.* Landscapes of Alaska . . . *1958.* No. 56055.

55946. WASHBURN, RICHARD H. Bad news for bugs: insect control recommendations for Alaska's farms and homes. College, Jan. 1958. 12 p., illus., table. (Alaska. University. Agricultural Extension Service. Circular 452 rev.)

Lists most useful chemicals for control of insects commonly found in Alaska, with directions for methods, amounts, etc. ***Copy seen:*** DA.

55947. WASHBURN, RICHARD H. Root maggots in Alaska. College, Apr. 1957. 8 p., illus. (Alaska. University. Agricultural Extension Service. Circular 700.)

Describes three species injurious to Alaska crops: the turnip, seed-corn, and onion maggots, noting their distribution and various plants' susceptibility to them. The life-cycles of the turnip and seed-corn maggots are traced. Cultural and chemical control measures are suggested.

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55948. WASHBURN, RICHARD H. *Taeniothrips orionis* Leh., a thrips destructive to vegetables in Alaska. (Journal of economic entomology, June 1958. v. 51, no. 3, p. 274.) 2 refs. Journ. ser., no. 17, Alaska Agricultural Exp. Sta.

Contains data on a thrips identified as *Taeniothrips orionis,* which injured lettuce

and potatoes on Kenai Peninsula in 1954. Infestation on potatoes was controlled by DDT. In 1957 cabbage, lettuce and potatoes near Kenai suffered from the same thrips. Its hosts are wild plants (mountain lupine in British Columbia, columbine); this is the first record of the species injuring cultivated crops.

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WAŚNIOWSKA, MARIA, *see* Mrozińska, S., *and* M. Waśniowska. Obraz elektrokardiograficzny . . . *1956*. No. 53436.

WATERHOUSE, ROBERT W., *see* Bader, H., *and others*. Excavations and installations . . . *1957*. No. 49471.

55949. WATSON, ADAM. The behavior, breeding, and food-ecology of the snowy owl *Nyctea scandiaca*. (Ibis, July 1, 1957. v. 99, no. 3, p. 419–62, illus., 8 diagr.) 84 refs.

Contains results of field work May–Sept. in the Penny Highland of Cumberland Peninsula, with the 1953 Baffin Island Expedition. Observations on behavior, registered flight and hunting, behavior to other snowy owls, reaction to man, displacement activities, preening, eating, nest sanitation and behavior of the young. The owls were confined to a wet lowland area where lemmings were abundant and nests were in prominent position. Egg laying started in the third week of May; mean clutch was eight eggs. The egg hatched at different dates; most young left the nest in their fourth week. Proportionate changes in weight (diagr. 2–3) were greatest in the first few days; young ate about two full-grown lemmings a day while in the nest; adults ate three to five a day. The relation of changes in lemming population to predation by owls is discussed. ***Copy seen:*** DSI.

55950. WATSON, ADAM. Birds in Cumberland Peninsula, Baffin Island. (Canadian field - naturalist, July – Sept. 1957. v. 71, no. 3, p. 87–109, text map, 6 tables.) 57 refs.

Contains an annotated list of 32 species of birds studied during May–Sept. 1953 on the P. D. Baird Expedition. Islands and fjords on the Davis Strait coast of the Peninsula were visited by sledge in May, and most of the summer was spent in a mountain valley of Penny Highland. At the big fulmar (*Fulmarus glacialis*) colony on Cape Searle, not more than 25,000 fulmars were in occupation of the cliffs, at the end of May; their body weight is less than in Atlantic birds (tables 1–3). Breeding success of Lapland longspur and snow bunting, and their measurements are tabulated. The food contents of snow bunting, Lapland longspur, horned lark and rock ptarmigan are analyzed in appendix. ***Copy seen:*** DLC.

55951. WATSON, ALEXANDER. D.O.T. has large expansion program. (Canadian shipping, Dec. 1957. v. 29, no. 3, p. 80–81, illus.)

Lists, with brief descriptions, four Canadian Dept. of Transport ships delivered in 1957, and nine ice-breakers, work boats, supply and buoy vessels under construction, the majority for arctic service. Another seven ships are under design. All vessels over 150 ft. in length have helicopter platforms.

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WATTS, G., *see* Watts, N., *and* G. Watts. Through Finland . . . *1958*. No. 55955.

55952. WATTS, MURRAY. Operating conditions in Ungava. (Precambrian, Sept. 1957. v. 30, no. 9, p. 22–26, 2 illus., port.)

Describes recent nickel-copper discoveries in the Cape Smith-Wakeham Bay area, an east-west belt of older Precambrian rocks about 200 mi. long and 30 mi. wide across northern Ungava Peninsula. Sulfide zones observed by writer in 1931–1932, were explored in 1955. An east-west belt of pillow lavas forms a range of hills across the peninsula. South of the hills are narrow interbedded lavas and sedimentary rocks intruded by sills or dikes of gabbro-diorite type with associated sulfide occurrences; outcrops are plentiful. Accessibility is conditioned by the climate: short summer season (July–Aug.), early freeze-up (Oct.), and winter snowfall of 3–4 ft. affording good transport; and by the rugged terrain with shallow rivers and numerous lakes. Best travel is by bombardier tractor with trailer in summer, and by sleds in winter. Exploration and prospecting costs (high), sea ports and supply bases are considered, also need for aircraft, labor supply, power sources, possible European markets. ***Copy seen:*** DGS.

55953. WATTS, MURRAY. Prospecting in Ungava. (Canadian mining journal, Apr. 1958. v. 79, no. 4, p. 96–97.) Paper read at 26th annual convention of (Canadian) Prospectors and Developers Association, 1958.

Describes known mineral resources of East Hudson Bay-Ungava Bay area; also problems and pressing needs in development: transportation, communications, population, etc.; additional knowledge of climate, topography, geology. Current mineral production and planning is described. ***Copy seen:*** DGS.

55954. WATTS, NOEL. Narvik. (Norseman, Sept.–Oct. 1958. v. 16, no. 5, p. 308–310, illus.)

Describes the iron ore port in northwest Norway. The modern town of 12,000 inhabitants was rebuilt after World War II. Ore (30,000–40,000 tons daily) arrives by electric train from Swedish mines, and is loaded on ships, 4,500 tons/hr., by mechanized methods. Plans for expansion are noted.

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55955. WATTS, NOEL, *and* **G. WATTS.** Through Finland to the North Cape. (Norseman, Mar.–Apr. 1958. v. 16, no. 2, p. 95–102, illus.)

Describes a summer 1957 trip by train, bus and boat across northern Finland and Norway to Nordkapp; impressions of the landscape, towns, etc., along the way: Rovaniemi, Sodankylä and Lake Inari in Finland, Karasjok, Honningsvåg, Magerøy and Porsangerfjord in Norway.

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55956. WAY, M. J. Glycerol-containing insects. (Royal Society of London. Proceedings, 1957. ser. B, v. 147, no. 929, p. 551.) 2 refs.

Note on insect freezing, supercooling; reports that glycerol has been found in their bodies, presumably as means of resistance to cold.

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55957. WEBB, JOSEPH E., *and* **H. M. GRAHAM.** Observations on some filth flies in the vicinity of Fort Churchill, Manitoba, Canada, 1953–54. (Journal of economic entomology, Oct. 1956. v. 49, no. 5, p. 595–600, 3 tables.) ref.

Lists 27 species with notes on biology, habits, abundance, seasonal occurrence and probable importance in human enteric disease transmission. *Musca domestica* and two species of calliphorid flies (*Cynomyopsis cadaverina* and *Protophormia terrae-novae*) were observed frequenting indoor messes in limited numbers. None were observed in any significant numbers around food preparation or food serving activities at troop bivouacs or outdoor camps. ***Copy seen:*** DA.

55958. WEBB, R. B., *and others.* A study of the temperature dependence of radiation sensitivity of dry spores of *Bacillus megaterium* between 5° K. and 309° K. (Experientia Sept. 1958. v. 14, fasc. 9, p. 324–26, illus., table.) 11 refs. *Other authors:* C. F. Ehret *and* E. L. Powers.

Account of sensitivity to X-rays in dry spores of this bacillus. Below 130° K. sensitivity was temperature-independent. Between 130° and 310° K. it corresponded to the van-t'Hoff-Arrhenius rule at an activation energy of 0.100 kcal.

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55959. WEBB, WATTS R., *and* **H. S. HOWARD.** Restoration of function of the refrigerated heart. (Surgical forum, 1958. v. 8, p. 302–306, tables.) 10 refs.

Reports on experiments with isolated dog hearts maintained in a nutrient solution of 4° C. When all blood was flushed from the coronary system, the hearts could be restored to function after six–eight hours. Non-perfused hearts did not resume function. Massive doses of heparin had a similar effect as flushing out the blood. ***Copy seen:*** DNLM.

55960. WEBBE, RUSSELL. Problemer omkring kortnebbgåsas trekk til og fra Spitsbergen, *Anser* arv. *brachyrhynchus.* (Stavanger, Norway. Museet. Sterna, May 1958. bd. 3, hefte 2, p. 41–52, illus.) 35 refs. Text in Norwegian. ***Title tr.:*** Problems of the migration of the pink-footed goose *Anser* f. *brachyrhynchus,* to and from Spitsbergen.

Contains notes on concentration places (e.g., Camp Erna) in Spitsbergen prior to the autumn migration west, and on the wintering ground. Birds stop on Bjørnøya on the way from northern Norway and the western parts of Russian Lapland. The way south may lie across Finnish Lapland to the Gulf of Bothnia or via the tundra zone of Sweden and Jylland, Denmark. In spring, pinkfeet concentrate at Tipperne (Jylland) prior to migration. Soon after arrival on Spitsbergen, the geese disperse to their breeding grounds elsewhere in the island. A result of the British (Sherborne-Cambridge) Spitsbergen Expedition of 1954 led by G. T. Wright.

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55961. WEBBER, ALFRED C. Brittleness temperature testing of elastomers and plastics. (American Society for

Testing Materials. Bulletin, Jan. 1958. no. 227, p. 40–44, illus., tables.) 16 refs.

Studies were made to determine the degree of reproducibility of results obtained from low temperature brittleness tests of elastomers and plastics by various methods; only ASTM Method D746–55T was found useful over the range of materials tested. Brittleness temperature, it is emphasized, is not a fundamental property of the material, but a function of many variables, particularly mode and rate of straining, and that no exact definition of brittleness can be given. ***Copy seen:*** DLC.

WEBER, C. PHILIP, *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

WEBSTER, DONALD ROBERTSON, 1902– , *see* Ogilvy, W. L., *and others*. Vascular changes . . . cold injury. *1957*. No. 53709.

55962. WEBSTER, F. M. Butterflies common to Norway and arctic North America. (Canadian entomologist, May 1894. v. 26, no. 5, p. 117–20.)

Contains an annotated list of 13 butterflies of northern Norway ranging 58°–71° N. from Alaska to Labrador. Distribution of all species in Norway is given.
Copy seen: DLC.

WEBSTER, W. W., *see* Mefferd, R. B., *and others*. Whole body lipid metabolism . . . adverse environments. *1958*. No. 53213.

WEDOW, H., *see* Houston, J. R., *and others*. Reconnaissance for radioactive deposits . . . *1958*. No. 51823.

WEEKES, K., *see* Polar Atmosphere Symposium . . . 1956 . . . *1958*. No. 54042.

WEEKS, L. J., *see* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957*. No. 50087.

55963. WEEKS, WILFORD FRANK, *and* **D. L. ANDERSON.** An experimental study of strength of young sea ice. (American Geophysical Union. Transactions, Aug. 1958. v. 39, no. 4, p. 641–47, table, diagrs., graph.) 10 refs.

Describes in-place cantilever beam tests of homogeneous sheet ice, made in North Star Bugt (76°33′ N. 68°52′ W.), North Greenland, and at Hopedale, Labrador. A definite relationship was found between flexural strength and brine content. Experimentally determined values of Young's modulus are used to calculate the ice thickness required to support light loads; the calculations are compared with field (Thule) observations. The bearing capacity of a sea-ice sheet is dependent on the brine content; thin ice sheets are capable of supporting a large "super load" beyond the force necessary to form the first crack. ***Copy seen:*** DLC.

55964. WEEKS, WILFORD FRANK, *and* **O. S. LEE.** Observations on the physical properties of sea-ice at Hopedale, Labrador. (Arctic, 1958. v. 11, no. 3, p. 135–55, map, illus., diagrs., graphs.) 13 refs.

Preliminary results are reported of field studies 1955–56 by the U.S. Air Force Cambridge Research Center, the Hydrographic Office and SIPRE on the general physical properties of sea ice; methods of measurement are described. Characteristics of sea water during the freezing period are outlined: formation, structure, and salinity of the initial ice cover, formation and characteristics of infiltrated snow-ice, growth of the ice and influencing factors, density of the ice at various periods, and crack formation are discussed. Data on the salinity of sea ice formed during wave action and that of sheet-ice, hourly averages of air and ice temperatures at various levels, snow and slush density and thickness, observed slush levels and theoretical water levels are shown. Salinity of ice before and after the slush layer froze, and that of deteriorating ice, salinity of ice vs. ice thickness, thickness of the ice versus degree-days, the density of the ice, and measured ice densities vs. theoretical density of air-free sea ice at −15° C. are figured and discussed. The orientation of sea ice *c*-axes and of infiltrated snow-ice *c*-axes are diagrammed.—From SIPRE. ***Copy seen:*** CaMAI.

55965. WEEKS, WILFORD FRANK, *and* **D. L. ANDERSON.** Sea ice thrust structures. (Journal of glaciology, Mar. 1958. v. 3, no. 23, p. 173–75, illus., diagr.) Ref.

The structures, consisting of a series of parallel, rectilinear overthrusts alternating with similarly shaped underthrusts, were observed in open leads at the edge of fast ice at Hopedale, Labrador and during initial freezing of Wolstenholme Fjord, northwest Greenland. Similar structures were observed during flights over the Beaufort Sea in 1951. The phenomenon occurred in areas of ex-

tremely thin sheet ice (2–6 cm.) and varied in dimensions from 0.1 x 1 m. to 40 x 100 m., the corner angles usually 90°, occasionally as low as 70°, the maximum dimension of the thrust sheets usually normal to the initial ice edge and parallel to the wind at the time of formation. The phenomenon is attributable to the splitting of a thin, homogeneous sheet of ice under the combined action of wind, tide, and waves, and the consequent deposition of individual segments on top of shore-fast ice by the crest of a wave. When the wave crest passes, the overlapping part of the deposited sheet collapses and slides under the fast ice during the next wave trough. When thicker ice is subjected to these same forces, pressure ridges result.—From SIPRE. ***Copy seen:*** DGS.

55966. WEEKS, WILFORD FRANK. The structure of sea ice: a progress report. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 96–98.) 6 refs.

Based upon field study during winters 1956/57 and 1957/58, of the general crystalline structure of the sea ice along the coasts of northern Labrador, Baffin Island, and northwest Greenland. The freezing process in sea water is discussed in detail, noting shape, size, alignment and optical characteristics of crystals; consolidation of crystals into skim ice; thermal conductivity at various depths. Freezing of sea and lake ice is compared. ***Copy seen:*** DN–HO.

55967. WEERTMAN, J. Deformation of floating ice shelves. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 38–42, diagr.) 8 refs.

The problem of the creep deformation of floating ice shelves is solved, using Glen's creep law for ice and Nye's relation of steady-state creep (the analogue of the Lévy-Mises relation in plasticity theory). Good agreement is obtained between an observed creep rate at Maudheim in the Antarctic and that predicted from the results of creep tests made by Glen.—From author's abstract. ***Copy seen:*** DGS.

55968. WEERTMAN, J. On the sliding of glaciers. (Journal of glaciology, Mar. 1957. v. 3, no. 21, p. 33–38, 2 diagrs., graph.) 9 refs.

Sliding over its bed may contribute to a glacier's surface movement. About 80% of the movement of Highway Glacier, Penny Ice Cap, Baffin Island, is due to sliding (No. 43245). Examples from Switzerland and Norway are also noted. "A model is proposed to explain the sliding of any glacier whose bottom surface is at the pressure melting point. Two mechanisms are considered. One is pressure melting and the other is creep rate enhancement through stress concentrations. Neither of the mechanisms operating alone is sufficient to explain sliding. If both mechanisms operate together appreciable sliding can occur." ***Copy seen:*** DGS.

55969. WEGENER, KURT, 1878– . Temperatur- und Dichte-Messungen des Grönländischen Inlandeises. (Annales de géophysique, 1956. t. 12, fasc. 4, p. 283–84, graph.) Text in German. ***Title tr.:*** Temperature and density measurements on the Greenland inland ice.

Comments on Georgi's paper (No. 45073) with disagreement. Georgi's reply, in clarification, is appended (p. 285–86). ***Copy seen:*** DGS.

WEHR, EVERETT E., *see* Herman, C. M., *and* E. E. Wehr. The occurrence . . . gizzard worms in Canada geese. *1954.* No. 51691.

55970. WEICKMANN, L. Harald Ulrik Sverdrup 1888–1957. (Meteorologische Rundschau, May–June 1958. Jahrg. 11, Heft 3, p. 6.) Text in German.

Obituary with sketch of his life and mention of his major publications. ***Copy seen:*** DLC.

55971. WEIDICK, ANKER. Gletscheraendringer i Grønland og Europa i historisk tid. (Grønland, Apr. 1958, nr. 4, p. 137–45, illus., diagrs.) Text in Danish. ***Title tr.:*** Glacier changes in Greenland and Europe in historical time.

Contains a general account of accumulation and ablation processes in glaciers and periods of their advance and recession in Europe. Details are given on the development of Greenland glaciers. Reports date from about 1750, but during the Norse period (approx. 1000–1500) the climate was mild. The glaciers probably started advancing, as in Europe, about 1600, and in 1750, were in a very advanced or advancing position. Most Greenland glaciers present this pattern: maximum extension about 1750, recession, interrupted by delays and advances around 1800, 1850 and 1890 and a speedy recession after about 1900. A diagram represents the recession of eight of them.

Some of the North Greenland glaciers have started advancing in the last few years. ***Copy seen:*** DLC.

55972. WEILER, GLADYS D. Alaska begins operation of own mental health program. (Alaska's health, Oct. 1957. v. 14, p. 1–2.)

Contains information on the Alaska Mental Health Act of the U.S. Congress (Public Law 830, July 28, 1956) and the Territorial Mental Health Commitment Act (CH. 87, SLA 1957), and their outstanding features; the planned construction program, staff recruitment, mentally retarded patients, rehabilitation, etc. ***Copy seen:*** DNLM.

55973. WEINER, HOWARD M. Low temperature degradation of flexible barrier materials. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 113–25, 3 tables.)

Existing low-temperature flexibility tests for grease-, water-, and water-vapor proof barrier materials in current U.S. Government specifications and the development of new test procedures at Picatinny Arsenal are summarized. The flexing or creasing tests are followed by liquid water or water vapor barrier tests. The outstanding performance of polyethylene at low temperatures is noted.

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55974. WEIR, BRYCE K. A. A respiratory effect of hypothermia. (McGill medical journal, Dec. 1957. v. 26, no. 4, p. 212–14, illus.) 6 refs.

Report on cooling the cat's brain while keeping the rest of the body warm. Rate of respiration decreased when temperature of the brain's blood supply was lowered. The respiratory center was not irreversibly damaged by being perfused for six minutes by blood of 18–19° C.

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55975. WEISS, A. KURT. Energy metabolism of cold-exposed rats during anesthesia. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 170.)

A comparison of cold-induced increase of metabolism in small (150 gm.) versus large (300 gm. and more) rats. The effects of sodium pentobarbital, injected during metabolism determinations are discussed. ***Copy seen:*** DLC.

55976. WEISS, A. KURT. Severe cold-exposure of large rats. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 134–35.)

Rats of 150 gm. exposed to 5° C. for five days or longer show elevated O_2-consumption in preparations of liver, diaphragm, kidney cortex, and muscle. In older rats weighing twice as much or more, no such changes were observed except in the liver. Large animals could not withstand severe cold (−5° C.) their mean survival time being ca. nine days.

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55977. WEISS, A. KURT. Tissue responses in the cold-exposed rat. (American journal of physiology, Mar. 1957. v. 188, no. 3, p. 430–34, tables.) 28 refs.

In rats exposed for five days to 5±2° C., Qo_2 values of liver, diaphragm, heart and skeletal muscle were elevated; kidney slices showed a variable response while preparations from six other organs did not show any change. In general, tissues responded to cold as to hormonal treatment. Conditions in hypothyroid animals and their survival time in cold environment are also discussed.

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55978. WEISS, BERNARD. Effects of brief exposures to cold on performance and food intake. (Science, Feb. 28, 1958. v. 127, no. 3296, p. 467–68, illus.) 5 refs.

Account of experiments with rats exposed to −20°, 0°, 10° or 20° C. for 20 minutes per day. Performance was measured by lever pressing rewarded by a small food pellet and food was accessible for one hour after exposure. At low temperatures both food intake and barpressing increased for about three days, then leveled off. ***Copy seen:*** DLC.

55979. WEISS, BERNARD. Performance and food intake at low temperatures. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 135.)

Rats exposed to 0° and 10° C. showed an initial depression in performance and food intake, followed by a rise to a level corresponding to the metabolic cost. Another group exposed alternatingly to −10° and 20° C. showed first a steep rise, followed by a leveling off in these two activities. ***Copy seen:*** DLC.

55980. WEISS, BERNARD. Thermal behavior of the subnourished and pantothenic-acid-deprived rats. Jan. 1957. 5 p. illus. (U.S. Air Force School of Aviation Medicine, Randolph Field, Tex.

Report no. 57–25.) 12 refs. *Also pub. in* Journal of comparative and physiological psychology, Oct. 1957, v. 50, no. 5, p. 481–85.

Rats were trained in an environment of 0° C. to obtain a burst of heat from a lamp, by pressing a lever. When deprived of pantothenic acid the animals were most affected by cold, as determined by frequency of lever pressing. When subsequent to deprivation they received high pantothenic acid supplements they were least affected by cold.

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WEISS, EDWARD S., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

55981. WEISS, S. J., *and others.* Preliminary study of snow values related to vehicle performance. Detroit, Sept. 1956. Land Locomotion Research Laboratory. 27 p. diagrs., graphs (U.S. Office of Ordnance Research. Technical memorandum MO2.) 13 refs. *Other authors:* W. L. Harrison, L. C. Abarca, and M. G. Bekker.

"The results of preliminary attempts at a more complete description of the strain-stress relationship of snow using seven snow values (frictional modulus of deformation, cohesive modulus of deformation, dimensionless sinkage exponent, cohesion, angle of internal friction, slippage parameter/in., and dimensionless slippage parameter) for both horizontal and vertical loading are reported; the test procedure, underlying principles, and instrumentation are described; and data are tabulated. The study included load-*vs.*-sinkage tests to obtain a stress-strain curve and torque-*vs.*-rotation tests to obtain a shear-stress-*vs.*-deformation curve. The results indicate that the proposed system of 7 snow values is suitable for engineering usage in determining snow-vehicle relationship and that the instruments and investigation techniques developed for this purpose deserve further study."—SIPRE. ***Copy seen:*** DLC.

55982. WEITZ, JOSEPH. Vibratory sensitivity as a function of skin temperature. (Journal of experimental psychology, Jan. 1941. v. 28, no. 1, p. 21–36, illus.) 16 refs.

Account of experiments with skin heated or cooled over an area of some 25–50 cm.^{2}. With skin temperature falling, vibratory thresholds showed a continuous rise. The effects of cooling (or warming) were not due to changes in skin conductivity nor the results of gross vascular action. ***Copy seen:*** DNLM.

55983. WELCH, B. E., *and others.* Energy requirements of men in subarctic bivouac. (Federation proceedings, Mar. 1957. v. 16, no. 1, pt. 1, p. 401–402.) *Other authors:* L. M. Levy, C. F. Consolazio, E. R. Buskirk, and T. Dee.

Account of observations on 26 soldiers during a control period and during one pre-bivouac and three bivouac periods of seven-eight days. Caloric intake rose from 2,536 to 4,488 cal./day. Average total body water and weight decreased and body density increased.

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55984. WELCH, B. E., *and others.* The relation of climate and temperature to food and water intake in man. Denver, Colorado, Sept. 1957. 14 p. illus., tables. (U.S. Army. Medical Nutrition Laboratory, report no. 213.) *Other authors:* E. R. Buskirk *and* P. F. Iampietro.

A study of 53 men aged 17–35 years in warm, moderate, and cold climate. The last was conducted in winter at Fort Churchill, Manitoba. Caloric intake was found to be the same in all environments when calculated on the basis of body weight. There was no relationship between environmental temperature *per se* and caloric intake. Water intake was essentially the same at temperatures of 60° to −20° F. ***Copy seen:*** DNLM.

55985. WELCH, B. E., *and others.* Relation of climate and temperature to food and water intake in man. (Metabolism: clinical and experimental, Mar. 1958. v. 7, no. 2, p. 141–48, illus., tables.) 22 refs. *Other authors:* E. R. Buskirk *and* P. F. Iampietro.

A study of men in three different climates, including at Fort Churchill, Manitoba, properly clothed for each environment, but otherwise living under similar conditions. Caloric intake was the same in all climates when calculated on the basis of body weight. There was no relationship between environmental temperature *per se* and caloric intake. Water intake was essentially identical in the temperature range −20° to +60° F. but increased sharply above 60° F.

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WELCH, B. E., *see also* Buskirk, E. R., *and others.* Variations . . . metabolism . . . food, exercise and climate. *1957.* No. 50023.

55986. WELLS, JOSEPH VAN BRUNT, *and* S. K. LOVE. Compilation of records of quantity and quality of surface waters of Alaska through September 1950. Washington, D.C., U.S. Govt. Print. Off., 1957. 5, 262 p., fold. map, diagrs., tables. (U.S. Geological Survey. Water-supply paper 1372.) 3 refs.

Comprehensive summary of published stream-flow records for Alaska prior to 1946, compiled on a monthly and yearly basis. Published for the first time are: records of daily and monthly discharge and miscellaneous discharge data, collected 1946–50; also results of quality-of-water testing. A general description of Alaskan surface-water records is given, including the stream-gaging program, principal features of the data, material previously published, hydrologic conditions; comparable information on the quality-of-water records is also provided. A bar chart summarizes some of the data presented in the body of the report. Records from 262 stations (cf. map) are presented in two sections: Southeast Alaska, and area west of 141° W. Miscellaneous discharge measurements and chemical analyses supplement the station records. ***Copy seen:*** DGS.

55987. WELLS, JOSEPH VAN BRUNT, *and* S. K. LOVE. Quantity and quality of surface waters of Alaska, October 1950 to September 1953. Washington, D.C., U.S. Govt. Print. Off., 1958. vi, 243 p. tables. (U.S. Geological Survey. Water-supply paper 1466.) Refs.

Contains data on the flow and the chemical and physical quality of streams in Alaska, based on records from 64 gaging stations, 175 chemical sampling sites and from 11 sediment measuring stations during the three-year period. Terms, methods of gaging and analysis, etc. are explained. Comparison is made between field data (runoff) and computed results (precipitation). Base data collected at gaging stations consist of records of stage and measurements of discharge; factors affecting the stage-discharge relationship, weather records, and other pertinent information are also included. The report is in two sections: Southeast Alaska, and area west of 141° W.

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55988. WELLS, JOSEPH VAN BRUNT, *and* S. K. LOVE. Quantity and quality of surface waters of Alaska, October 1953 to September 1956. Washington, D.C., U.S. Govt. Print. Off., 1958. 229 p. tables. (U.S. Geological Survey. Water-supply paper 1486.)

Contains results of measurements of the flow and the chemical and physical quality of streams in Alaska during period noted; 61 gaging stations were being operated by the U.S. Geological Survey on Sept. 30, 1956; data from these and other stations are included, similar to those of No. 55987. ***Copy seen:*** DGS.

55989. WELLS, ROLLIEN R., *and others.* Beneficiation of iron-copper ores from Kasaan Peninsula, Prince of Wales Island, Alaska. Washington, D.C., 1957. 15 p., tables, maps (1 fold.), diagr. (U.S. Bureau of Mines. Report of investigations 5312.) *Other authors:* E. G. Erspamer *and* F. T. Sterling.

Summarizes results of laboratory testing of copper-bearing magnetite ore, found amenable to flotation and magnetic separation treatment for production of high-grade magnetite concentrate of low copper content. Though known reserves of individual deposits are small, combined reserves within a limited area seem substantial; simple method of concentration is required.

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WELLS, ROLLIEN R., *see also* Lorain, S. H., *and others.* Lode-tin mining at Lost River . . . *1958.* No. 52911.

WELLS, ROLLIEN R., *see also* Mihelich, M., *and* R. R. Wells. Copper mines . . . Landlocked Bay . . . *1957.* No. 53273.

WELSH, B. E., *see* Iampietro, P. F., *and others.* Effect of food, climate and exercise on rectal temperature . . . *1957.* No. 51895.

55990. WENDEL, OTTO W., *and* L. W. CHARKEY. Influence of environmental temperature and chlorpromazine on biochemical changes following bowel shock. (Society for Experimental Biology and Medicine. Proceedings, July 1958. v. 98, no. 3, p. 463–66, tables.) 17 refs.

Account of experiments on rats with experimental bowel obstruction shock. The extent of biochemical changes was directly related to rectal temperature of normothermic as well as animals made poikilothermic by chlorpromazine. Hypothermia was found to protect the rats from bowel shock and chlorpromazine was beneficial only as it enhanced hypothermia. ***Copy seen:*** DLC.

55991. WENGER, JOSEPH N., *and others.* Scatter propagation. (Signal, Aug., Sept. 1958. v. 11, no. 12, p. 7–12, 20; v. 12, no. 1, p. 42–45, illus., tables.) *Other authors:* W. A. Ross, W. A. Ellis, *and* R. C. Sears.

The fundamentals of ionospheric and tropospheric scatter are reviewed, emphasizing these systems' special value in northern latitudes. Discussions of specific projects, mainly in arctic and subarctic regions, are presented by U.S. Army, Navy and Air Force representatives. Details are given of equipment, antennas, frequency range, performance, capacity, etc.; possibilities of developing light-weight, mobile units for field use, are discussed. ***Copy seen:*** DLC.

WENNERBERG, BIRGER, *see* Hjulström, F., *and others.* Mikkaglaciären . . . *1957.* No. 51733.

WERESUB, LUELLA K., *see* Cain, R. F., *and* L. K. Weresub. Studies . . . coprophilous Ascomycetes, V . . . *1957.* No. 50054.

WERKENTHIN, T. A., *see* Hanok, M., *and others.* A comparison instruments . . . part I: hardness. *1957.* No. 51554.

55992. WERTHEIMER, ERNST, *and* **V. BENTOR.** Adaptation of young and old rats to short cold exposure. (Gerontologia, 1957. v. 1, no. 5, p. 306–312, tables.) 5 refs.

Account of investigation on the effects of single or repeated cold exposures of the diaphragm of 42-day-old rats *in vivo.* Cold adaptation was followed and noted to appear after a fortnight of exposures. The effect of cold on older animals (five-six months) was also studied.

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WERTHEIMER, ERNST, *see also* Itzhaki, S., *and* E. Wertheimer. Changes in carbohydrate metabolism . . . muscle in hypothermic rats. *1957.* No. 51983.

55993. WEST, DAVID. Arctic artery. (Aeronautics, Aug. 1958. v. 38, no. 6, p. 32–34, illus.)

Relates impressions from journey as passenger on a Canadian Pacific Airlines DC–6B on regular flight Vancouver-Sondrestrom-Amsterdam. Brief description of operational procedure is included; route is flown three-four times weekly.

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WEST, R. G., *see* Donner, J. J., *and* R. G. West. The Quaternary geology of Brageneset . . . *1957.* No. 50603.

WEST, R. G., *see* Glen, J. W., *and others.* On the mechanism . . . stones in till . . . oriented. *1957.* No. 51225.

55994. WEST, THEODORE C., *and* **E. L. FREDERICKSON.** Intracellular recording in dog heart during hypothermia. (Federation proceedings, Mar. 1958. v. 17, no. 1, pt. 1, p. 419.)

Account based on records of left ventricular pressure, electrocardiogram and cellular potentials in open chest dogs made hypothermic by extracorporeal circulation. Perimeters proportional to the intensity of hypothermia and those unaffected are discussed.

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55995. WESTENHOLZ, H. Flyvning på Grønland, betingelser og muligheder. (Grønland, Dec. 1958, nr. 12, p. 441–55, illus., tables.) Text in Danish. ***Title tr.:*** Aviation in Greenland, conditions and possibilities.

Analyzes conditions for flying: weather, distances, topography, air fields and other landing and service possibilities, meteorological and radio stations; and gives a survey of types of aircraft suitable for the country. All flying should be coordinated by the government, e.g., under the direction of the air force. Flying time for various activities is estimated at 4,500 hours altogether, and costs at 2.5 million D. kr. initially for conversions and purchases, 6.5 million for annual running expenses. ***Copy seen:*** DLC.

55996. WESTENHOLZ, H. Flyvning på Grønland, udvikling, betydning og behov. (Grønland, Nov. 1958, nr. 11, p. 401–414, illus., maps, table.) Text in Danish. ***Title tr.:*** Flying in Greenland, development, importance and need.

Reviews flying introduced in 1932 to carry out air photography and air reconnaissance for survey and scientific work. Aviation is now used in Greenland for transport, postal service, search and rescue, survey, ice reconnaissance, military duties and fisheries inspection. Flying hours required by various institutions are indicated. ***Copy seen:*** DLC.

WESTERGAARD, M., *see* Jørgensen, C. A., *and others.* The flowering plants of Greenland . . . *1958.* No. 52075.

55997. WESTERMANN, HANS. Biblioteksvaesenet i Grønland. (Grønland, Oct. 1958, nr. 10, p. 377–84, illus.) Text in Danish. ***Title tr.:*** Library organization in Greenland.

Describes the work of the Danish librarian, appointed in 1956 to organize the Greenland libraries: finding suitable premises and personnel, sorting and cataloging existing collections and building up new ones, etc. The central library is to be that at Godthåb, and others of varying size are to be in all the towns. Boxes of books will be sent out to the trading stations. Children's libraries are to be set up in 16 towns. Guiding principles for book purchase are outlined. ***Copy seen:*** DLC.

55998. WESTERMARCK, NILS. Die finnische Landwirtschaft. Helsinki, Gesellschaft Pellervo, 1956. 87 p. 41 illus. on 31 plates, 16 text maps, 7 diagrs., 5 tables. 20 refs. Text in German. ***Title tr.:*** Finnish agriculture.

Finland is the fifth largest country in Europe with population second lowest per unit area; 8% of its area was farmland in 1950 and 71% was forested. The importance of forestry in the national economy and to the farmer is stressed. The natural background, historical development, and present conditions of agriculture are concisely presented. Since Finland became independent, land use has changed from self sufficiency to an intensive, integrated, commercial economy. This is due to land reforms, clearing of new land, agricultural subsidies and premiums, also to improvements in crops and farming practices, development of the export market, and to education, as well as individual and cooperative effort. Data, including comparative production figures over the past half century, are presented for each important agricultural crop. Cooperatives, their development and present status, are individually discussed. Education, practical training, and professional guidance are considered in detail and agricultural administration is outlined in tabular form. A third of the linear extent of the country is in the arctic region. Its agricultural conditions, activities, and products are representatively included in this study. ***Copy seen:*** DLC.

55999. *WESTERN MINER AND OIL REVIEW.* Canadian Arctic survey. (Western miner and oil review, Oct. 1958. v. 31, no. 10, p. 114–15, map.)

Outlines federal surveying program of 50,000 sq. mi. of the Canadian Arctic Islands, made by Aero Surveys (western part), Spartan Air Services (central), and The Photographic Survey Corp. (eastern part). Two B–17's fitted with Airborne Profile Recorder and fuel tanks for 15 hrs. of flying, photographed 31,000 sq. mi. in the (July–Aug.) 1958 season. The photography will be used for delineating navigable waters, and is the first step in providing base mapping, essential for the recording of further geological information. ***Copy seen:*** DI.

56000. WESTERSKOV, KAJ. Age determination and dating nesting events in the willow ptarmigan. (Journal of wildlife management, July 1956. v. 20, no. 3, p. 274–79, illus., tables.) 24 refs.

A study largely based on material collected by Norwegian biologists. The regular wing moult is proposed as means of obtaining the approximate ages of the birds as well as dates for onset of oviposition, incubation and hatching. Methods for determining the age of ptarmigan chicks, and of distinguishing juvenile from adult birds are also presented, and nesting data discussed. ***Copy seen:*** DI.

56001. WESTERVELT, R. D. The Knob Lake iron ore deposits. (Canadian mining and metallurgical bulletin, Nov. 1957. v. 50, no. 547, p. 678–88, text map, 2 diagrs., 3 tables.) 25 refs. *Also pub. in* Canadian Institute of Mining and Metallurgy, Transactions, 1957, v. 60, p. 376–86.

Describes development of iron mining in the Labrador Trough, formation of the Iron Ore Co. of Canada in 1949, the physiography of the area and its origin. Regional and stratigraphic geology are discussed in general; detailed treatment of the Sokoman (iron) formation is given, noting its seven main members, their characteristics, principal minerals and their paragenesis; origin of the formation is explained. ***Copy seen:*** DGS.

56002. WESTFALL, HERBERT C. Battling permafrost, sub-arctic weather and tough soil to give Fairbanks water. (Water works engineering, Feb. 1958. v. 111, no. 2, p. 128–31, 153–54, illus.)

The water supply works of this Alaskan city were constructed as a single-main recirculating system with a water recirculating velocity of 2–3 ft./sec. depending on the season. By utilizing heat created by water friction, addition of external heating could be reduced to only a few points in the system. During construc-

tion, an insulated steel pipe wrapped in asphalt-impregnated asbestos felt was developed, and a thawing machine capable of thawing a 50-ft. dual-service line in approx. 30 min., was designed. Extensive use was made of test data obtained from various U.S. laboratories.

Copy seen: DLC.

56003. WESTPHALL, POVL, 1907– . En luftens viking laegger op. (Grønland, Jan. 1957, nr. 1, p. 29–33, port.) Text in Danish. ***Title tr.:*** A viking of the air retires.

Notes activities of Bernt Balchen, born in Norway in 1899 and recently retired from the United States Air Force which he joined in 1941; his arctic flying experience, building of airfields in Greenland, organizing the post-war Fairbanks-North Pole flights; development of Thule air base during the Korean war, trans-polar passenger flights, etc. ***Copy seen:*** DLC.

56004. WESTRING, NICOLAUS. Araneae Svecicae descriptae. Göteborg, Bonnier, 1861. 614 p. (Göteborgs k. vetenskaps- och vitterhetssamhälle. Handlingar, ny tidsföljd, häfte 7.) Text in Latin. ***Title tr.:*** Description of Swedish *Araneae*.

A study of Swedish spiders known at the time, including those from arctic areas. Altogether 308 species are described belonging to six families. A synopsis of families and familial and generic descriptions precede the treatment of species. The latter includes morphology of both sexes, anatomy, size, color, comparisons with related species, variations, seasonal occurrence, habitat, etc. A review of families and genera, and an alphabetic index of species conclude the monograph.

Copy seen: DLC.

56005. WETHERBEE, DAVID KENNETH. Natal plumage and downy pteryloses of passerine birds of North America. (American Museum of Natural History, New York. Bulletin, 1957. v. 113, article 5, p. 343–436, 13 illus., plates 6–7, 90 tables.) 190 refs. M.A. thesis to Clark University.

Birds are best known by their plumage and the various plumages of most North American birds have been described. The natal plumage, and the downy feather growth pattern of the Passeriformes, the most numerous order of birds are described, with measurements (in mm.) and counts of downy feathers of various species presented in tables. *Parus rufescens*, the chestnut-backed chickadee, from Yakutat in Alaska, and *Calcarius lapponicus*, the Lapland longspur, from Northwest Territories, are included. Reduction of the natal plumage, considered a product of specialization, is suggested to be a by-product of total embryonic specialization. Complete loss of the natal plumage has occurred in some families. Because of its fragility, most individual variations observed in this plumage are due to abrasion rather than to genetic differences. Statistical treatment of two species showed the positive value of natal pterylosis as a tool in systematics even with small samples. ***Copy seen:*** DLC.

56006. WETTERN, DESMOND. Japan in the Antarctic. (Nautical magazine, Apr. 1957. v. 177, no. 4, p. 231.)

Contains brief description of the icebreaker-supply ship *Soya* used by the Japanese research team participating in the IGY. The 2,600-ton vessel has been specially strengthened and fitted with heeling and trimming tanks. It is powered by two diesel engines, is 79 m. long with a 15 m. beam, and cruises at 12.5 knots. The ship carries modern scientific equipment as well as a seaplane and helicopter. ***Copy seen:*** DLC.

56007. WEVER, RÜTGER, *and* **J. ASCHOFF.** Die Wärmedurchgangszahl als Durchblutungsmass am Menschen. (Pflügers Archiv für die gesamte Physiologie, 1957. Bd. 264, Heft 3, p. 272–79, illus.) 5 refs. Text in German. ***Title tr.:*** "Heat transit number" as measure of circulation in man.

Description of a method evolved from observations on a model and on human fingers. It enables to determine the heat current at the body surface, the temperature difference between core and surface and the quotient of both values: the heat transit number.

Copy seen: DNLM.

56008. WEXLER, HARRY, 1911– . Modifying weather on a large scale. (Science, Oct. 31, 1958. v. 128, no. 3331, p. 1059–1063, 3 graphs, 3 tables.) 19 refs.

Discusses feasibility and probable results of two proposals for large scale modification of Northern Hemisphere weather: (1) changing the albedo or reflectivity of a large area by blackening the surface of the arctic ice pack to in-

crease the melting of the surface, and enlarge the water-covered area of the arctic ocean, with resulting changes in temperature and humidity; (2) reducing the return of infrared radiation to space, by such means as formation of ice clouds from nuclear explosions under the arctic ocean; these ice clouds would greatly increase surface temperatures and speed current melting of the ice pack; but would also increase snowfall along the arctic coasts. ***Copy seen:*** DLC.

56009. WEXLER, HARRY, 1911– , *and* W. B. MORELAND. Winds and temperatures in the arctic stratosphere. (*In:* Polar Atmosphere Symposium, Oslo 1956. v. 1, *pub.* 1958, p. 71–84, 3 fold. maps, graphs.) 23 refs.

General characteristics of the temperature and wind fields at 50 mb. in the Arctic are described and compared with upper-air conditions in the Antarctic. Studies revealed the existence of cold cyclones and warm anticyclones which have little or no connection with lower-level systems. These findings have explained some of the confusion arising from earlier observations and have also led to a better understanding of the smaller-scale dynamic structure of the wind and temperature fields. The arctic stratosphere in winter appears to be 5°–10° C. warmer than at equivalent latitudes in the Antarctic; summer temperatures are more nearly equal. There is also evidence of a strong winter jet stream near 30 km. at the boundary between the dark and sunlit stratosphere. ***Copy seen:*** DLC.

WEYPRECHT, KARL, 1838–1881, *see Payer-Weyprecht-Gemeinde. 1949.* No. 53894.

WHALEY, ROBERT D., *see* Scott, E. M. *and others.* Serum-cholesterol . . . blood-pressure of Alaskan Eskimo . . . *1958.* No. 54644.

56010. WHARTON, BILL. Under the ice cap. (Nautical magazine, Oct. 1958. v. 180, no. 4, p. 203–205.)

Cites statements of the captain and navigation officer on the U.S. Submarine *Nautilus'* 1,830-mi. polar crossing in July–Aug. 1958. ***Copy seen:*** DLC.

56011. WHEELER, EVERETT PEPPERRELL, 1900– . Pleistocene glaciation in northern Labrador. (Geological Society of America. Bulletin, Mar. 1958. v. 69, no. 3, p. 343–44.) 5 refs.

Examines R. F. Flint's theory that the Kighlakhpait (Kiglapait) and Khaumayet (Kaumajet) Mts. on the northern Labrador coast were important ice-cap centers during the waning phases of the Laurentide Ice Sheet (cf. No. 21848). Observations of indicator erratics, direction of striations, drumlins and drumlinoids, and summit elevations showed no evidence to support the theory. They indicated, instead, that the only important Pleistocene ice movement of which any trace remains was from south of west. This is in accordance with the theory of Douglas and Drummond (cf. No. 28804) that there was a center of glaciation in the Knob Lake region. ***Copy seen:*** DGS.

56012. WHEELER, JOHN OLIVER. Mesozoic tectonics of northwestern Canadian Cordillera. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Abstracts of papers, p. 115.)

Traces the succession of geologic events connected with the development and deformation of a trough in Yukon Territory from Triassic to mid-Cretaceous time. ***Copy seen:*** DLC.

56013. WHEELOCK, WILLIAM E. A list of species of the smaller herbaceous genera of North American Saxifragaceae. (Torrey Botanical Club. Bulletin, Mar. 1896. v. 23, no. 3, p. 67–78.)

Contains keys and a systematic annotated list of 53 species, ten of them recorded in Alaska and northern Canada. ***Copy seen:*** DLC.

56014. WHITAKER, IAN 'R. Declining transhumance as an index of culture-change. (Studia ethnographica upsaliensia, 1956. v. 11, Arctica, p. 96–104, tables.) 32 refs.

Deals with the modification of stock migration, mechanization of transportation and trend toward permanent winter dwellings among the reindeer-breeding mountain Lapps of Lainiovuoma Community, Karesuando parish. The progressive settlement of originally nomadic Lapps and their increasing acculturation to Swedish culture is discussed. Data on house ownership, mechanization of transport and composition of households for 1950–55 are tabulated and correlated with 1945 findings. ***Copy seen:*** DSI.

56015. WHITE, C. E. Operating problems in northern Canada. (Western miner and oil review, July 1957. v. 30, no. 7, p. 37–40, illus., maps.)

Reviews problems of mining operations: transportation (mainly), power, utilities, supplies, communications, etc. Water, rail, road transport facilities are summarized. ***Copy seen:*** DI.

56016. WHITE, JACK A. Newfoundland mineral industry 1956; production near $88 million; big growth in iron. (Canadian mining journal, Feb. 1957. v. 78, no. 2, p. 116–18.)

Review includes mineral production in Newfoundland Labrador, where iron ore production was expanded. In addition to the growing production from the present producers, shipments of iron ore will be still further increased by the start, expected in 1957, of operations at Canadian Javelin's Wabush Lake deposits. A 37-mi. spur railway line is being constructed to connect with the Quebec North Shore and Labrador Railway.

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56017. WHITE, THEODORE GREELY, 1872–1901. A preliminary revision of the genus *Lathyrus* in North and Central America. (Torrey Botanical Club. Bulletin, Oct. 1894. v. 21, no. 10, p. 444–58.)

Contains a key, synonyms and data on 33 species of these perennial herbs, vetchling or wild pea. Four species and two varieties are described as new; three extend to the North: *L. palustris* in northern Canada and Alaska, *L. maritimus* and *L. maritimus aleuticus* in Alaska.

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56018. WHITHAM, KENNETH, 1927– , *and* E. I. LOOMER. Characteristics of magnetic disturbance at the Canadian arctic observatories: part I, cyclic field changes on quiet and disturbed days; part II, transient field changes. Ottawa. Queen's Printer, 1957. p. 289–346, 22 diagrs., 11 tables. (Ottawa. Dominion Observatory. Publications, v. 18, no. 12.) 48 refs.

Part I: Three classes of days at Resolute Bay (geomagnetic latitude 83° N.) and Baker Lake (geomagnetic latitude 73.7° N.) are selected, corresponding to "local disturbed," "local quiet," and "local very quiet" conditions at a time of sunspot minimum. The disturbance daily variation is harmonically analyzed, and the statistical properties of the cyclic disturbance waves examined. Well inside the polar cap, the form of the disturbance field remains substantially constant, independent of the intensity of disturbance and the season. In the transitional region north of the auroral zone, diurnal disturbance is much more complex and variable. Part II: The analysis of magnetic disturbance at Resolute Bay and Baker Lake is extended to include sudden commencements, sudden commencement storms, non-sudden commencement storms, and bay phenomena. The physical meaning of the mean disturbance field and non-cyclic changes is also discussed; a number of new results are suggested by these analyses.—From authors' abstract.

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56019. WHITHAM, KENNETH, 1927– , *and* E. I. LOOMER. Irregular magnetic activity in northern Canada with special reference to aeromagnetic survey problems. (Geophysics, July 1957. v. 22, no. 3, p. 646–59, 6 diagrs.) 5 refs.

Investigation of the diurnal and seasonal characteristics of irregular magnetic activity in northern Canada, using the indices of disturbance, shows that, in general, the K index provides a reliable but smoothed measure of short period activity. Two peaks of activity exist, a day-time peak, dominant inside the polar cap, and a night peak, dominant south of the auroral zone. Measurements of range at the most disturbed observatory suggest that aeromagnetic surveying in high latitudes is in general feasible, but that for accurate reconnaissance work it is advantageous to plan operations, taking account of the systematic diurnal variation of disturbance. The location of the magnetic observatories (including those for IGY) and the approximate location of the auroral zone in Canada are mapped. The diurnal and seasonal variations in the usual K index are graphed for Meanook, Baker Lake, and Resolute. A special index is evolved to measure disturbances with periods or other characteristic times of less than 15 minutes. ***Copy seen:*** DLC.

WHITHAM, KENNETH, 1927– , *see also* Serson, P. H., *and others.* A three-component airborne magnetometer. *1957.* No. 54708.

WHITING, KENNETH R., *see* Laktionov, A. F. Recent . . . investigations . . . North Polar regions. *1956.* No. 52632.

56020. WHITTAKER, E. J. Freshwater Mollusca from Mackenzie River basin, Canada. (Nautilus, July 1924. v. 38, no. 1, p. 8–12.)

Lists 43 species (17 forms of pelecypods, 36, including six terrestrial, gastropods)

from 13 localities in the Liard, Hay, Horn and Kakisa Rivers, all tributary to the Mackenzie.

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WHITTOW, G. C., *see* Glaser, E. M., *and others.* Adaptation to localized warming and cooling. *1958.* No. 51219.

56021. WIBORG, KRISTIAN FREDRIK, 1914– . Factors influencing the size of the year classes in the arcto-Norwegian tribe of cod. (Norway. Fiskeridirektoratet. Skrifter, ser. havundersøkelser. Report on Norwegian fishery and marine investigations, 1957. v. 11, no. 8, p. 3–24, illus., tables, map.) 36 refs.

A study on the occurrence of cod eggs and larvae in the waters of northern Norway during 1948–56 and of biological and physical factors possibly influencing the size of year classes in the catch. No correlation was found between abundance of eggs and larvae and the corresponding year classes. No increased mortality was found at any stage of early life. The factors responsible for rich year classes are discussed. ***Copy seen:*** DI.

56022. WIBORG, KRISTIAN FREDRIK, 1914– . Forekomst av fiskeegg og- yngel i nordnorske farvann våren 1952 og 53. Fiskets gang, Jan. 7, 1954. årg. 40, nr. 1, p. 5–9, 12 maps, graph.) Text in Norwegian. ***Title tr.:*** Occurrence of fish eggs and young in north Norwegian waters in the spring of 1952 and 53.

Variations in fish hatches were studied in Vestfjord, Andfjord, and on coastal banks northward to Nordkapp. Samples were taken to 75 m. depth (with plankton collectors) and the hatch per sq. m. of sea surface computed. Cod eggs and hatch for several periods are mapped and annual differences for the period 1947–1953 diagrammed. The large hatch of 1949 may appear in the catch off Finnmark and in Barents Sea if comparison between numbers of young and age classes is valid. Herring, haddock and several small local varieties were also studied. Annual variations in location and limits of spawning grounds, which depend on hydrographic conditions, may be determined. ***Copy seen:*** DLC.

56023. WIBORG, KRISTIAN FREDRIK, 1914– . Quantitative variations of the zooplankton in Norwegian coastal and offshore waters during the years 1949–56. (Norway. Fiskeridirektoratet. Skrifter, ser. havundersøkelser. Report on Norwegian fishery and marine investigations, 1958. v. 12, no. 1, p. 3–17, illus., table, maps.) 7 refs.

Based on net hauls at permanent stations and on cruises, including such in the northern waters. Variations between stations and years are analyzed and possible causative factors discussed. However, no satisfactory explanation of the main causes of quantitative plankton fluctuations was found.

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WICKENDEN, ROBERT THOMAS DAUBIGNY, 1901– , *see* Canada. Geol. Survey. Geology and economic minerals of Canada. *1957.* No. 50087.

56024. WICKHAM, HENRY FREDERICK, 1866–1933. The Coleoptera of Canada, I; the Cicindelidae of Ontario and Quebec. (Canadian entomologist, June 1894, v. 26, no. 6, p. 149–54, illus. 11–16.) 6 refs.

Contains a table to the species of two tiger beetle genera, *Omus* and *Cicindela,* and an annotated list of 14 species in Canada, three of them native to Northwest Territories and two occurring in the Hudson Bay region.

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56025. WICKHAM, HENRY FREDERICK, 1866–1933. The Coleoptera of Canada, V.; the Coccinellidae of Ontario and Quebec. (Canadian entomologist, Nov. 1894. v. 26, no. 11, p. 297–306, illus. 35–52.) 4 refs.

Contains keys and an annotated list of nine species of lady-bugs, among them *Ceratomegilla ulkei, Hippodamia falcigera* and *H. americana,* all native to the Hudson Bay region. ***Copy seen:*** DLC.

56026. WICKHAM, HENRY FREDERICK, 1866–1933. Preliminary handbook of the Coleoptera of North Eastern America. (New York Entomological Society. Journal, Dec. 1895, v. 3, no. 4, p. 180–90; Mar. 1896, v. 4, no. 1, p. 33–49.)

Contains synopses of the species and annotated list of about a hundred with brief descriptive notes and data on distribution; at least nine species are recorded in Alaska, Labrador and the Hudson Bay region. ***Copy seen:*** DLC.

WIDDOWSON, ELSIE M., *see* Masterton, J. P., *and others.* Food intakes, energy . . . faecal excretions . . . *1957.* No. 53178.

WIDDOWSON, ELSIE M., *see* Masterton, J. P., *and others.* Nutrition and energy expenditure . . . *1957.* No. 53179.

56027. WIEGAND, KARL McKAY, 1873–1942. A revision of the genus *Listera.* (Torrey Botanical Club. Bulletin, Apr. 1899. v. 26, no. 4, p. 157–71, plates 356–57.)

Contains a discussion of this orchid genus, the twayblades; a synopsis of the species; and descriptions of twelve, including *Listera cordata* (Greenland, northern Canada, Alaska, Lapland) and *L. convallarioides* (Alaska).

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WIEGMAN, E. J., *see* Serebreny, S. M., *and others.* Study of jet stream . . . *1957.* No. 54697.

WIGGINS, ERNEST J., *see* Robinson, E., *and others.* Ice fog . . . *1957.* No. 54343.

56028. WIGGINS, IRA LOREN, 1899– . The Arctic, its discovery and past development. (Biology Colloquium. 18th, 1957. p. 3–11, illus., maps.) 44 refs.

Outlines the extension of biological knowledge in the Arctic. Notable discoveries and explorations are sketched and an account of early explorers on the biota. Increase in research and observational work since World War II is described, including work of government and scientific agencies in Canada and the United States, and references are made to some of the basic biological contributions in English.

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56029. WIGGINS, IRA LOREN, 1899– . The ferns and fern-allies at Chandler Lake, Alaska. (American fern journal, Jan.–Mar. 1957. v. 47, no. 1, p. 16–25, text map.)

Contains a description of this region (68°12′ N. 152°46′ W.) in northern Alaska and its vegetation in general; followed by notes on the habitats and distributional data on *Cystopteris fragilis, Lycopodium selago* var. *appressum, Dryopteris fragrans, Equisetum arvense* and *Selaginella sibirica.* Based on specimens collected by MacVicar in 1955–56 and by the author in 1956.

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56030. WIGGINS, IRA LOREN, 1899– . Potentialities for the future development of the American Arctic. (Biology Colloquium. 18th, 1957. p. 131–34, illus.)

Discusses, from the biologist's point of view, various problems to be solved before the potentialities are realized. For optimum development, conservation of natural resources, protection and management of wildlife and the training of Americans to live and work in the Arctic are required. Public health studies and water supply and waste disposal are essential. Means of year-round employment must be found, surface transportation improved. Possibility of utilizing thin seams of coal for subterranean heating is mentioned.

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56031. WIGUM, STIG, *Editor.* Norges fiskarlag gjennom 25 år. Bergen, Norges fiskarlags forlag, 1951. 72 p. illus. Text in Norwegian. ***Title tr.:*** Norway Fishermen's Association during 25 years.

The background, development, organization, and activities of this association during its first 25 years are summarized. Welfare of fishermen and their families, cooperative buying (gear, etc.) and selling (fish products), legislature and financial support from the government are outlined. Educational work, health benefits, retirement programs, and improvements within the industry are discussed.

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56032. WIJKSTRÖM, TORSTEN. Maskinell skogsvägsbyggnad. (Svenska vägföreningen. Tidskrift, Sept. 1955. årg. 42, häfte 7, p. 259–67, illus.) Text in Swedish. ***Title tr.:*** Mechanized forest road construction.

Road building was mechanized during World War II when coal and labor were in short supply, a factor now of importance in extending the Swedish roadnet, especially in northern forests. Plans are outlined for beginning road construction in the North in September and continuing throughout the year. Mechanized equipment of various types and its operation are described. A road under construction should be observed during spring thaw to avoid proneness to frost damage.

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56033. WIKE, JOYCE ANNABEL. More puzzles on the Northwest Coast. (American anthropologist, Apr. 1957. v. 59, no. 2, p. 301–317.) 41 refs.

Criticism of Boas's, Swanton's also Murdock's treatment of social organization of Pacific Northwest Indian groups.

The clan affiliations of Tlingit and Haida villages, one- and multi-clan settlements, kinship system, the role of the "town chief," the relation of social mobility to potlatch, etc. are discussed.

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56034. WIKE, JOYCE ANNABEL. Problems in fur trade analysis; the Northwest Coast. (American anthropologist, Dec. 1958. v. 60, no. 6, pt. 1, p. 1086–1101.) 56 refs.

Recapitulates the advantages and disadvantages of increased fur trade in post-contact times for the aboriginal population of the Pacific Northwest including the Tlingit, Tsimshian and Haida. The problems relating to native economy (trade versus barter), social structure and rise of class-society (accumulation of wealth by individuals), economic acculturation and exploitation of natural resources are discussed. The need for further study is stressed.

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56035. WIKLANDER, LAMBERT, *and others.* Studies on gyttja soils, II; some characteristics of two profiles from northern Sweden. (Uppsala. Lantbrukshögskolan. Annaler, 1950. v. 17, p. 24–36, illus., tables.) 6 refs. *Other authors:* G. Hallgren, N. Brink, *and* E. Jonsson.

Two gyttja- and sulfide-containing profiles Ersnäs (65.5° N.) and Bäverbäck (65.9° N.) were examined as to mechanical composition and relative content of gytta (a sapropelic black mud), pH, electric conductivity and distribution of different forms of sulfur and phosphorus, also iron and manganese. These profiles are compared with the Kungsängen (Uppsala) studied earlier, and data given on the hydrological conditions, oxidation reduction status, soil reaction and the solubility of phosphorus.

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56036. WILBER, CHARLES GRADY, 1916– , *and* **P. F. ROBINSON.** Effect of restraint on body temperature in guinea pigs. (Journal of applied physiology, Mar. 1958. v. 12, no. 2, p. 214–16, illus.) 4 refs.

At 0° C. ambient temperature, free animals showed an average temperature drop of some 4° C. in 230 minutes; restrained animals dropped 18° C. in the same time; restrained and clipped animals dropped 35° in 150 minutes. It is suggested that restraint and clipping diminish muscular production of heat and increase heat loss. ***Copy seen:*** DNLM.

56037. WILBER, CHARLES GRADY, 1916– . Influence of temperature on performance in guinea pigs. (American journal of physiology, Sept. 1957. v. 190, no. 3, p. 457–58, illus., table.) 7 refs.

Account of observations upon small and large guinea pigs made to swim in baths of 7° to 40° C. Top performance was at water temperatures near body temperature. The large animals swam longer at low temperatures, but a shorter time at high temperatures.

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WILBER, CHARLES GRADY, 1916– , *see also* Hoffman, R. A., *and* C. G. Wilber. Comparison . . . temperature . . . homeotherms to tranquilizing . . . drugs. *1958.* No. 51749.

WILBER, CHARLES GRADY, 1916– , *see also* Musacchia, X. J., *and others.* A comparison of liver . . . lipids in arctic fishes. *1957.* No. 53468.

WILBERS, CLAUS, *see* Brendel, W., *and others.* Die Reaktivität des Kreislaufs . . . *1958.* No. 49909.

WILCE, ROBERT T., *see* Blum, J. L., *and* R. T. Wilce. Descriptions . . . *Vaucheria* . . . *1958.* No. 49780.

56038. WILDERNESS CONFERENCE, 5TH. *San Francisco,* Mar. 15–16, 1957. Recommendations, no. 3, arctic wilderness. (Sierra Club. Bulletin. June 1957. v. 42, no. 6, p. 80.)

Recommends that northeast Alaska (east of Canning and upper Chandalar Rivers and Old Woman Creek, north of 67°15′ N.) be retained as a perpetual wilderness, administered by Bureau of Land Management, and that other wilderness areas be established in the Brooks Range. ***Copy seen:*** DGS.

WILIMOVSKY, NORMAN J., *see* Mohr, J. L., *and others.* An arctic . . . kelp bed. *1957.* No. 53356.

56039. *WILLGOHS, JOHAN FREDRIK, 1915– . Beryxens forekomst i europeiske farvann. (Naturen, 1958. årg. 82, nr. 3, p. 151–58, illus., sketch map, tables.) Text in Norwegian. ***Title tr.:*** Occurrence of *Beryx* in the seas off Europe.

Beryx borealis, caught off the west and north coasts of Norway, is now recog-

* See also No. 56050.

nized to be several-year-old examples of *Beryx decadactylus*, hitherto known only from two three-year-old specimens taken off Biscay and in the Azores-Canary area. In the Norwegian catches, the fish have been caught only below 100 fathoms, and near the coast only where deeps approach it. These specimens are described as 23–57 cm. long, averaging 3.4 kg. in weight, deep bodied, with large eyes and distinct red color. ***Copy seen:*** DGS.

56040. WILIMOWSKI, MARIAN, *and* **H. DJACZYSZYN.** Badania nad działaniem leków cucących i krążeniowych w hipotermii. (Archiwum immunologii i terapii doświadczalnej, 1956. t. 4, p. 439–60, tables.) 22 refs. Text in Polish. Summary in English. ***Title tr.:*** Investigations on the action of analeptics and circulation-promoting drugs in hypothermia.

Account of experiments with rabbits made hypothermic to 30°, 27° and 24° C. Of the analeptics studied caffeine was found to be most and coramine least toxic. Their action is followed by decreasing temperature, and so were the effects of adrenaline, ephedrine, veritol, pendiomide and doryl.

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56041. WILKE, FORD, *and* **K. W. KENYON.** The food of fur seals in the eastern Bering Sea. (Journal of wildlife management Apr. 1957. v. 21, no. 2, p. 237–38, table.) 4 refs.

Report on 207 animals examined between June 17 and July 20, 1955. Capelin was the dominant food near the Aleutians and was replaced offshore by squid and Alaska pollack. Salmon was rarely found in the stomachs.

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56042. WILKE, FORD. Food of sea otters and harbor seals at Amchitka Island. (Journal of wildlife management, Apr. 1957. v. 21, no. 2, p. 241–42, tables.) 6 refs.

Five sea otters examined in March were found to feed on green sea urchin (86% by volume) fringed greenling (6%) mussel (5%), etc. Seven harbor seals were found to feed on fringed greenling (96%) octopus (3%), etc. The two species are thus largely non-competitive in food habit. ***Copy seen:*** DI.

56043. WILKE, FORD, *and* **K. W. KENYON.** Notes on the food of fur seal, sea lion and harbour porpoise. (Journal of wildlife management, July 1952. v. 16, no. 3, p. 396–97, tables.) 5 refs.

Food determinations from 148 fur seal stomachs and from disgorged material; from stomachs of female sea lions and one porpoise. Fish was the main food registered with occasional traces of squid.

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56044. WILKINS, *Sir* **GEORGE HUBERT, 1888–1958.** Food problems in exploring the Arctic. (*In:* Nutrition under climatic stress, a symposium sponsored by the U.S. Quartermaster Food and Container Institute. Washington, Dec. 1952, *pub.* 1954. p. 102–107.)

Contains suggestions in selecting men for arctic expeditions and their food habits; attitude towards fat, variety or monotony of diet; food and emotional stress; useful menus for arctic explorers, value of bulk in food; role of shelter, and clothing. ***Copy seen:*** DNLM.

56045. WILKINS, *Sir* **GEORGE HUBERT, 1888–1958.** Problems of subsistence in hot and dry-cold areas. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, 1953. (n.s.) v. 5, no. 1, p. 7–12, illus.)

A discussion on the role of mind and spirit in overcoming old eating habits in the field; caloric intake in the Arctic, its limits and conservation through cold-protection; need for fat in cold (and hot) climate; fat-hunger, temper and cannibalism; "recreational" aspects of food.

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56046. WILKINS, *Sir* **GEORGE HUBERT, 1888–1958.** Use and abuse of environmental factors. (U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Activities report, Oct. 1956. v. 8, no. 3, p. 241–43, illus.)

Discusses the meaning of "environment" as including supplies and circumstances, and of "abuse" as including improper use, misuse, or waste in the Arctic. Use of snow to keep warm, abuse of snow, making shelters in snow, kinds of arctic environment, arctic clothing, etc., are dealt with.

Copy seen: DNLM.

WILKINS, R. B., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

WILKINS, ROBERT W., *see* Coffman, J. D., *and others.* Effect of cooling and smoking tobacco . . . blood flow. *1958.* No. 50298.

56047. WILLARD, RAY. Land der Zukunft am Ende der Welt; vor 90 Jahren wurde "Russisch-Amerika" verkauft. (Universum, Natur und Technik, Apr. 1957. Jahrg. 12, no. 7, p. 217–20, illus.) Text in German. ***Title tr.:*** Land of the future at the end of the world; 90 years ago "Russian America" was sold.

Contains information on the geographic location of Alaska and its potential value for airways; its climate, area, settlements, communication and transportation, rivers, the tundra, harbors, fisheries, etc. This is followed by an outline of Alaska's discovery, conquest, colonization and development by the white man, and its potentialities. ***Copy seen:*** DGS.

56048. WILLERS, UNO. Berg och människor. (Svenska turistföreningen. Årsskrift, 1957. p. 17–23.) Text in Swedish. ***Title tr.:*** Mountains and men.

General discussion of the influence of Sweden's mountains on its people, their legends, history, etc. The Sarek-Kebnekaise region is noted among others, also various individuals whose scientific work has furthered interest in the arctic section of Sweden. ***Copy seen:*** DGS.

56049. WILLEY, GORDON R. Archaeological perspective on Algonkian-Gulf linguistic relationships. (Southwestern journal of anthropology, Autumn 1958. v. 14, no. 3, p. 265–72.) 18 refs.

Presents archeological evidence supporting the theory of a proto-Algonkian-Gulf of Mexico region linguistic unity.

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56050. *WILLGOHS, JOHAN FREDRIK, 1915– . Some notes on *Beryx decadactylus* (Cuv. & Val.) in European waters with a special account of Norwegian records. Bergen, Grieg, 1957. 13 p. illus., map, table. (Bergen, Norway. Universitetet. Årbok 1956, naturvitenskapelig rekke, no. 15.) 14 refs.

Discusses captures (32) of this rare fish in Norwegian coastal waters 1839–1955, including seven in the Andøy area (69° – 69°30′ N.). Most, but not all, were taken in deep waters (to 400 fathoms) and most since 1920. Distribution and frequency of the Norwegian (also Icelandic) finds seem not accidental; it represents a considerable extension of range into regions influenced by warm Atlantic drift. Tabulated data on finds include museum locations of specimens, measurements, fin rays, sex glands, etc.

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* See also No. 56039.

56051. WILLIAMS, DAVID D. A histological study of the effects of subnormal temperature on the testis of the fowl. (Anatomical record, Feb. 1958. v. 130, no. 2, p. 225–41, illus., table.) 32 refs.

Core and testis temperatures were found to be approx. 41.3° C. while subcutaneous temperatures ranged from 39.3° in the axillary region to a minimum of 26.6° in the foot. Testicular tissue transplanted into subdermal areas with a temperature range of 39.3° to 26.2° C. developed normally, but did not establish well in regions of lower temperatures.

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56052. WILLIAMS, GAYNOR PARRY, *and* **L. W. GOLD.** Snow density and climate. Ottawa, July 1958. 4 p., map, diagr., tables. (National Research Council of Canada. Division of Building Research. Research paper no. 60.) 16 refs. Reprinted from Engineering Institute of Canada, Transactions, May 1958. v. 2, no. 2, p. 91–94.

Data on snow density collected since 1947 from selected stations across Canada (including Aklavik, Churchill, Goose Bay, Moosonee, Resolute, and Whitehorse), are summarized and discussed in relation to meteorological variables, particularly wind velocity and air temperature. Higher densities (except in mountainous regions) are usually associated with shallow snow covers and extreme wind and temperature conditions. The insulating value of the snow cover is given for different regions of Canada, and its effectiveness noted in forest regions. Values of thermal conductivity in exposed locations such as on the prairies, in the Arctic, or on high mountains are much higher than in sheltered areas.

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56053. WILLIAMS, GAYNOR PARRY. Variability of physical characteristics of snow cover across Canada. (*In:* International Union of Geodesy and Geophysics. Association of Scientific Hydrology. Report, 1957. v. 4, *pub.* 1958, p. 158–65, text map, 3 diagrs., table.) 4 refs.

Summarizes results of snow-cover sur-

vey obtained subsequent to those reported by Klein (No. 8805) and by Pearce and Gold (No. 25010). Observation stations (map) include Resolute, Aklavik and Gander; data used and method of analysis are discussed; variations of density, hardness and grain-size are briefly described and shown graphically. Greatest extremes in hardness were recorded at Resolute and Aklavik. Probability values of extremes for these snow characteristics are also depicted graphically. Development of the "Canadian snow kit" (instruments used) is noted. ***Copy seen:*** DGS.

56054. WILLIAMS, GEORGE C. A cold wave strikes interior Alaska. (Weatherwise, Oct. 1958. v. 11, no. 5, p. 164–65, +, graph, 2 text maps.)

Describes situation on Jan. 22–25, 1953, when passage of a secondary arctic front caused temperatures in the Tanana valley to fall to the −50's, with an extreme low of −58° F. at Tanana village. The short life of this cold snap was unusual, but it provided evidence of the existence of secondary arctic fronts in Alaska in winter. ***Copy seen:*** DWB.

56055. WILLIAMS, HOWEL, 1898– . *and others.* Landscapes of Alaska, their geologic evolution. Berkeley and Los Angeles, University of California Press, 1958. 12, 148 p., illus., 8 maps incl. 7 fold., diagr., tables. (U.S. National Park Service. Recreation Survey of Alaska, pt. 4, v. 1, Geology and Geography.)

Contains 16 chapters prepared by specialists for the general reader. Introduction by J. C. Reed and H. Williams (p. 1–8) outlines the geologic development of the landscapes, which are then described for each of the 15 regions, viz:

Southeastern Alaska, by J. C. Reed (p. 9–18), its wildlife, ethnic groups, principal landscape characteristics and their geologic unfolding;

Gulf of Alaska area, by D. J. Miller (p. 19–29), its glaciers, and contrasts in topography, vegetation and climate;

Wrangell Mountains, by R. F. Black (p. 30–33), isolated, and largely covered with snow and ice.

Copper River plateau, by R. F. Black (p. 34–37), has much evidence of glaciation and permafrost, is crossed by several highways;

Talkeetna Mountains, by F. F. Barnes (p. 38–42), rugged, show evidence of numerous geologic processes, mineral deposits of value;

Cook Inlet-Susitna lowland, by F. F. Barnes (p. 43–47), its Matanuska valley, bituminous coal deposits, changes effected by glaciation;

The Alaska Range, by C. A. Wahrhaftig (p. 48–60), 600-mile-long mountain wall, featuring Mt. McKinley;

Alaska Peninsula-Aleutian Islands, by H. A. Powers (p. 61–75), volcanic belt extending from Anchorage to Attu;

Lowlands and plains of interior and western Alaska, by R. F. Black (p. 76–81), scattered but similar in topography, show climatic and glacial fluctuations, evidence of permafrost;

Interior highlands of western Alaska, by J. M. Hoare (p. 82–87), noted for mining of gold, platinum, mercury, tungsten;

Interior highlands of eastern Alaska, by R. M. Chapman (p. 88–103), have varied landscape, mineral wealth, hydro-electric power resources and good transport facilities, but permafrost restricts construction;

Seward Peninsula, by J. P. and D. M. Hopkins (p. 104–110), with extensive uplands and rugged mountains, possibly the bridge for migration from Asia to North America;

Brooks Range, by G. Gryc (p. 111–18), rugged, glaciated, treeless wilderness;

Arctic Slope, by G. Gryc (p. 119–27), frozen tundra, almost uninhabited, with bars and islands off the low coast;

Islands of the Bering Sea, by G. M. Flint (p. 128–36), St. Lawrence, St. Matthew, the Pribilofs, Nelson, and Nunivak. Photographs by H. B. Washburn and others, and color maps by R. L. Moravetz add to usefulness of the volume. ***Copy seen:*** DLC.

56056. WILLIAMS, JAMES A. Minerals in Alaska. (Western miner and oil review, Oct. 1958. v. 31, no. 10, p. 140, +, illus.)

Surveys present prospecting activities stating names of companies, area of search, and state of development. Search is now mainly for iron, copper, coal, and oil; to a lesser extent, nickel, mercury, uranium, chrome, gold, and molybdenum; 17 companies with 51 helicopters participate in the oil search; leases for more than 30,000 acres have been applied for, mainly in the provinces of Alaska Peninsula-Cook Inlet, Alaska Gulf, Kateel River-lower Koyukuk, and Kandik. A gradual increase in exploration and development activities is expected.

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56057. WILLIAMS, JOHN ROPES, 1924– , *and* O. J. FERRIANS, *Jr.* Late Wisconsin and recent history of the Matanuska Glacier, Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1757.) Abstract of a paper presented at the Ninth Alaskan Science Conference at College, Sept. 3–5, 1958.

Describes past positions, indicated by moraines and marginal channels, of this glacier which (according to photographs) has had only minor horizontal retreat but considerable thinning since 1898. The glacier filled the Matanuska valley, terminating between Anchorage and Willow, during Wisconsin time. It stagnated in the lower valley, but readvanced more than 8,000 years ago in the upper valley to positions 2½–5 miles from the present, blocking Caribou and Glacier creeks and the upper Matanuska River. This readvance was followed by retreat and canyon cutting. Moraines, probably formed in the last 4,000 years, occur in the valley bottom 1, ¼, and within ¼ mile west of the terminus. An advance prior to 1898 is recorded by unvegetated moraines marginal to the ice.

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WILLIAMS, JOHN ROPES, 1924– , *see also* Efimov, A. I. Merzlye gornye porody Alâski i Kanady . . . *1958.* No. 50694.

WILLIAMS, L., *see* Angelakos, E. T., *and others.* Sensitivity . . . hypothermic myocardium to calcium. *1957.* No. 49322.

56058. WILLIAMS, M. M. Coal in western Canada and its uses. (Canadian mining and metallurgical bulletin, Aug. 1958. v. 51, no. 556, p. 468–75, text map, graphs, tables.) 9 refs. *Also pub.* Canadian Institute of Mining and Metallurgy. Transactions, 1958, v. 61, p. 242–49.

Survey of coal reserves in western Canada, as of 1956; present and possible future use in industry, thermal power production, railways, and domestic heating. Table and map of reserves show small supplies of mineable coal in Yukon and Northwest Territories (5% of total for area), mostly lignite and subbituminous. ***Copy seen:*** DGS.

56059. WILLIAMS, MORGAN L. Brittle fractures in ship plates. (U.S. National Bureau of Standards. Circular, May 7, 1952. no. 520, p. 180–206, illus., diagrs., graphs, table.) 12 refs.

Data were obtained by Charpy V-notch bar tests of 113 plates removed from fractured ships and examined at the National Bureau of Standards. The probability of fracture development in a plate increases markedly with increased notch sensitivity of the steel, as measured by the 15 ft. pound transition temperature of Charpy V-notch specimens. The notch sensitivity is increased with increasing amounts of carbon and phosphorus, and decreased with finer grain size and with increasing amounts of silicon and manganese. ***Copy seen:*** DI.

56060. WILLIAMS, P. J. The direct recording of solifluction movements. (American journal of science, Dec. 1957 v. 255, no. 10, p. 705–714, 2 illus., diagrs., graphs.) 4 refs.

Describes new instrument: "probes, which are inserted into the soil, consist basically of spring steel strips with electrical resistance strain gauges attached. Bending of the probe by soil movement can easily be determined at any time from the strain gauge readings." Construction and operation of the probes are described; also field tests made in Dovrefjell, central Norway, with a few results and conclusions.

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WILLIAMS, R. C., *see* Skinner, H., *and* R. C. Williams. On . . . Hesperiidae . . . *1923.* No. 54922.

56061. WILLIAMS, RALPH B. Asian influenza diagnoses are confirmed by laboratory tests. (Alaska's health, Aug. 1958. v. 15, p. 3, illus.)

Outlines the Alaska Dept. of Health Laboratory's activities in this epidemic; its course, effect of vaccination, death rates in past epidemics (for United States), morbidity, earlier epidemics.

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56062. WILLIAMS, RALPH B. *Onchocerca* in an Alaskan moose. (Journal of mammalogy, Aug. 1958. v. 39, no. 3, p. 449–50.) Refs. in text.

Notes on female specimens of this group of nematodes found in a moose near Juneau, Alaska, with information on occurrence in other mammals and parts of the world, and on pathology.

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56063. WILLIAMS, ROBERT STATHAM, 1859–1945. Forest condi-

tions in the Klondike. (New York Botanical Garden. Bulletin, Mar. 1900. v. 1, no. 3, p. 44–46.)

A general sketch with notes on some trees (birch, alder, pine, spruce, cottonwood), shrubs (willow, buffalo-berry, *Viburnum*, dogwood), and berries (raspberry, small huckleberry, red and black currant). ***Copy seen:*** DA.

56064. WILLIAMS, ROBERT STATHAM, 1859–1945. The genus *Desmatodon* in North America. (Torrey Botanical Club. Bulletin, June 1919 v. 46, no. 6, p. 207–220, plate 11.)

Describes 12 species of this genus of mosses, and provides a key; three species appear in the North: *D. latifolius* from Greenland and the Gaspé (Canada) to Unalaska; *D. systylius* in Greenland, Labrador; and *D. suberectus* in Greenland, Beechey Island, and the arctic mainland. ***Copy seen:*** DLC.

56065. WILLIAMS, VOLNEY M. Report on arctic survival kit, passenger. Ladd Air Force Base, Aug. 1957. 24 p. illus., tables (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57–3.)

Description of "a survival kit for passengers that can be quickly attached to a . . . parachute, and provide some of the essential items of equipment needed to survive . . . following an emergency bail out." It was found "entirely satisfactory" for the purpose and is claimed to provide a better chance for survival than one large, cargo-aircraft survival kit.

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56066. WILLIAMSON, FRANCIS S. L. Ecological distribution of birds in the Napaskiak area of the Kuskokwim River delta, Alaska. (Condor, Sept.–Oct. 1957. v. 59, no. 5, p. 317–38, 7 illus., 2 tables.) 24 refs.

Contains a brief discussion of the climate, topography, and general ecological setting of the region investigated in summers of 1955 and 1956. "Placing emphasis on the life-form of the vegetation, a list of ten ecological formations is discussed and employed to analyze the distribution of birds. Sixty-two species were recorded in the region. . . . The direct effects of climate, or other physical factors, are suggested as influencing at least some of these distributional patterns." ***Copy seen:*** DLC.

56067. WILLIAMSON, M. H. Polymorphism in Ross's goose, *Anser rossii*, and the detection of genetic dominance from field data. (Ibis, July 1, 1957. v. 99, no. 3, p. 516–18, 3 tables.) 2 refs.

Contains a study of two forms of goslings in the broods of *A. rossii* which may have either yellow or grey plumage, as reported by the Perry River Expedition in 1956. This seems to be a case of simple dimorphism. Tables show the numbers of broods with particular numbers of gray and of yellow goslings, the expected frequencies of different types of broods, and the expected and observed numbers of segregating and non-segregating families. ***Copy seen:*** DSI.

WILLIS, ALGERNON USBORNE, 1889– , *see* Simpson, C. J. W., *and others.* North ice . . . *1957*. No. 54901.

56068. WILLSON, JOHN T., *and others.* Blood studies in the hypothermic dog. (Surgery, June 1958. v. 43, no. 6, p. 979–89, illus., tables.) 20 refs. *Other authors:* W. R. Miller *and* T. S. Eliot.

Account of changes in the blood of dogs during immersion hypothermia (lowest point 21° C.) and rewarming. Clotting time, platelet number and platelet thromboplastic factor, prothrombin time and fibrinogen concentration, sedimentation rate, hematocrit and protein concentration were studied; also changes in the numbers of leucocytes, erythrocyte fragility and agglutination, blood flow rate, etc. ***Copy seen:*** DLC.

56069. WILSE, EYVIND. Veivesenets og Norges statsbaners plantninger av snøskjermer (lebelter) på høyfjellsovergangene. (Norsk skogbruk, Feb. 1957. årg. 3, nr. 4, p. 99–100, 2 illus.) Text in Norwegian. ***Title tr.:*** The planting of snow screens (lee belts) on high mountain overpasses by the Highway Department and the Norwegian National Railways.

Discusses the planting of suitably hardy trees for shelterbelts along transportation routes over uplands above normal treelines in Norway. The trees recently set out were grown at Alstahaug and Mosjøen near 66° N., and include species from Alaska, northern Siberia, Labrador, and upland locations in China, Scotland, and Canada. Species names and planting and fertilization procedures are noted. ***Copy seen:*** DA.

56070. WILSON, A. P. Tagging experiments. (International Council for the Study of the Sea. Annales biologiques, 1956, *pub.* 1958. v. 13, p. 170–72, tables, maps.)

511326—60——81

Report on herring tagged in the Norwegian Sea from 1953 to 1956. The herring migrations are reconstructed from the recovered material. Distances of up to 1,500 miles have been covered within a year with speeds up to 7 nautical miles a day. ***Copy seen:*** DI.

56071. WILSON, C. B. The Lower Middle Hecla Hoek rocks of Ny Friesland, Spitsbergen. (Geological magazine, July–Aug. 1958. v. 95, no. 4, p. 305–327, plates, maps, cross-sections, table.) 12 refs.

Describes in detail the part of the Hecla Hoek succession in the Fakse and Veteranen areas in the central part of the Ny Friesland peninsula of Vestspitsbergen. The succession, outlined in a paper by Harland and Wilson (No. 45442) was confirmed by the author's investigations of more satisfactory outcrops in 1956 and 1957. "A large-scale repetition of a sedimentary cycle is demonstrated, and the relationship with equivalent rocks in Nordaustlandet is discussed."

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56072. WILSON, C. V., *Editor.* Contributions to the study of the arctic circulation; a report on the second seminar in arctic meteorology at Stanstead College, Stanstead, Qué., July 29th–August 9th, 1957. Montréal, Mar. 1958. vi, 78 p. maps, diagrs., tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 9.) Refs. Contract no. AF 19(604)–1141, scientific report no. 7.

Contains résumé of proceedings, list of papers, participants (32) and text of papers, abstracted in this Bibliography under the authors' names, viz:

GODSON, W. L. Canadian meteorological program for the International Geophysical Year.

GODSON, W. L. Models for numerical weather prediction.

GODSON, W. L. High-level fields of wind and temperature over the Canadian Arctic.

KEEGAN, T. J. The wintertime circulation in the arctic troposphere.

REED, R. J. Arctic synoptic analysis.

REED, R. J. Cold polar vortices.

REED, R. J. A baroclinic graphical prediction model. ***Copy seen:*** CaMAI.

56073. WILSON, C. V. Synoptic regimes in the lower arctic troposphere during 1955. Montreal, Mar. 1958. 58, 42 p., maps, diagrs. incl. 1 fold., tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 8.) 27 refs. Contract no. AF 19(604)–1141, scientific report no. 6.

Preliminary analysis of the progression of large synoptic systems (sea-level) by computing a persistence function. Generally high stability prevailed throughout the year; high persistence was maintained during periods of six days average, alternating with abrupt large-scale reorganizations. A winter-spring regime, with consistently high degree of persistence maintained for 14-15 days, was followed by a June change to a summer-autumn regime, with less stable conditions and less distinct changes; then a gradual return to winter conditions. Sudden increases in geomagnetic activity were followed in 14 days by a marked decrease in the persistence function. Tables, graphs, and maps summarize the results. ***Copy seen:*** CaMAI.

WILSON, C. V., *see also* Hare, F. K., *and others.* Specification of pressure fields and flow patterns . . . *1957.* No. 51587.

WILSON, E., *see* Rae, B. B., *and* E. Wilson. Rare fishes . . . northern seas; Scotland. *1957.* No. 54196.

56074. WILSON, ERNEST HENRY, 1876–1930. The Rhododendrons of northeastern Asia exclusive of those belonging to the subgenus *Anthodendron.* (Harvard University. Arnold Arboretum. Journal, Jan. 1923. v. 4, no. 1, p. 33–56.)

Contains keys and a systematic list of about 25 species and varieties, and a few hybrids, with synonyms, descriptions, critical notes and data on habitats and distribution. Several are northern forms: *R. chrysanthum* (from Altay Mts. to Kamchatka), *R. adamsii* (eastern Siberia, Lena valley), *R. kamtschaticum* (Kamchatka, the Aleutians, Alaska), and *R. redowskianum* (northeastern Asia). ***Copy seen:*** DLC.

WILSON, G. S., *see* Drummond, J. C., *and others.* The examination . . . tinned foods . . . *1938.* No. 50637.

56075. WILSON, H. P., *and* **W. E. MARKHAM.** A study of arctic surface winds. Ottawa, May 13, 1957. 13 p. mimeo., 8 tables. (Canada, Dept. of Transport. Meteorological Branch. Circular-2923, Tec.–251.) Ref.

Study undertaken to aid forecasting of surface winds for the five joint Ca-

nadian-American weather stations in the Queen Elizabeth Islands; viz: Resolute, Eureka, Alert, Mould Bay, and Isachsen; also to elucidate the relationship between winds at the surface and at gradient levels. Three-hourly observations, June 1949–June 1954, and twice-daily upper wind observations at Alert, Eureka and Resolute, 1952 and 1953, supplied the data. Surface wind characteristics at all five stations are complex, depending as much upon local air drainage as upon the mean pressure pattern. Stability in the friction layer has considerable influence on surface wind speed and direction; stability and roughness are major factors in the relationship between winds at the surface and at gradient levels. ***Copy seen:*** DWB.

56076. WILSON, J. WARREN. Arctic plant growth. (Advancement of science, June 1957. v. 13, no. 53, p. 383–88.) 34 refs.

Following an introduction on the main physiological and morphological characteristics of arctic plants, the author discusses their annual growth (very slow); summer growth rate; effects of soil fertility and nitrogen shortage; effects of wind on plant temperature and growth. The report is based on observations and experiments on Jan Mayen (71° N. 9° W.) and Cornwallis Island (75° N. 95° W.). The view is advanced that the poverty of arctic vegetation is due immediately, though perhaps not entirely, to the extreme depression of growth rates. ***Copy seen:*** DLC.

56077. WILSON, J. WARREN. Dirt on snow patches. (Journal of ecology, Mar. 1958. v. 46, no. 1, p. 191–98, illus., tables.) 22 refs.

Account of the nature, origin and ecological significance of dirt found on late snow, as studied on Jan Mayen and Cornwallis Islands, with references to the phenomen in Greenland, Finland, etc. Its character was found to vary from wholly mineral to largely organic. It is transported by wind or sometimes by water. Repeated deposition of this dirt builds up a fine organic soil and may contribute nitrogen to the land. It affects the growing season of plants where it retards snow melt.
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56078. WILSON, J. WARREN. Observations on the temperatures of arctic plants and their environment. (Journal of ecology, July 1957. v. 45, no. 2, p. 499–531, illus., tables.) 54 refs. "Botanical results no. 4 from the Oxford University Expedition to Jan Mayen 1947, the Jan Mayen Expedition 1950, and the Cornwallis Island Expedition 1954."

A comprehensive study on temperatures of some high-arctic plants and the adjacent air and soil. Most of the observations were carried out at Resolute (75° N. 95° W.). Five species examined showed only minor differences in leaf temperature behavior; hence *Salix arctica* was selected for a representative study. Leaves were found to be warmed by sunshine, commonly for several degrees and even at midnight during "midnight sun"; warming is less, however, than in temperate or tropical regions. During nights, leaf temperatures fall slightly below air temperature. Clouds, mist, wind and shading quickly and greatly reduce the temperature difference between leaf and air. Sunlight markedly raises surface-soil temperature and that of plant clumps and of the air near ground. At night, soil is cooled by radiation, but this cooling is weaker than the day-time warming. Temperature fluctuation in soil and air occur also during the "midnight sun" period. Color, slope, moisture and organic matter may cause significant differences in soil temperature.
Copy seen: DLC.

56079. WILSON, JAMES LEE, 1920– . Geography of olenid trilobite distribution and its influence on Cambro-Ordovician correlation. (American journal of science, May 1957. v. 255, no. 5, p. 321–40, text map, 2 fold. charts.) 67 refs.

World-wide occurrence of Late Cambrian and Early Ordovician olenid trilobites is plotted. These are a dark-shale-and-limestone fauna widely distributed in the world's orogenic belts or in outcrops between them and major shield areas of the continents. Their distribution is discussed and comparisons made with faunas of the shield areas. Includes faunas of the Yukon-Alaska boundary, Victoria Island in the Canadian Arctic, Novaya Zemlya, Anabar Massif, and Bennett Island (north of Novosibirskiye Ostrova) in northern U.S.S.R. Bearing on stratigraphic problems is noted.
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56080. WILSON, JAMES TINLEY, 1914– . Moving loads on floating ice sheets. Ann Arbor, Mich., July 1958. 22

p., illus., 13 diagrs., 2 text maps. (Michigan University. Research Institute. UMRI Project 2432, Final Report under Contract No. AF19(604)–1558, Air Force Cambridge Research Center, Bedford, Mass.) 8 refs. cf. No. 43341.

Develops a simple theory of the coupling between a moving load and the flexural waves generated by it in a floating ice sheet; reports a number of experiments to verify this theory, including measurements of the waves resulting from constant-velocity loads and the waves resulting from aircraft landings and takeoffs. The critical velocity for resonance (coupling) between the moving load and the flexural waves will occur at the *minimum wave velocity for flexural waves* in the ice sheet. This velocity can be predicted reasonably well from a knowledge of the water depth and the ice properties. For a wide range of ice thickness and water depth, this velocity is in the range of ordinary vehicle velocities. The experimental data including those from tests on sea ice on the bay at Hopedale, Labrador, Feb. 1956, indicate that amplitudes at least three times as great as the "static" deflection can result when a vehicle travels at a velocity corresponding to the minimum wave velocity of flexural waves in the ice.—From author's abstract.

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WILSON, JOHN NEWHALL, 1925– , *see* Ferguson, A. T., *and others.* The effect of hypothermia . . . hemorrhagic shock. *1958.* No. 50874.

WILSON, JOHN TUZO, 1908– , *see* Geological Assoc. of Canada. The glacial map of Canada. *1958.* No. 51142.

WILSON, JOHN TUZO, 1908– , *see* Meen, V. B. Chubb . . . meteor crater. *1957.* No. 53205.

56081. WILSON, MILDRED STRATTON, 1909– . North American harpacticoid copepods; 4, diagnoses of new species of fresh-water Canthocamptidae and Cletodidae (genus *Huntemannia*); 5, the status of *Attheyella americana* (Herrick) and the correct name for the subgenus *Brehmiella.* (Biological Society of Washington. Proceedings, May 9, 1958. v. 71, p. 43–52.) 27 refs. In continuation of No. 48982.

Describes seven new species, including *Attheyella alaskensis, Bryocamptus umiatensis, Paracamptus reggiae* and *Mesochra alaskana* n. spp. In pt. 5, *Attheyella* (*Mrázekiella*) *americana* includes fresh-water specimens from Alaska and Canada (synonyms). The correct name for the subgenus *Brehmiella Chapius* (genus *Attheyella*) is *Mrázekiella* Brehm.

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WILSON, MILDRED STRATTON, 1909– , *see also* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

WILSON, MILDRED STRATTON, 1909– , *see also* Hock, R. J., *and* M. S. Wilson. High school biology . . . *1957.* No. 51738.

56082. WILSON, MORLEY EVANS, 1882– . Precambrian classification and correlation in the Canadian Shield. (Geological Society of America. Bulletin, June 1958. v. 69, p. 757–74, maps, tables.) 159 refs.

Discusses the number of divisions to use in classifying the formations; and the territorial extent over which the Precambrian rock series can be correlated. The division of Precambrian time into more than two eras by means of stratigraphic investigation is not, at present, possible. The geographical sub-provinces delimit the territory to which direct serial correlations can be extended with reasonable certainty.

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WILSON, WILLIAM SOLOMON, 1908– , *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957.* No. 49210.

WILTON, A. C., *see* Taylor, R. L., *and others.* Field crops for Alaska. *1958.* No. 55353.

WILTON, A. C., *see* Taylor, R. L., *and others.* Weeds . . . *1958.* No. 55354.

WIMPENNY, R. S., *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1956–57. *1957.* No. 51934.

WIMPENNY, R. S., *see* International Commission NW. Atlantic Fisheries. Proceedings . . . 1957–58. *1958.* No. 51935.

56083. WINCHESTER, JAMES W., *and* **C. C. BATES.** Meteorological conditions and the associated sea ice distribution in the Chuckchi Sea during the summer of 1955. (*In:* Polar Atmosphere Symposium, Oslo, 1956. v. 1, *pub.* 1958, p. 323–34, maps, diagrs.) 2 refs.

A combination of circumstances kept the polar pack-ice from receding off the northern coast of Alaska during the 1955 summer. The worst ice year in many years occurred, and over 40 ships had their exit blocked for two weeks at what was normally the height of the shipping season. An unusually deep polar vortex steered the Siberian storms into the western Canadian Archipelago or the Arctic Basin and slowed disintegration of the ice pack. The behavior of the pack's margin under these anomalous meteorological conditions is described, and sample verifications of ice forecasts are given.—From authors' abstract.

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56084. WINDBERG, ISAK P. Hur skal det gå med Norrlands jordbruk? (Skogs- och lantbruks-akademien. Tidskrift, 1956, årg. 95, nr. 2–3, p. 100–112, maps.) Text in Swedish. Summary in English. ***Title tr.:*** What is the future of agriculture in Norrland?

Agriculture has economic limitations in large areas of Norrland despite favorable botanical, ecological and biological conditions. Climate limits crops chiefly to frost-resistant forage plants which must be converted to livestock products prior to human consumption. In the interior, small holdings predominate due to topography. Average of crop land, number of farms, and population (excess of births over deaths) are still increasing in Norrland, but decreasing in southern Sweden. Should a significant population movement develop to the south, or to urban areas, Norrland would become a wilderness. National interest indicates development, not decline in this northern province.

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56085. WING, LEONARD WILLIAM, 1913– . Time chart measurements of Norwegian lemming and rodent cycles. (Journal of cycle research, Jan. 1957. v. 6, no. 1, p. 3–14, illus., tables) 5 refs.

Account of investigation on abundance cycles of lemmings, mice and rodents for different parts of Norway during the period 1871–1949. A cycle of 3.86 years is established for all Norway and "substantially the same for the groups of animals in the several regions." The probable effect of other cycles and a "backcast" to 1578 are also discussed.

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56086. WINTERS, ROBERT HENRY, 1910– . Government activities in development of the Northwest Territories. (Canadian surveyor, annual report, 1957. v. 13, no. 9, p. 564–70.)

Problems and progress in the development of northern Canada are outlined, as exemplified in construction of the Mid-Canada early warning line and the moving of Aklavik; the latter operation is described in some detail. Surveying carried out by the Dept. of Mines and Technical Surveys is sketched, and road projects in the Northwest Territories are noted. ***Copy seen:*** DLC.

56087. WISEMAN, DONALD D. Drilling at the ends of the earth. (Water well journal, Aug. 1958. v. 12, no. 8, p. 10–38 illus., 2 text maps.) 4 refs.

Contains brief note on laboratory of the U.S. Army Snow Ice and Permafrost Research Establishment (SIPRE) at Wilmette, Ill.; describes 1957 project which collected ice core samples in summers 1956 and 1957, from a site about 200 mi. east of Thule, at 7,000 ft. elevation. Cores 4 inches in diameter were recovered in a nearly continuous string down to about 1,000 ft.; below that, two 20-ft. strings, the deepest from 1,312 ft. Selected half-cores were studied at the Wilmette laboratory for stratigraphy, character of enclosed air bubbles, porosity and permeability, snow structure, etc. A similar project was carried out in the summer of 1957 at Byrd Station, Antarctica. ***Copy seen:*** DGS.

56088. WISEMAN, JOHN DUGDALE HOLT, *and* **C. D. OVEY.** Proposed names of features on the deep-sea floor. (Deep-sea research, Jan. 1955. v. 2, no. 2, p. 93–106.) 36 refs.

A list of about 65 geographical names prepared by the British National Committee on Ocean Bottom Features is given together with coordinates and depths. Among them are the Aleutian Ridge, Aleutian Basin, and Aleutian and Kuril Trenches. The Aleutian Ridge extends along the Aleutian Island chain from 56° N. 164° E. to Unalaska Island. The Aleutian Basin, located north of the Ridge, showed a maximum corrected depth of 5,236 m. at 53°52′ N. 177°37′ W. The Aleutian Trench is a narrow elongate depression running parallel to the south side of the Kenai and Alaska Peninsulas and the Aleutian archipelago. Maximum uncorrected depth measured was 7,679 m. at 51°13′ N., 174°48′ E. and at 51°49′ N. 172°20′ E. The Kuril Trench runs southwest from Bering Island, parallel to

Kamchatka and the Kurils, terminates near Hokkaido. The *Vitiaz'* record of 10,377 m. depth is noted.

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WISHART, MARY, *see* Gillespie, J. S., *and* M. Wishart. The effect of cooling . . . response. . . rabbit colon. . . *1957.* No. 51190.

56089. WISSLER, E. H., *and* **G. W. MOLNAR.** Analysis of cooling under conditions of changing air temperature. Fort Knox, Ky. April 1958. 2, 18 p. illus. (U.S. Army. Medical Research Laboratory. Report no. 294.) 5 refs.

A mathematical analysis resulting in an equation "for the cooling of an infinite cylinder under conditions of changing air temperature." The equation, applied to specified conditions, enables utilization of data obtained in still air.

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56090. WITTEKINDT, WILHELM, 1897– . Forschungsarbeiten über den Schutz von Betondecken und Betonsteinen gegen Frostschaden. (Strasse und Autobahn, Aug. 1957. Jahrg. 8, Heft 8, p. 293–94.) 13 refs. Text in German. ***Title tr.:*** Research on the protection of concrete pavements and blocks against frost damage.

Contains brief abstracts of 13 major works in this field. ***Copy seen:*** DLC.

56091. WITTHAUER, K. Grönland. (Petermanns geographische Mitteilungen, 1957. Jahrg. 101, Heft. 2, p. 139). Text in German. ***Title tr.:*** Greenland.

Reprinted from Denmark's Statistisk årbog 1956, v. 61, data on settlements (180), and on native and European population for 1901–1954; total population for 1954: 26,192. ***Copy seen:*** DLC.

56092. WITTMANN, WALTER I. Continuity aids in short range ice forecasting. (*In:* Arctic Sea Ice Conference. Proceedings, 1958. p. 244–55, 4 text maps, 6 graphs.) 11 refs.

Attempts to demonstrate that reasonable general estimates of ice thicknesses and concentrations over the entire Northern Hemisphere may be made, using three types of currently available synoptic data, viz: aerial ice reconnaissance, surface atmospheric pressures, and surface air temperatures. Use of data is demonstrated in charts and graphs. ***Copy seen:*** DN–HO.

WITTMANN, WALTER I., *see also* Schule, J. J., *and* W. I. Wittmann. Comparative ice . . . North American Arctic . . . *1958.* No. 54628.

56093. WITTNER, MURRAY. Effects of temperature and pressure on oxygen poisoning of *Paramecium.* (Journal of protozoology, Feb. 1957. v. 4, no. 1, p. 20–23, illus., table.)

Account of investigation which showed that at temperatures above 5° C., O_2-toxicity varied directly with pressure, but below this temperature, and with oxygen tension of 1–2 atmospheres (absolute), O_2-toxicity varies inversely as temperature. A hypothetical explanation of this behavior is advanced.

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WITZELL, OHO WILLIAM, *see* Eskin, S. G., *and others.* Strength . . . ice in contact with various . . . surfaces. *1957.* No. 50791.

56094. WOHLSCHLAG, DONALD EUGENE, 1918– . Differences in metabolic rates of migratory and resident freshwater forms of an arctic whitefish. (Ecology, July 1957. v. 38, no. 3, p. 502–510, illus., tables.) 25 refs.

Contains a description of a specially designed apparatus for measuring O_2-consumption rates in actively swimming fish, followed by account of a field study on two forms of *Coregonus sardinella* found near Point Barrow; a study made with the aid of this apparatus at the Arctic Research Laboratory. The results indicate that the migratory form of the sea has higher O_2-consumption and metabolism rates than the isolated freshwater form. This explains why the latter is fatter and deeper bodied.

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56095. WOLFE, L. S., *and* **D. G. PETERSON.** A new method to estimate levels of infestations of blackfly larvae. Diptera: Simulidae. (Canadian journal of zoology, Dec. 1958. v. 36, no. 6, p. 863–67, illus., table.) 9 refs.

Description of a new appliance and method of estimating degrees of infestation of streams by black-fly larvae. Counts of larvae attached to the simple device enable also to determine when the greatest number of larvae move downstream. ***Copy seen:*** DLC.

56096. WOLFF, A. Befaringen 1940 till Äpartjåkko magnesitfyndighet. (Svenska vägföreningen. Tidskrift, May

1945. årg. 32, häfte 4, p. 142–46, map, illus.) Text in Swedish. ***Title tr.:*** A trip to the Äpartjåkko magnesium deposits in 1940.

Recounts a three-week expedition to Äpartjåkko (approx. 67°25′ N. 18° E.) in northern Sweden to extract magnesium samples for assay, and to explore possibilities for building a road from the deposits to Stora Sjöfallet or other point on the Stora Lule River. A route south of Petsaure to Saltoluokta is favored.

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56097. WOLFF, A. Moderna svenska vägsnöslungor. (Svenska vägföreningen. Tidskrift, 1944. årg. 31, nr. 2, p. 51–56, illus.) Text in Swedish. ***Title tr.:*** Modern Swedish rotary snow removal equipment for roads.

Describes three new rotary snow plows: type AJ–42, driven by a tractor and intended for use mainly on airfields; type AJ–43 for airfields and heavy snow-clearance of roads; and type AJ–44 for roads. Types AJ–43 and AJ–44 are mounted on trucks and can be easily removed.

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56098. WOLFF, A. Vintervägdagar med plogtävlingar i Kuopio, Finland. (Svenska vägföreningen. Tidskrift, Apr. 1946. årg. 33, häfte 3, p. 78–82, illus.) Text in Swedish. ***Title tr.:*** Winter road days with plowing competitions in Kuopio, Finland.

Relates impressions from a demonstration of snow plows in 1946. Finnish plows type Tuisku, Jermu m./46, and Levitysaura are illustrated.

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56099. WOLFF, H. S. A knitted wire fabric for measuring mean skin temperature or for body heating. (Journal of physiology, June 1958. v. 142, no. 1, p. 1P–2P.)

Description of complete garments knit from fine insulated wire with electrical continuity. They are used for measuring mean skin temperature continuously on working subjects. By passing an electric current through such garments they can be used for warming the body.

Copy seen: DLC.

WOLFF, P. M., *see* George, J. J., *and others.* An empirical method . . . cyclones. *1958.* No. 51143.

56100. WOLLEBAEK, ALF, 1879– . Tundra-måser utenfor Lillesand. (Naturen, 1949. årg. 73, nr. 5, p. 159–69, illus.) Text in Norwegian. ***Title tr.:*** Tundra gulls off Lillesand.

A considerable number of tundra gulls (*Xema sabinii*) were observed off southern Norway in Oct. 1948, probably driven there by bad weather. Native to Greenland, arctic America and Asia, they have been known to nest on Svalbard. The species is described and compared with similar species. ***Copy seen:*** DGS.

56101. WOLTERECK, HANS. Gletscherlandungen. (Flug-Revue, Nov. 24, 1956, Heft 11, p. 18–19, illus.) Text in German. ***Title tr.:*** Glacier landings.

Describes experiences of Hermann Geiger with a high-wing monoplane of Piper Super Club type in the Swiss Alps. A pair of landing skis mounted on the undercarriage of the plane can easily be lowered and lifted from the cockpit. By landing uphill and taking off downhill, Geiger has reduced the necessary length of runway to a minimum. Without accidents, he has flown thousands of tons of equipment to shelters and rescue stations in the mountains, and brought over 300 injured persons to hospitals.

Copy seen: DLC.

WONSIATSKY, ELISABETH, *see* Pinegin, N. V. Aufzeichnungen eines Polarforschers. *1955.* No. 53997.

WONSIATSKY, WLADIMIR, *see* Pinegin, N. V. Aufzeichnungen eines Polarforschers. *1955.* No. 53997.

56102. WOOD, C. P., *and* J. J. GLEASON. Weather and flying in Alaska. (Weatherwise, Oct. 1958. v. 11, no. 5, p. 161–63, illus.) 3 refs.

Describes flying conditions: those in the Aleutians are not typical; terminal conditions in Alaska compare favorably with those at several major stateside air terminals. Five regions are characterized: the interior (flying weather unusually good), Gulf of Alaska (better in winter), arctic coast (better with arctic air masses), Bering Sea (rarely good), and Aleutians (one of the worst in the world, especially in summer). Weather hazards (ice fog, ice and snow accumulation, very low temperatures, supercooled fog, and arctic haze) impede operations; but satisfactory air operations can be carried out with knowledge and sound planning.

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56103. WOOD, G. H. Squaws along the Yukon. (National geographic mag-

azine, Aug. 1957. v. 112, no. 12, p. 245–65, illus., map.) refs.

Describes trip of six women and a man by foldboat along the Yukon River from Whitehorse to Eagle. This was the gold-rush route, now little traveled, stern-wheelers no longer in use, settlements abandoned except on highways. Indian burials along the river are noted. High (90° F.) temperatures (not cold, rain or insects) caused some discomfort.

Copy seen: DGS.

56104. WOOD, JAMES EDWIN, 1897– . Cold weather survival. (Military medicine, Mar. 1958. v. 122, no. 3, p. 187–89, illus.)

Description of a face mask some 800% more efficient than a parka hood. The effects of cold and wind on the respiratory tract and head are also illustrated.

Copy seen: DNLM.

56105. WOOD, JAMES EDWIN, 1897– , *and others*. Responses of peripheral veins of man to prolonged and continuous cold exposure. (Journal of applied physiology, May 1958. v. 12, no. 3, p. 357–60, illus.) 8 refs. *Other authors:* D. E. Bass *and* P. F. Iampietro.

Two weeks' exposure to 60° F. (preceded and followed by exposure to 80° F. an equal period) caused marked venous constriction, decreased blood flow, and increased pressure, within three days. Conditions returned to normal upon return to the warm environment.

Copy seen: DLC.

WOOD, JAMES EDWIN, 1897– , *see also* Coffman, J. D., *and others*. Effect of cooling and smoking tobacco . . . blood flow. *1958*. No. 50298.

56106. WOOD, STEPHEN LANE, 1924– . Ambrosia beetles of the tribe Xyloterini (Coleoptera: Scolytidae) in North America. (Canadian entomologist, Aug. 1957. v. 89, no. 8, p. 337–54, 34 illus.) 11 refs.

Presents the history, intraspecific and geographic variations, characters and phylogeny of this tribe of wood-boring beetles, with keys to the genera and species. Five species of the genus *Trypodendron* and one of *Xyloterinus* are described, with synonyms, type localities, hosts (deciduous and coniferous trees) and geographic distribution. The great economic loss caused by these forest pests is stressed. One of the species, *Trypodendron lineatus*, is recorded at Hunter's Bay and Sitka in Alaska; it lives on almost any conifer, also on *Alnus*, *Betula*, and *Malus*.

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56107. WOOD, THOMAS HAMIL, 1923– , *and* A. M. ROSENBERG. Freezing in yeast cells. (Biochimica et biophysica acta, July 1957. v. 25, no. 1, p. 78–87, illus., tables.) 29 refs.

Account of "calorimetric measurements on populations of yeast cells that allow determinations to be made on the fraction of cellular water frozen as a function of temperature." Freezing down to −72° C. showed that these cells can survive even though as much as 90 percent of their cellular water is frozen.

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56108. WOOD, THOMAS HAMIL, 1923– , *and* A. L. TAYLOR. X-ray inactivation of yeast at freezing temperature. (Radiation research, Aug. 1957. v. 7, no. 2, p. 99–106, illus., table.) 11 refs.

Radiosensitivity of haploid yeast irradiated in the frozen state decreased between 0° and −33° C., then increased again attaining at −72° C. the value typical of 0° C. When slowly cooled to −72° C., it displayed radiosensitivity typical of −33° C. The effects of pre-freezing were also studied, and all these phenomena are discussed.

Copy seen: DNLM.

56109. WOODHALL, BARNES, *and* D. H. REYNOLDS. Localized cerebral hypothermia. (Society for Experimental Biology and Medicine. Proceedings, Jan. 1958. v. 97, no. 1, p. 194–96.) 10 refs.

Account of observations on dogs with cerebral hypothermia produced by extracorporeal circulation. The results were found to be in accord with those noted in generalized hypothermia. Survival depended on low perfusion flow and a perfusion pressure closely aligned with systemic arterial pressure.

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56110. WOODHALL, BARNES, *and others*. The physiologic and pathologic effects of localized cerebral hypothermia. (Annals of surgery, May 1958. v. 147, no. 5, p. 673–83, illus., tables.) 16 refs. Other authors: D. H. Reynolds, S. Mahaley, *Jr.*, *and* A. P. Sanders.

Account of experiments on dogs with local cerebral hypothermia produced by extracorporeal circulation. The results studied were in accord with conditions of general hypothermia. Condition of sur-

vival is predicated upon low perfusion pressure well aligned with the systemic arterial pressure. ***Copy seen:*** DLC.

56111. WOODLAND, BRUCE. Canada's Atlantic seal fishery. (Canada. Dept. of Fisheries. Trade news, Feb. 1958. v. 10, no. 8, p. 3–6, illus.)

Information is presented on the decline and closing of large-scale sealing based on Newfoundland; the impact of sealing on the life and economy of the island in the 18th and 19th century; type of early vessels; iron and steam boats; economics of sealing; its organization; work conditions; risks and tragedy at sea; future of the industry. ***Copy seen:*** DLC.

WOODRUFF, M. F. A., *see* Mitchell, R. M., *and* M. F. A. Woodruff. The effects of local hypothermia . . . kidney to ischemia. *1957.* No. 53340.

56112. WOODS, ANNE. This ol' house. (Alaskan sportsman, Nov. 1957. v. 23, no. 11, p. 22–23, 33–34, illus.)

Reviews development of Kodiak (57°47′ N. 152°24′ W.), Alaska, its oldest building, a storehouse built by Alexander Baranof about 1795. Its economic growth derived largely from the Pribilof Islands sealing; fishing is the main industry now. ***Copy seen:*** DI.

56113. WOODS, GORDON T. Longevity of captive wolverines. (American midland naturalist, Mar. 1944. v. 31, no. 2, p. 505, illus.)

Presents data on the life span of *Gulo luscus* in zoological parks in the United States and Canada; of 57 considered, 43 were shipped from Cordova and four from other Alaskan localities. Wolverines may live 15 years in captivity, but infection of teeth and throat, tuberculosis, disturbance of digestive tract, etc. shorten the life to about five and one-half years on average. ***Copy seen:*** DLC.

56114. WOODS, JAMES W., 1923– . The effects of acute stress and of ACTH upon ascorbic acid and lipid content of the adrenal glands of wild rats. (Journal of physiology, Feb. 1957. v. 135, no. 2, p. 390–99, illus., tables.) 25 refs.

Wild rats exposed to cold (−2° to 4° C.) for periods up to 24 hrs. showed, in contrast to domestic forms, no significant change in adrenal ascorbic acid, nor in sudanophilic substances. No metabolic depletion of the adrenal cortex occurred in the wild animals under other forms of stress. ***Copy seen:*** DNLM.

56115. WOODS, JAMES W., 1923– . The effects of long-term exposure to cold upon adrenal weight and ascorbic acid content in wild and domesticated Norway rats. (Journal of physiology, Feb. 1957. v. 135, no. 2, p. 384–89, tables.) 18 refs.

The adrenals of wild Norway rats, about twice the size of domesticated animals showed no increase in size after long exposure to freezing temperatures; under identical conditions the adrenals of the domesticated rats became 35% heavier than those of controls. Concentration of ascorbic acid in the adrenals of both forms was identical under normal conditions. The significance of the results for the problem of domestication is discussed. ***Copy seen:*** DSG.

56116. WOODWORTH, JIM. The Kodiak bear. Harrisburg, Pa., Stackpole Co., 1958. 205 p. illus., table, 4 refs.

Sketch of its taxonomy, size and behavior, especially towards hunters, introduces stories about this large brown bear, *Ursus arctos middendorffi*, as studied, photographed, and hunted during writer's seven years' work as guide in Alaska. Hunting experiences for bear and other animals are recounted. A chapter is devoted to photographing experiences. Kodiak Island geography and economics are sketched; hunting conditions, costs, and essential equipment, preparation of bear hides are described and rifles recommended. ***Copy seen:*** DI.

WOOLFORD, RAY. *see* Scott, R. F. Resource planning . . . *1957.* No. 54647.

WORLD METEOROLOGICAL ORGANIZATION, *see* Nusser, F. Eine neue internationale Eisnomenklatur. *1956.* No. 53675.

56117. WORTHINGTON, LAWRENCE VALENTINE, 1920– , *and* W. E. SCHEVILL. Underwater sounds heard from sperm whales. (Nature, *London,* Aug. 1957. v. 180, no. 4580, p. 291.) 3 refs. *Also pub.* in Norsk hvalfangsttidende, Oct. 1957. årg. 46, nr. 10, p. 573–75.

Description of sounds picked up by echo-sounding apparatus and by phonographic recording from whales as close as 15 m. Comparisons with the sounds of other species and those heard by open-boat sperm whalers, are made. ***Copy seen:*** DLC.

56118. WOTKYNS, R. S., *and others.* Prolonged hypothermia in experimental

pneumococcal peritonitis. (Surgical forum 1958. v. 8, p. 89–92, illus.) 5 refs. *Other authors:* H. Hirose *and* B. Eiseman.

Report on experiments with mice maintained at 21° C. body temperature for 24 hrs. after being injected variously diluted cultures of Pneumococcus III. The therapeutic effect of hypothermia was established; its possible mechanism is discussed. Combining hypothermia with penicillin therapy had no better effect than each agent alone.

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56119. WREDENFORS, WALTER. Bygge på tjälad jord. (Teknisk tidskrift, Nov. 27, 1956. årg. 86, häfte 44, p. 1021–24, illus., diagrs.) 9 refs. Text in Swedish. ***Title tr.:*** Building on frozen ground.

Describes recent Swedish experiments with winter construction of houses on unexcavated ground, and study of the effects and the physics generally of frost-heaving. Height of the heave is estimated on the basis of soil porosity, capillarity distance from ground water, and time. Ice-lense formation as a function of the soil's grain composition is graphed. Houses built on the ground surface, with a hot-water (40° C.) heating system built into the ground floor to prevent freezing of the soil below, were found too expensive and complicated. Tests are underway of houses on an adjustable concrete-beam base resting on a layer of sand upon the surface of frozen ground. The beams are adjusted once, when the ground becomes frost-free; heat transfer from the house prevents refreezing. ***Copy seen:*** DLC.

WRIEDT, CHR., *see* Tjebbes, K., *and* C. Wriedt. The albino . . . Samojede dog. *1927.* No. 55457.

56120. WRIGHT, ERNEST B. The effect of low temperatures on single crustacean motor nerve fibers. (Journal of cellular and comparative physiology, Feb. 1958. v. 51, no. 1, p. 29–65, illus.) 33 refs.

A study of changes in excitation and electrical properties at low temperatures in the giant motor axons of the lobster. In particular, threshold values for DC stimulation, chronaxie values and the accommodation time constant were determined as well as repetitive firing, recovery excitability and conduction velocity elucidated. Conduction block occurred at 4°–5° C. in the large non-oscillatory fibers and at 1°–3° in the smaller oscillatory types. Several other problems emerging in low temperature experiments are also discussed. ***Copy seen:*** DNLM.

56121. WRIGHT, GRANT MacLACHLAN, 1917– . Geological notes on eastern District of Mackenzie, Northwest Territories: report and map 17–1956. Ottawa, Queen's Printer, 1957. 23 p., 2 fold. maps. (Canada. Geological Survey. Paper 56–10.) 15 refs.

Contains results of Operation Thelon, geological reconnaissance by helicopter of 61,000 sq. mi. (61°–66° N. 102°–108° W.) in summer 1955. A small area in Keewatin District is included (65°–66° N. 100°–102° W.). Accessibility, topography, vegetation, and wildlife are briefly described; also (by B. C. Craig) glacial geology. Sedimentary and volcanic rocks are Archean and/or Early Proterozoic, Late Proterozoic, and Ordovician. Large parts of the map-area are underlain by Precambrian granitic rocks of wide variety. Several types of basic intrusives are present. Regional trends in granitic gneisses, the Bathurst trench, and possible extension of the McDonald fault into the map-area are discussed. No obviously important mineral deposits were seen, although gossans were found in many places. ***Copy seen:*** DGS.

56122. WRIGHT, J. W., *and* **R. W. KNECHT.** Atlas of ionograms, compiled for the URSI/AGI Special Committee on World-wide Ionospheric Soundings. Boulder, Colorado, Central Radio Propagation Laboratory, National Bureau of Standards, June 1957. v, 7 p. map, chart, and 263 p. ionograms.

The major purposes of the atlas are to illustrate the variability of the undisturbed ionosphere diurnally, seasonally, and geographically; to indicate the schemes for classifying ionospheric characteristics; to illustrate the difficulties encountered in describing ionograms by numerical data; and to give sample ionograms made with the various ionosondes employed today. Section I contains four ionograms on a summer and a winter day at 00, 06, 12, and 18 hours local standard time for the two selected geomagnetically quiet days, July 18 and Nov. 26, 1956. Stations for the higher geomagnetic latitudes include Anchorage, College, and Barrow in Alaska; Churchill, Baker Lake, and Resolute Bay in Canada; Kjeller, Tromsø and Svalbard for Norway; Luleå and Kiruna in Sweden; and

Narsarssuak, Godhavn, and Thule in Greenland. Typical ionograms obtained with American and Canadian equipment are illustrated. Various types of sporadic E are shown with typical ionograms from a number of stations including College, Barrow, Narsarssuak, Tromsø, and Kiruna. Several disturbance effects are illustrated with soundings from Uppsala, Adak, and Kiruna. The stations are listed alphabetically and by geomagnetic latitude. A world map of station locations is included.

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56123. WRIGHT, NOEL. The cache at Victoria Harbour. (Arctic, 1957. v. 10, no. 2, p. 121–23, map.) Refs.

Speculates on location of a cache of scientific instruments made by Capt. John Ross May 28, 1832. The instruments, left in "a tunnel" have never been found; clues are cited.

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56124. WRIGHT, THEON. The knife. New York, Gilbert Press, Inc., 1955. x, 300 p. illus. in text and on 16 plates, map.

Fictional account of the introduction of the white man's implement into a Polar Eskimo community in the Thule region of northwest Greenland. The story is based on a narrative of Meksak, grandfather of Peter Freuchen's Eskimo wife, Navarana, and on the legend of Saviksu, the meteoritic iron stones at Cape York brought away by Peary in 1897. ***Copy seen:*** DLC.

WÜSTEMANN, H., *see* Okladnikov, A. P., *and* V. V. Naryshkin. Neue Ergebnisse über alte Kulturen . . . *1956.* No. 53734.

56125. WULFFSBERG. B. Nipisat Lorangstation. (Ingeniøren 1955. årg. 64, nr. 27, p. 562–66, 9 illus.) Text in Danish. ***Title tr.:*** The Nipisat Loran Station.

The station, located on Disko, West Greenland, started operating in Sept. 1954. It has an output of 1,000 kw. and an antenna arrangement mounted on 26 masts; in cooperation with two stations built by the U.S. Coast Guard at River Clyde and Cape Atholl, it covers Davis Strait and Baffin Bay between Greenland and northern Canada.

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56126. WUSTMANN, ERICH, 1907– . 1,000 Meilen im Rentierschlitten; ein Leben in der Wildmark. Radebeul, Neumann, 1953. 148 p. 52 plates. Text in German. ***Title tr.:*** One thousand miles by reindeer sled; life in the wilderness.

Deals with writer's two-year sojourn (late 1930's), with his wife, in northern Norway and Finland while collecting Lappish folk songs and legends. They made winter treks with reindeer herds over the upland from Karasjok to Magerøy, also summer and winter journeys cross-country, and visited Petsamo and Sodankylä in Finland. Landscape, travel conditions, and hospitality are described. Lappish customs, clothing, food, family life, are sketched. Photographs (92) amplify the text.

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56127. WUSTMANN, ERICH, 1907– . Wo das Eis die Grenze schuf; bei Menschen, Tieren und Pflanzen in der Eisregion. Radebeul und Berlin, Neumann, 1954. 192 p., 72 p. illus. Text in German. ***Title tr.:*** Where ice created the limit; among people, animals, and plants in the ice region.

Relates impressions from trips in Iceland, in mountains and glaciers of southern Norway, and through northern Norway and Finland (p. 190–92). A brief history of early Norwegian settlements in Greenland is included (p. 59–86).

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56128. WYATT, COLIN. En patrouille dans le Grand Nord. (Alpen, Dec. 1955. Jahrg. 31, no 12, p. 285–89, illus., map.) Text in French. ***Title tr.:*** On patrol in the Great North.

Notes and impressions on the cold at Eskimo Point (61°07′ N. 94°03′ W.) on the west coast of Hudson Bay. Preparation of sleds, Eskimo clothing, and a trip with RCMP patrol over the Barren Grounds are described, with sketch and photos of the Caribou Eskimos and their life, snowhouse, government aid to the native population, etc.

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WYLIE, EDWIN J., *see* Adams, J. E., *and others.* Cerebral metabolic studies of hypothermia . . . human. *1957.* No. 49111.

56129. WYLLIE, PETER J. A geological reconnaissance through South Germania Land, Northeast Greenland **lat.** 77° N., long. 18½° W. to 22° W. København, C. A. Reitzel, 1957. 66 p., illus., plate, maps, tables, diagr. section. (Med-

delelser om Grønland, bd. 157, nr. 1.) 38 refs.

Reports observations during the British North Greenland Expedition, 1952–1954. Topography, glacial deposits, strand lines and terraces, regional setting and general geology of the area are briefly discussed. Outcrops examined on a 100 km. traverse along Saelsøen and the south coast of Germania Land east to Danmarkshavn are described in detail: field relations, petrography and petrogenesis. Rock types included are schists, paragneisses, granitic gneisses, migmatites, basic and ultra-basic rocks. Mineralogy of the basic and ultrabasic rocks is discussed. Evidence of increasing metamorphism eastward was noted. Rocks exposed in Germania Land were once the roots of the central ranges of the Caledonian mountain chain. ***Copy seen:*** DGS.

WYLLIE, PETER J., *see also* Lister, H., *and* P. J. Wyllie. The geomorphology of Dronning Louise Land. *1957.* No. 52862.

WYLLIE, PETER J., *see also* Simpson, C. J. W., *and others.* North ice . . . *1957.* No. 54901.

56130. WYNDHAM, C. H., *and* J. F. MORRISON. Adjustment to cold of Bushmen in the Kalahari Desert. (Journal of applied physiology, Sept. 1958. v. 13, no. 2, p. 219–25, illus., tables.) 10 refs.

Report on a number of observations made at winter temperatures of 10°–12° C. Fall in total heat content was similar to that in Europeans, when exposed to similar temperature. When the African was sleeping under his cloak beside a fire, air temperature over the trunk was at thermal neutrality but extremities were colder. The good use made of fire during the cold periods suggests an intellectual adaptation not a physiological one.

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WYNDHAM, C. H., *see also* Guttmann, L., *and others.* Thermoregulation in spinal man. *1958.* No. 51459.

WYNDHAM, C. H., *see also* Hammel, H. T., *and others.* Heat production . . . loss . . . 8°–36° C. . . . *1958.* No. 51535.

56131. WYNNE, FRANCES ELIZABETH, 1916– . *Drosera* in eastern North America. (Torrey Botanical Club. Bulletin, Mar. 1944. v. 71, no. 2, p. 166–74, 7 illus., 5 text maps.)

Contains a discussion of this herbaceous genus, a generic description, a key to the species and descriptions of seven species and two varieties (one is new). *D. rotundifolia* (Alaska and northern Canada) and *D. anglica* (southeastern Alaska) are included.

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56132. WYT, L. Untersuchungen über die Oberflächentemperatur der Nasenschleimhaut. (Monatsschrift für Ohrenheilkunde und Laryngo-Rhinologie, Feb. 1958. Jahrg. 92, Heft 1, p. 33–39, illus.) 23 refs. Text in German. ***Title tr.:*** Investigations on the surface temperature of the nasal mucosa.

Report based on recordings made in 17 subjects, with very sensitive apparatus. A continuous fluctuation of mucosal temperature was observed, which corresponds to changes in color, thickness, pH and electrical resistance of this tissue. These phenomena are considered as responses to the thermal, chemical or mechanical stresses.

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56133. YAGLOU, CONSTANTIN PRODROMUS, 1896– , *and others.* Reflective wall lining reduces body heat loss in arctic structure. (Heating piping and air conditioning, Mar. 1957. v. 29, no. 3, p. 110–13, illus., tables.) *Other authors:* C. Newton *and* D. W. Marble.

Presents the results of tests with reflective aluminum sheets as heat mirrors on walls in a stove-heated Jamesway arctic shelter, to improve thermal comfort and save fuel. Fuel economy of 15%, higher air and wall temperatures, and less overheating in the upper shelter space were achieved. These advantages were somewhat offset by visual glare and possible aggravation of condensation problems. A bracket fan near the ceiling to mix the air was found to increase thermal comfort. ***Copy seen:*** DLC.

56134. YAMAJI, KENJI, *and* D. KUROIWA. Visco-electric property of ice in the temperature range 0° to −100° C., 1. (Teion kagaku, 1956. ser. A, v. 15, p. 171–83, illus., table.) 4 refs. Text in Japanese. Summary in English.

Report on measurements of the modulus of elasticity and vibration losses in rectangular bars of ice (1 x 3 x 30 cm.). The modulus of elasticity ranged from

9 x 10^{10} to 11 x 10^{10} (c.g.s.) at 0° to −100° C., increasing linearly with decreasing temperature independently of crystal orientation. Vibration losses decreased exponentially from 0° to −35° C., then increased to reach a maximum at about −70° C., and decreased thereafter.—From SIPRE.

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YAMAJI, KENJI, *see also* Kuroiwa, D., *and* K. Yamaji. Study of elastic and viscous properties of snow . . . 2. *1956.* No. 52579.

56135. YAMANE, GEORGE, *and* **R. G. HENNES.** Subgrade frost action and related soil properties. (Trend in engineering at the University of Washington, Oct. 1957. v. 9, no. 4, p. 18–21, illus., graphs.)

Reports a study made to correlate certain soil properties such as sand equivalent, capillarity, permeability, and frost index number, with the amount of frost heave caused by freezing soils of different textures. The experimental procedure employing prepared soil samples frozen at controlled temperature in a specially constructed cabinet, is described. Frost heave was found negligible when sand equivalent is 60 or more; it increases with decrease in sand equivalent, with silty sand reaching maximum percentage of heave at a higher sand equivalent than clayey sand. The results of the capillarity-permeability test in relation with percentage of frost heave appear linear when plotted on a log-log or semi-log scale. Casagrande's criterion for non-frost susceptible soil appeared valid. Progress was made also in operation of the freezing cabinet. ***Copy seen:*** DLC.

YAMASHITA, KAZUKUNI, *see* Suzuki, T., *and others.* Effect of hypothermia . . . secretion of 17-hydroxycorticosteroids. *1957.* No. 55249.

56136. YASKOWICH, S. A. Conversion from shoran to hiran. (Canadian surveyor, Jan. 1958. v. 14, no. 1, p. 8–18, diagrs., tables.) 11 refs.

Reviews the development of shoran and describes improvements in design features in hiran (high accuracy shoran). Experiences of the Canadian shoran group in adopting the new equipment, using the gain riding technique, are summarized. Field calibrations in 1956 were made at Winnipeg and Churchill, Manitoba, in 1957 along a 117 mi. base line from Thule to the icecap in North Greenland.

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56137. YAWATO, ICHIRO. The affinity of Japanese and North American prehistoric pottery. (International Congress of Americanists, 31st, *São Paolo,* 1954. Proceedings, 1955, v. 2, p. 867–69.)

Compares north Japanese twisted string-, stamped-, shell-, and streak pattern earthenware with the comb ceramic of the north Eurasian mesolithic and early neolithic and the pre-Columbian pottery of North America. The introduction of neolithic culture to North American from northern Asia across Bering land bridge in the "alluvium epoch" is suggested.

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YENTSCH, C. S., *see* Fleming, R. H., *and others.* NORPAC 1955 . . . Preliminary data report. *1956.* No. 50926.

56138. YOCHELSON, ELLIS L., *and* **J. T. DUTRO.** Late Paleozoic Gastropoda from northern Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1668.) Abstract of a paper presented at the Society meeting in St. Louis, Nov. 6–8, 1958.

Deals with fossils occurring in Mississippian, Pennsylvanian and Permian rocks; 34 species are recognized.

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56139. YORK, GARLAND A. Jet navigation series Northern Hemisphere polar charts. (*In:* Alaskan Science Conference . . . 1954. Proceedings *pub.* 1957. p. 25–27.)

Describes the new chart series, scale 1:2,000,000, based on an "inverse or transverse Mercator" projection in polar areas; it has straight lines approximating great circles, and a nearly constant scale throughout; it is recommended for high altitude, speed navigation; its advantages over the Lambert conformal projection, used by the U.S. Air Force is stressed. The first charts are to cover Canada, Alaska, Greenland and the United States.

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56140. YOSHIDA, SEKIKO, *and* **Y. KAMIYA.** Latitude effect on the intensity decrease in the cosmic-ray storm. (Journal of geomagnetism and geoelectricity, Dec. 1953. v. 5, no. 4, p. 136–40, diagrs., 4 tables.) 16 refs.

Data were obtained from various stations including Bergen (61° geomag. N.) and Godhavn (79.9° geomag. N.) in

13 observational periods during 1937 to 1949; they are compared with theoretical predictions based on the electric field theory proposed earlier by Nagashima. The observed and theoretical values are shown to be in good agreement. The latitude effect of the cosmic ray decrease is graphed. ***Copy seen:*** DLC.

YOUNG, DAVID W., *see* Hannon, J. P., *and others*. Effect . . . cold acclimatization on plasma electrolyte . . . *1958*. No. 51547.

56141. YTREBERG, NILS-JARLE. Horndykkerens, *Podiceps auritus* (L.), forekomst i Norge og noen trekk fra dens biologi. (Norske videnskabers selskab, *Trondheim*. Museet. Årbok, 1956–57, p. 49–74, 6 illus., table.) 49 refs. Text in Norwegian. ***Title tr.:*** The occurrence of the Slavonian grebe, *Podiceps auritus* (L.), in Norway and some data of its biology.

Contains a study of recent distribution of this bird, breeding on the coastal islands of Nordland, and in Troms to 69°10′ N. The breeding sites are mostly small lakes and ponds, and larger lakes where the rush, *Equisetum*, is growing. Egg-laying has been observed from the middle of May to mid-August. The normal clutch is three or four eggs and the mean length and breadth was found to be 44.53 x 29.40 mm.

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ZABELIN, B. A., *see* Amaliȶskiĭ, V. M., *and* B. A. Zabelin. Lesovoznye dorogi . . . zhelezobetonnym pokrytiem. *1957*. No. 49268.

56142. ZABELINA, M. M. Nekotorye novye dannye po fitoplanktonu Karskogo morîa. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1930. vyp. 13, p. 105–143, illus., tables, maps.) 23 refs. Text in Russian. Summary in German. ***Title tr.:*** Some new data on the phytoplankton of the Kara Sea. Previously listed as No. 19774.

Study based on material collected during Aug.–Sept. 1925, in the open sea and in two relict lakes on Novaya Zemlya. Three phytogeographic areas could be distinguished: (1) east of the northern part of Novaya Zemlya, with low temperature and salinity and mostly arctic and arctoboreal forms; (2) an area southwest of this with higher water temperatures and fewer arctic forms; (3) the bay areas with littoral or brackish phytoplankton. The shore basins showed forms common in the bay area. The second part of the paper presents the material on a taxonomic basis, with notes on location of finds, earlier observations, variants, etc. Some 53 forms are new for the area, including one new variety and a new ecological race. ***Copy seen:*** NN.

ZABOEVA, IÎA VASIL'EVNA, *see* Polynȶseva, O. A. *and others*. Obshchie usloviîa pochvoobrazovaniîa. *1958*. No. 54068.

ZABOEVA, IÎA VASIL'EVNA, *see* Polynȶseva, O. A., *and others*. Opisanie pochv. *1958*. No. 54069.

56143. ZABOLOTSKIĬ, V. A. Peredvizhnaîa baza stroitel'noĭ organizaȶsii dliîa neosvoennykh raîonov. (Stroitel'naîa promyshlennost', July 1958. god 36, no. 7, p. 4–10, 14 illus., table.) Text in Russian. ***Title tr.:*** Movable camps for construction crews in undeveloped regions.

Describes temporary work camps planned for mine, pumping station, dam, bridge, road construction projects, particularly in remote northern or eastern areas, forest land, tundra, etc. The camp consists of single-family trailers, sleeping quarters for 4, 8 or 12 men, galley mess, and various auxiliary service trailers, the last for work shops, boiler, power station, concrete mixers, food storage, instruments and tools.

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56144. ZABORSHCHIKOV, F. IÂ, *and* **N. I. FEDIÂKINA.** O sviâzi mezhdu polîarnymi siîaniîami, rasprostraneniem radiovoln, magnitnymi i ionosfernymi vozmushcheniîami. (Problemy Arktiki, 1957. vyp. 2, p. 149–59, diagrs., table.) 4 refs. Text in Russian. ***Title tr.:*** Correlation of auroras, radio wave propagation and geomagnetic and ionospheric disturbances.

Auroral observations at the Tiksi Bay polar station Nov. 1955–Jan. 1956, were related to the audibility of radio signals of 24–69 mc. frequency, and the findings correlated with disturbances in horizontal component (H) of the earth's magnetic field and with data on the position of the reflectory layers (E) of the ionosphere. Clear reception of radio signals of undetermined stations, mostly in English and usually not perceptible at Tiksi Bay, coincided with bright or very bright

auroras, when records showed positive bays of H-component; during the negative bays, reception faded or disappeared; the negative bays coincided with low (100 km. or less) altitude of the E-layers. Types, phases, variations, disturbances and frequencies of these phenomena are discussed and their interrelations are shown on diagrams. ***Copy seen:*** DLC.

ZABORSKI, BOGDAN, 1901– , *see* International Geographical Congress, 1952. Proceedings. *1957.* No. 51939.

56145. ZACOUTO, F. Circulation extracorporelle permettant chez le chien une hypothermie régionale rapide, intense et prolongée. (Société de Biologie, Paris. Comptes rendus, 1958. t. 152, no. 2, p. 257–59, illus.) 9 refs. Text in French. ***Title tr.:*** Extracorporeal circulation enabling a rapid, intense and long regional hypothermia in the dog.

Description of a method using extracorporeal cooling of the blood and application of a tourniquet above the part (e.g., leg) to be cooled. Cooling of over four hours is tolerated without adverse effects. ***Copy seen:*** DNLM.

ZADNEPROVSKAIÂ, T. N , *see* Vinberg, N. A., *and* T. N. Zadneprovskaiâ. Sovetskaiâ arkheologicheskaiâ literatura za 1952 g. *1955.* No. 55821.

56146. ZADORNOV, NIKOLAĬ PAVLOVICH. Na Okhotskom poberezh'e. (Dal'nīĭ Vostok, Jan.–Feb. 1957. god 25, no. 1, p. 126–37.) Text in Russian. ***Title tr.:*** The Okhotsk coastal region.

Journalist's sketch of his trip to Okhotsk: the flight from Khabarovsk over the Shantarskiye Islands to Okhotsk; the town's early importance as a starting point for Russian explorations in the North Pacific area and its present decline; absence of any regular marine transportation; the fishing industry in the Okhotsk Sea, Okhota and Kukhtuy Rivers and its shortcomings; the good salmon catch in 1956(?); activities of the Pacific Institute of Fisheries and Oceanography (TINRO) and its branch at Okhotsk.

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56147. ZAGORSKAIÂ, N. G. Nekotorye dannye po stratigrafii chetvertichnykh otlozheniĭ Korotaikhinskoĭ depressii. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958, vyp. 8, p. 25–28.) Text in Russian. ***Title tr.:*** Some data on stratigraphy of Quaternary deposits in the Korotaikha River depression.

Reports full description of complete cross-section of Quaternary deposits identified by the Komi-Nenets geological survey in this region approx. 68°50′ N. 61°25′ E., the More-Yu valley to the west. This cross-section corresponds with the stratigraphic division of Quaternary deposits worked out for Yugorskiy Peninsula. ***Copy seen:*** DGS.

56148. ZAGORSKAIÂ, N. G. Predvaritel'nye dannye o geologicheskom stroenii kraĭnego severo-zapada Bol'shezemel'skoĭ tundry. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958, vyp. 11, p. 34–38.) Text in Russian. ***Title tr.:*** Preliminary data on the geologic structure of the far northwest of Bol'shezemel'skaya Tundra.

Outlines the stratigraphy, lithology and distribution of four series of Quaternary deposits in the region (approx. 68°–69° N. 54°–60° E.) between the Pechora estuary on the west and the lower More-Yu River-Khaypudyrskaya Bay on the east. The study is based on geological mapping in progress and on evaluation of previous studies. Deposits identified and briefly reviewed are: marine boreal transgressions, first Upper Quaternary glaciation, post-glacial-alluvial glaciation, and contemporary glaciation. Sands, clays and gravels are considered as building materials. ***Copy seen:*** DGS.

56149. ZAGORSKAIÂ, N. G. Sovremennoe oledenenie arkhipelaga Severnoĭ Zemli. (Vsesoûznoe geograficheskoe obshchestvo. Izvestiiâ, Nov.–Dec. 1957. t. 89, no. 6, p. 508–515, fold. map.) Ref. Text in Russian. ***Title tr.:*** The present-day glaciation of the Severnaya Zemlya Archipelago.

Summary of a part of the author's work *Geomorfologiiâ i chetvertichnye otlozheniiâ arkhipelaga Severnoĭ Zemli* (Geomorphology and Quaternary deposits of Severnaya Zemlya Archipelago), completed in 1953 and based on results of the Scientific Institute of Geology of the Arctic's Geological Expedition of 1948–51, headed by B. Kh. Elizarov, with author's participation in 1950–51. Of the 36,391 sq. km. surface of this archipelago, 45%, i.e., 16,908 sq. km., is covered by 22 glaciers; their size varies from 10 to 5,000 sq. km., and thickness from 20 to 400 m. Universitetskiy Glacier (1,605 sq. km.) on Oktyabr'skoy Revolyutsii Island, is

described in detail (p. 510–11) and typical features are noted of the other main glaciers (Kropotkina, Vavilova, Akademii Nauk, Al'banova, Dezhneva, etc.) shown on folded map, approx. 1:1,300,000. They appear to be in equilibrium: no evidence is found of present recession or extension; 25% of these glaciers are "active," but in the absence of steep slopes, the movement is slow and no formation of moraines or deposits is observed. ***Copy seen:*** DLC.

ZAGORSKAĬA, N. G., *see also* Dibner, V. D., *and* N. G. Zagorskaĭa. Konusoobraznye kholmy . . . *1958*. No. 50548.

ZAĬDMAN, L. A., *see* Gorodet͡skiĭ, P. I., *and others*. Razvitie sistem razrabotki . . . *1958*. No. 51295.

ZAĬKIN, PAVEL DMITRIEVICH, *see* Fraerman, R. I., *and* P. D. Zaĭkin. Elmsfeuer . . . Reisen und Abenteuer . . . Golownin. *1955*. No. 50963.

ZAĬKIN, PAVEL DMITRIEVICH, *see* Fraerman, R. I., *and* P. D. Zaĭkin. Zhizn' . . . Golovnina . . . *1957*. No. 50964.

56150. ZAIMIS, ELEANOR, *and others*. Effects of lowered muscle temperature upon neuromuscular blockade in man. (Science, July 4, 1958. v. 128, no. 3314, p. 34–35, illus.) 3 refs. *Other authors:* T. H. Cannard *and* H. L. Price.

Account of experiments on 11 subjects with muscle temperature of one leg lowered and that of the other remaining normal. Three drugs that produce neuromuscular block were tested. The results with these depolarizing drugs were similar to those obtained in cats.

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ZAIMIS, ELEANOR, *see also* Maclagan, J., *and* E. Zaimis. The effect . . . muscle temperature on twitch and tetanus . . . cat. *1957*. No. 53024.

ZAĬT͡SEV, N. S., *see* Arsen'ev, A. A., *and* N. S. Zaĭt͡sev. Mineral'nye bogatstva . . . *1958*. No. 49399.

56151. ZAĬT͡SEV, VIKENTIĬ PETROVICH. Rybokhozi͡aĭstvennai͡a nauka za 40 let. (Rybnoe khozi͡aĭstvo, Nov. 1957. god 33, no. 11, p. 26–30.) Text in Russian. ***Title tr.:*** Fisheries research during 40 years.

An historical outline of Soviet fisheries research, both marine and freshwater, with an introduction on pre-Revolutionary scientists and their work in this field (Ber, Kessler, Dybovskiĭ, etc.). Beginning with the reopening of the Murmansk biological station and the establishment of a fisheries institute (both in 1921), the author traces the appearance and development of similar institutions in other parts of the U.S.S.R., their work, expeditions, outstanding investigators. Research into technological problems, mechanization, etc., is also reviewed. ***Copy seen:*** DLC.

ZAKHAROV, A. I., *see* Akademii͡a nauk SSSR. I͡Akutskiĭ filial. Revoli͡utsionnye sobytii͡a 1905–1907 . . . *1956*. No. 49167.

56152. ZAKHAROV, NIKITA VASIL'EVICH, 1915–1945(?). Évenkiĭskiĭ poėt Nikita Zakharov. (Na severe dal'nem, 1957. kniga 7, p. 162–66.) Text in Russian. ***Title tr.:*** The Tungus poet, Nikita Zakharov.

Four of his poems are given in Russian translation, together with a biographical note by M. G. Voskoboĭnikov. Zakharov, born in Yakutia, was killed during World War II. ***Copy seen:*** DLC.

56153. ZAKHAROV, P. Na samolete protiv volka. (Grazhdanskai͡a avia͡t͡sii͡a, Mar. 1957. god 14, no. 3, p. 30, illus.) Text in Russian. ***Title tr.:*** Airplane against wolf.

In reindeer-breeding areas, damage by a single wolf during its lifetime may amount to approx. 100,000 rubles, and control of these predators is a vital problem for the breeders. Since 1951, aircraft have joined hunters in Nentsy National District; 27 wolves and a wolverine were killed from an airplane in 70 hrs. hunting in spring 1954; 163 wolves and eight wolverines have been exterminated by airplanes in the last two years. The methods of aerial hunting are discussed in detail; November, and, especially, February to mid-April are noted as best times for hunting wolves.

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56154. ZAKHVATKIN, ALEKSEĬ ALEKSEEVICH, 1906–1950. Paukoobraznye, t. 6, vyp. 1; tiroglifoidnye kleshchi, Tyroglyphoidea. Moskva-Leningrad, Izd-vo Akad. nauk SSSR, 1941. xii, 474 p. 704 illus. (Fauna SSSR. Arachnoidea, t. 6, vyp. 1 (nov. ser. no. 28).) 28 refs. Text in Russian. Summary in French, p. 411–49. ***Title tr.:*** Arachnids; sarcoptid mites, Tyroglyphoidea.

Contains an index to the species (p. vii–xii), and (p. 1–66) general characteristics, and account of the anatomy, morphology, geographic distribution,

biology, ecology, also the economic importance and control of these mites, which are pests of stored grains, flour, etc. In the special part (p. 67–411) are keys and descriptions of 166 species (50 new) with synonyms, notes on distribution, ecology, also on their damage to agricultural products, plants, and some animals. Two northern species are included (p. 302–304, 358–60): *Glycyphagus domesticus* from northern Europe and Asia, Franz Joseph Land, Spitsbergen, Greenland, and *Myocarus arvicolae* from the Shantar Islands, Okhotsk Sea. Many of the species are not native to the U.S.S.R. An index of Latin names is appended. ***Copy seen:*** MH–Z.

ZAKMAN, L. M., *see* Konovalov, I. N., *and others.* Nekotorye novye svedeniîa o . . . stoĭkosti rasteniĭ k morozu. *1958.* No. 52391.

ZAKONNIKOV, P. M., *see* Akademiîa nauk SSSR. Institut ėkonomiki. Problemy . . . ÎAkutskoĭ ASSR. *1958.* No. 49171.

ZAKS, IVAN GUGOVICH, *see* Gur'îanova, E. F., *and others.* Litoral' zapadnogo Murmana. *1930.* No. 51432.

ZALEWSKI, TADEUSZ, *see* Askanas, A., *and others.* Sztuczna hibernacja . . . *1956.* No. 49411.

56155. ZAMORIN, P. K. Sozdanie aėrodromov pri glubokom snege. (*In:* U.S.S.R. Armiîa. Upravlenie Voenno-vozdushnykh Sil. Sbornik materialov po stroiteľstvu . . . aėrodromov. Moskva, 1942. vyp. 1, p. 35–56, illus. tables, graphs.) Text in Russian. ***Title tr.:*** Construction of airfields in deep snow.

Instructions are given for the construction of winter airfields in snow of 80–100 cm. depth. Excess snow is removed with tractor-propelled sleds and trucks, leaving an 8 cm. packed layer. The snow remaining on projected runways is compressed by rollers and graders, and mixed by gripper harrows, disc harrows, and cultivators; mixing doubles compactness after 24 hrs. at −12° C. and increases (six-fold) the initial hardness. Construction equipment (fig. 4–12) using local materials, simple tools (specified), unskilled army personnel is indicated.

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ZAMORINA, N. V., *see* Abramov, L. T., *and* N. V. Zamorina. Osenniĭ remont . . . na aėrodromakh . . . *1942.* No. 49103.

56156. ZAPLATIN, M. Priroda, skul'ptor. (Sovetskiĭ soîuz, 1958, no. 5 (99), p. 14–15, illus.) Text in Russian. ***Title tr.:*** Nature as sculptor.

Describes and illus. the strange, pillar-like, rock-formations of Man'-Pupy-Nër mountain (approx. 63° N. 59° E.) at the headwaters of the Pechora River, Northern Ural. A rugged 100–km. march across the taiga by Sverdlovsk movie studio personnel and the filming of hazel- and wood-grouse, unused to men and fearless even at the sound of firearms, are noted.

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56157. ZAPNIVETRENKO, I. Za vysokie ulovy. (*In:* Na promyslakh v Barenŝovom more, 1956, p. 45–61.) Text in Russian. ***Title tr.:*** For high catches.

"Pep talk" for increasing catches by withholding the boats from routine reconditioning; through devotion, responsibility and high qualification of the crew. Productivity, working conditions of men and machines, maintenance of equipment and gear, repairs, etc. are also discussed.

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ZAPOROZHSKAÎA, V. D., *see* Kirichenko, A. O chem povedali skaly. *1957.* No. 52290.

ZAPOROZHSKAÎA, V. D., *see* Levin, M. G. Polevye issledovaniîa . . . 1946 g. *1947.* No. 52790.

ZAPOROZHSKAÎA, V. D., *see* Okladnikov, A. P. Ancient cultures . . . *1958.* No. 53725.

56158. ZAPOROZHTŜEVA, A. S., *and* **A. I. KRAVTŜOVA.** Gidrogetit-leptokhloritovo-kaolinitovye porody srednego triasa severnoĭ chasti Anabaro-Khatangskogo mezhdurech'îa. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89. Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 178–88, illus., tables.) 3 refs. Text in Russian. ***Title tr.:*** Middle Triassic hydrogoethite-leptochloride-kaolinite rocks in the northern part of the Anabar-Khatanga interfluve.

Presents results of investigation (approx. 72°–73° N. 106°–113° E.) of middle Triassic rocks and minerals in gravels derived from them. Iron ore pebbles of three types are found in the gravels, bearing hydrogeothite, leptochloride, and kaolinite. Each type was studied microscopically, and the included minerals are enumerated. Chemical analysis of each

rock type is given. None of the minerals present has resource value.

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56159. ZAPOROZHTSEVA, A. S. Lomontit iz melovykh otlozheniĭ Lenskogo uglenosnogo basseĭna. (Akademiia nauk SSSR. Doklady, May 11, 1958, god 26, t. 120, no. 2, p. 384–86.) 6 refs. Text in Russian. ***Title tr.:*** Laumontite from Cretaceous deposits of the Lena coal basin.

Reports investigation of laumontite in the Chay-Tumus coal location on the Olenek channel of the Lena delta, and compares this site with others in the Lena coal basin. Above the coal deposits a coal-free sandstone series is evident, in which laumontite exists. The sandstones are characterized, crystallic properties described, and thickness of the stratum indicated. ***Copy seen:*** DLC.

56160. ZAPOROZHTSEVA, A. S. O glinistykh mineralakh argillitov nizhnego triasa Ust'-Eniseĭskogo raĭona. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958. t. 67, Sbornik stateĭ po geologii Arktiki, vyp. 7, p. 143–62, illus., diagrs., incl. 1 fold., tables.) 10 refs. Text in Russian. ***Title tr.:*** On the clayey argillite minerals of the Lower Triassic in the Ust'-Yenisey region.

Presents results of lithological and geochemical investigations in the tufaceous-argillaceous stratum. Its lower part is described as variegated and the upper, dark in color. Appearance, physical properties, polished and micro sections of both series are described and data presented in tables and diagrams. The minerals are identified and chemical analyses given. The mineral composition of the two series is similar, but not identical. Differences in development are noted; the upper stratum is thought to be in process of kaolinization.

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56161. ZAPOROZHTSEVA, A. S. Produkty kory vyvetrivaniia v osnovanii otlozheniĭ mezozoia Ust'-Eniseĭskogo raĭona. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89. Sbornik stateĭ po geologii Arktiki, vyp. 6, p. 174–77.) Text in Russian. ***Title tr.:*** Products of crust weathering in the foundation of Mesozoic deposits in the Ust'-Yenisey district.

Outlines the composition of weathering products which are found in the Tochinsk uplift on the left bank of the lower Yenisey. Their properties are outlined and origin discussed in connection with marine transgression. They developed in the Triassic and Lower Jurassic periods and are synchronous with weathering products of the Tyumen' region.

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56162. ZAPOROZHTSEVA, A. S. Tufogenno-argillitovaia tolshcha Ust'-Eniseĭskogo raĭona i ee proiskhozhdenie. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1958, t. 67. Sbornik stateĭ po geologii Arktiki, vyp. 7, p. 104–142, illus., 12 tables.) 11 refs. Text in Russian. ***Title tr.:*** A tufaceous-argillitic stratum in the Ust'-Yenisey region and its origin.

Presents the results of investigation on this stratum on the left bank of the lower Yenisey and in the area of Ust'-Port. Structure of the deposit and its stratigraphic divisions are outlined. Comparison is made with similar deposits of the Taymyr Peninsula, Tyumen region, and the Siberian Ural. Previous works on tufaceous strata are reviewed. Types of gabbro-diabases and diabases and pyroclastic tufaceous terrigenous rocks are described and their chemical analyses given. Argillites, their composition, and chemical and physical properties are clarified. Origin, diagenesis, epigenesis, and metamorphism of the tufaceous-argillitic stratum are discussed.

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56163. ZARROW, MYER X., 1913– , *and* E. W. BRINGMAN. Decreased sensitivity of the eosinophil depletion test in the rat exposed to a low ambient temperature. (Endocrinology, Apr. 1957. v. 60, no. 4, p. 573–74, table.) 6 refs.

Animals exposed to a temperature of 3°–5° C. for a week failed to respond to minimal effective doses of cortisone acetate; at room temperature such doses caused a considerable fall of circulating eosinophils in control animals.

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ZARROW, MYER X., 1913– , *see also* Jasper, R. L., *and others.* Comparison of tissue respiration . . . *1958.* No. 52050.

56164. ZARZYCKI, J. M. Application of shoran to establish horizontal control for photogrammetric mapping of inaccessible areas. (Canadian surveyor, Jan.

1957. v. 13, no. 6, p. 345–56, illus., diagrs., maps.) 12 refs.

Describes the basic functions of shoran equipment and methods, and discusses the application of shoran-obtained data to photogrammetry; accuracy and time consumption are evaluated and compared with those of conventional surveying methods. Surveys completed since the introduction of shoran in Canada in 1952, are briefly outlined.

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56165. ZARZYCKI, J. M. Photogrammetry and electronic surveys in the exploration of Canada's North. (Canadian mining and metallurgical bulletin, Aug. 1957. v. 50, no. 544, p. 482–86, illus., text map, 5 diagrs.) *Also pub. in* Canadian Institute of Mining and Metallurgy, Transactions, 1957, v. 60, p. 268–72.

Discusses advantages, methods, equipment, prerequisites (net of primary geodetic points), of photogrammetry and electronic surveys (shoran) in obtaining map, geologic, gravity, seismic, and general information on northern Canada. ***Copy seen:*** DGS.

56166. ZAUER, V. V., *and* **V. A. ZUBAKOV.** Palinologicheskoe obosnovanie raschleneniia chetvertichnykh otlozheniĭ Osinovskogo raĭona doliny r. Eniseĭ. (Akademiia nauk SSSR. Doklady, May 1, 1958. god 26, t. 120, no. 1, p. 162–65, table.) 3 refs. Text in Russian. ***Title tr.:*** The palynological basis for Quaternary deposit separation in the District of Osinovo in the Yenisey River valley.

Between Osinovo and Sumarokovo on the Yenisey near the mouth of the Podkamennaya Tunguska, the Quaternary deposits are especially well represented by a 150 m. thick stratum of lacustrine, lacustrine-alluvial and glacial deposits. Some 500 samples were investigated by pollen analysis: three interglacial and four glacial horizons were distinguished, and are presented in a table together with a brief explanation of this new division.

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56167. ZAUSMER, DAVID M. The effect of cooling on muscle excitability. (Annals of physical medicine, Nov. 1957. v. 4, no. 4, p. 144–47, table.) 4 refs.

Report on investigation into muscle excitability of 13 normal subjects. A statistically significant reduction in excitability was observed with the fall of skin temperature between 5° and 2.3° C. The index of excitability adopted was a multiple of the rheobase.

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56168. ZAVALISHIN, N. Noveĭshiia izvĕstiia o Novoĭ Zemlĕ. (Sĕvernyĭ arkhiv, 1824. pt. 11, p. 23–37.) Text in Russian. ***Title tr.:*** Newest data about Novaya Zemlya.

Describes the geography, topography, flora and fauna of the island, the straits and adjacent island groups. Meteorological and other data gathered on Litke's 1823 voyage are included (cf. No. 10212). ***Copy seen:*** DLC.

56169. ZAVARINA, MARIIA VASIL'EVNA, *and* **M. K. ROMASHEVA.** Moshchnost' oblakov nad arkticheskimi morĭami i TSentral'noĭ Arktikoĭ. (Problemy Arktiki, 1957. vyp. 2, p. 127–32, tables.) 3 refs. Text in Russian. ***Title tr.:*** Thickness of clouds over arctic seas and Central Arctic.

Reports results of observations carried out Apr.–Sept. each year 1949–1955, by the Flying Observatory Expedition (Ėkspeditsiia "Letaiushchaia observatoriia") of the Arctic Institute. Flights to the North Pole over all Soviet arctic seas were made at 3–5 km. height. Tabulated data on mean and extreme altitudes of lower and upper boundaries of each of five main types of clouds and on their occurrence are given and discussed. Thickness above 700 m. was observed in only 24% of 227 full-scale observations and only twice above 2 km.

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ZAVARITSKIĬ, ALEKSANDR NIKOLAEVICH, 1884–1952, *see* Dobrokhotov, IU. S. Aėros"emka v vulkanologicheskikh ėkspeditsiiakh . . . *1950.* No. 50578.

56170. ZAVATTI, SILVIO, 1917– . Chi raggiunse per primo il Polo Nord? La controversia Cook-Peary si ripresenta in tutta la sua importanza in questo Anno Geofisico Internazionale. (Universo, Nov.–Dec. 1957. v. 37, no. 6, p. 1031–1044, illus., map.) 7 refs. Text in Italian. ***Title tr.:*** Who reached the North Pole first? The Cook-Peary dispute turns out again in all its importance in this International Geophysical Year.

Defends Cook's claim of having reached the North Pole in 1908, a year before Peary. The Cook-Peary controversy is discussed, Peary's attainment of the

Pole discounted (cf. No. 28947) and the veracity of Cook's story supported. Short biographies of both explorers are given and their characters evaluated. Cook's route to the North Pole is mapped. ***Copy seen:*** DGS.

56171. ZAVATTI, SILVIO, 1917– . La criolite della Groenlandia. (Rivista geografica italiana, Dec. 1954. annata 61, fasc. 4, p. 342.) Text in Italian. ***Title tr.:*** Greenland's cryolite.

Reviews Trevor Lloyd's findings (No. 35935) on cryolite mining at Ivigtut (61°12′ N. 48°16′ W.), only known deposit outside the U.S.S.R. No traces of this mineral have been found in other ice-free areas of Greenland; the Ivigtut reserves may be exhausted within ten years; average production figures for 1865–1953 are given.

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56172. ZAVATTI, SILVIO, 1917– . L'Istituto Artico Danese. (Società geografica italiana, Bolletino, June–Aug. 1956. ser. 8, v. 9, fasc. 6–8, p. 364–65.) Text in Italian. ***Title tr.:*** The Danish Arctic Institute.

Reports establishment, in 1954, of an Arctic Institute at Copenhagen to further study of Greenland and to assist Danish and foreign scientists in polar exploration.

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56173. ZAVATTI, SILVIO, 1917– . Peter Freuchen. (Società geografica italiana. Bolletino, Nov.–Dec. 1957. ser. 8, v. 10, fasc. 11–12, p. 622.) Text in Italian.

Obituary of this Danish explorer, with sketch of his life and mention of some of his publications. ***Copy seen:*** DLC.

56174. ZAVATTI, SILVIO, 1917– . Le regioni polari. Brescia, La Scuola, 1957. 72 p., illus., tables, maps. (Scienza e lavoro, July–Aug. 1957. anno 12, no. 6.) 12 refs. Text in Italian. ***Title tr.:*** The polar regions.

Concise and lucid account of the Arctic and Antarctic, introduced by outline of polar limits and areas, discovery and exploration, including Northeast and Northwest Passages, conquest of the Poles, etc. The Arctic (p. 11–48) is described: climates, sea ice, seas, their limits, areas, physical oceanography, cold poles, etc.; regions are sketched in turn: Greenland, Svalbard, Canadian Islands, and waters of the Western Hemisphere; their flora and fauna, population and economy. A similar treatment is given to the Eastern Hemisphere: Franz Joseph Land, Severnaya Zemlya, etc. Northern peoples, Lapps, Finno-Ugrians, Eskimos, etc., are included. Author is director of Istituto Geografico Polare.

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56175. ZAWADZKI, ANTONI R. Die photogrammetrischen und kartographischen Arbeiten der polnischen Spitsbergen-Expedition im Jahre 1934 und Grönland-Expedition im Jahre 1937. (*In:* International Geographical Congress. 15th, *Amsterdam*, 1938. Comptes rendus. v. 2, section 1, Cartography, p. 190–96.) Text in German. ***Title tr.:*** The photogrammetric and cartographic work of the Polish Spitsbergen expedition of 1934 and the Greenland expedition of 1937.

Results of two expeditions (cf. No. 19783, 19813–19815) are reviewed and compared. ***Copy seen:*** DGS.

56176. ZBRUEVA, A. V. Arkheologicheskiĭ otrîad kompleksnoĭ ėkspeditsii v Komi ASSR. (Akademiîa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniîa, 1947. vyp. 2, p. 64–65.) Text in Russian. ***Title tr.:*** The archeological section of the Complex Expedition to Komi A.S.S.R.

A preliminary report on the excavations of the archeological section headed by the author and conducted in Sept. 1945 in the vicinity of Syktyvkar (61°40′ N. 50°49′ E.) and along the Sysola River between Koygorodok and the confluence of the Vizinga (approx. 60°30′–61°10′ N. 50°15′–51° E.). A large part of the 30 known archeological sites have been obliterated by plowing. No neolithic or bronze age finds were made and the recovered material seems to indicate that the upper Sysola basin was settled later than the lower part. ***Copy seen:*** DLC.

ZEBERL, A. J., *see* Alaskan Science Conference, 1954. Science . . . proceedings. *1957*. No. 49210.

56177. ZECHMAN, F. W., *Jr., and others.* Effect of cooling the cervical vagi on the work of breathing. (Journal of applied physiology, Mar. 1958. v. 12, no. 2, p. 301–304, illus., table.) 6 refs. *Other authors:* J. Salzano *and* F. G. Hall.

Records of intrathoracic pressures and tidal volumes in anesthetized dogs with vagi warm or cooled. Pressure-volume diagrams "showed that both elastic and viscous work increased during vagal cooling." ***Copy seen:*** DNLM.

ZEDERFELDT, BENGT, *see* Löfström, B., *and* B. Zederfeldt. Effects . . . hypothermia on wound healing . . . *1957*. No. 52883.

ZEDERFELDT, BENGT, *see* Löfström, B., *and* B. Zederfeldt. Wound healing . . . hypothermia . . . *1957*. No. 52884.

56178. ZELENIN, DMITRIĬ KONSTANTINOVICH, 1878–1954. Bibliograficheskiĭ ukazatel' russkoĭ ėtnograficheskoĭ literatury o vneshnem bytė narodov Rossii. S.-Peterburg, 1913. xxxix, 736 p. (Vsesoûznoe geograficheskoe obshchestvo. Zapiski po otdeleniû ėtnografii, t. 40, vyp. 1.) Text in Russian. ***Title tr.:*** Bibliographical index of Russian ethnographic literature on the mode of life of the peoples of Russia.

Lists 8,847 books and articles published between 1700 and 1910; they are grouped as geography, ethnic distribution, customs, housing, clothing, music and art, material culture and economy. Northern provinces are included under geography, and peoples of both European and Asiatic Russia in the groups following. Regional and ethnographic indexes are appended as well as such of authors, subject matter and maps. ***Copy seen:*** DLC.

56179. ZELENIN, DMITRIĬ KONSTANTINOVICH, 1878–1954. Narody kraĭnego Severa posle Velikoĭ Oktûabr'skoĭ sotsialisticheskoĭ revolûtsii. (Sovetskaâ etnografiâ, 1938, no. 1, p. 15–52.) Approx. 45 refs. Text in Russian. Summary in French. ***Title tr.:*** The peoples of the far North after the great October Socialist Revolution.

Describes the cultural and economic progress of the so-called small peoples of the North under the Soviet regime: the creation of national districts, collectivization, emancipation of women, propagation of literacy, sponsoring of native artistic, literary and musical output, development of trade, building of the Noril'sk branch railroad. The establishment and later liquidation of the Committee of the North, the activities of the Institute of the Peoples of the North (Leningrad) and other scientific organizations are reviewed. The Lapps (Saami), Samoyeds (Nentsy), Ostyaks and Voguls, Yakuts, Lamuts and Yeniseians, Chukchis and Koryaks, Asiatic Eskimos, Golds, etc. are treated in turn and selected statistics given on schools and students, health services, population, trade turnover, number of kolkhozes and sovkhozes, natives' participation in administration, etc.
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56180. ZELENKO, A. S. O nakhodke ostatkov belemnita na vostochnom beregu severnogo ostrova Novoĭ Zemli. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informaûsionnyĭ bûlleten', 1958. vyp. 8, p. 24–25.) Text in Russian. ***Title tr.:*** On the find of remnants of a belemnite on the eastern coast of the northern island of Novaya Zemlya.

Reports a find of the middle part of *Belemnites* sp. (?*Pachytenthis* sp. indet.) approx. 30 km. southeast of Cape Zhelaniya. The precise location is described and the age and origin of this find (in Mesozoic deposits) is considered.
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56181. ZELENOV, KONSTANTIN KONSTANTINOVICH. Litologiâ nizhnekembrijskikh otlozheniĭ severnogo sklona Aldanskogo massiva. Moskva, izd-vo Akademii nauk SSSR, 1957. 123 p., illus., plates, maps, diagrs., cross-sections incl. 3 fold. (Akademiâ nauk SSSR. Geologicheskiĭ institut. Trudy, vyp. 8.) 58 refs. Text in Russian. ***Title tr.:*** Lithology of Lower Cambrian deposits of the northern slope of the Aldan massif.

Presents results of investigation during 1950–1952 of the compaction, cementation, recrystallization and other changes and developments of Cambrian deposits of the Lena and Aldan regions. Occurrence of a marine basin in the Lower Cambrian is determined and its deposits are described. Sedimentation of dolomites is examined and facies defined; occurrence of bituminous and other organic material is studied. The bitumen (mineral oil, liquid fuel, tar, asphalt) is classified in several groups and the properties, content of bitumen, and organic mixtures indicated for each. Some of the bitumen may have practical importance. ***Copy seen:*** DLC.

56182. ZELENOV, KONSTANTIN KONSTANTINOVICH. O vynose rastvorennogo zheleza v Okhotskoe more gidrotermami vulkana Ėbeko, o. Paramushir. (Akademiâ nauk SSSR. Doklady, June 11, 1958. god 26, t. 120, no. 5, p. 1089–92.) 4 refs. Text in Russian. ***Title tr.:*** On iron in solution carried into Sea of Okhotsk by the hot springs of the Ebeko volcano, Paramushir Island.

Three types of hot springs in the fumarole fields and on the upper part of the Ebeko volcano cone are distinguished; their temperature, volume and discharge streams, of high acidity, are described. Three streams from the Ebeko thermal waters, which flow into the Sea of Okhotsk from this island (50°25′ N. 155°50′ E.) off the tip of Kamchatka, are treated in detail. Their chemical reactions with seawater are noted, especially with reference to the iron solution and its discharge. The effects on bottom sediments at various distances from the stream mouth are discussed. The assembled data are said to contribute toward an explanation of sea sedimentation in areas with volcanic activity, and they may lead to recovery of iron, possibly also of aluminum and manganese.

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56183. ZELÎANIN, B. Malaĭa ratsionalizatsiia. (*In:* Na promyslakh v Barentsovom more, 1956, p. 62–76, illus.) Text in Russian. ***Title tr.:*** A little streamlining.

Discusses minor repairs and improvements on machinery of fishing boats, especially those of foreign make where spare parts are not always available. Specifically, a cover for protection of bearings against water and dirt, an arrangement for cooling filter water, and improvements in the steam distribution system, are described.

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56184. ZELIKMAN, Ė. A. Materialy o raspredelenii i razmnozhenii evfauziid v pribrezhnoĭ zone Murmana. (Akademiia nauk SSSR. Kol'skiĭ filial. Murmanskaia biologicheskaia stantsiia. Trudy, 1958. t. 4, p. 79–117, illus., tables, maps.) 57 refs. Text in Russian. ***Title tr.:*** Materials on the distribution and reproduction of euphausiids in the Murman coastal zone.

A study based on analysis of plankton collected during 1952–1956 in a zone between Kil'din Island and Cape Svyatoy Nos. Five species of the crustaceans are recorded, including sexual condition and number of eggs; development of young in the Dal'ne Zelenetskaya Bay; distribution and multiplication in 1953, 1954 and 1955; distribution and multiplication in Motovskiy Bay during 1954 and 1955. A general outline is given of reproduction in the area studied; biology of adult forms is discussed: numerical relation of the five species, size and growth, seasonal and sex distribution, reproduction.

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56185. ZELIKMAN, Ė. A. O sozrevanii gonad i plodovitosti samok u massovykh vidov barentsevomorskikh evfauziid. (Akademiia nauk SSSR. Doklady 1958. t. 118, no. 1, p. 201–204, illus., table.) 12 refs. Text in Russian. ***Title tr.:*** Ripening of gonads and female fertility in the mass species of Barents Sea Euphausiidae.

Report on observations on the growth and maturation of gonads in *Thysanoessa inermis* and *Th. raschii* from the coastal zone. Body size, number of oocytes and their sizes, etc. are also noted.

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ZELIKMAN, Ė. A., *see* Kamshilov, M. M., *and* Ė. A. Zelikman. O vidovom sostave zooplanktona . . . *1958*. No. 52149.

ZELIKMAN, Ė. A., *see* Kamshilov, M. M., *and others.* Plankton . . . *1958*. No. 52150.

ZENÎAKIN, A., *see* Muravin, Ĭu., *and* A. Zenîakin. Komandory. *1958*. No. 53457.

ZENKEVICH, G. D., *see* Gel'man, N. S., *and* G. D. Zenkevich. Biokhimiia rasteniĭ; bibliograficheskiĭ ukazatel' . . . *1956*. No. 51121.

56186. ZENKEVICH, LEV ALEKSANDROVICH, 1889– . Deîatel'nost' okeanograficheskoĭ komissii za 1951–1956 gg. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Biûlleten', 1958, no. 1, p. 7–20.) Text in Russian. ***Title tr.:*** Activities of the Oceanographic Commission in 1951–1956.

Account of the Interdepartmental Oceanographic Commission under the Presidium of the Academy of Sciences U.S.S.R., founded in 1951: its functions, structure, executive board, 13 divisions (sektsii) and their heads, etc. Directed by the author, the 53-man Commission coordinates the oceanographic investigations of nearly a hundred Soviet administrative, scientific and economic organizations. The Northern Seas (headed by N. A. Maslov) and Arctic Seas (A. F. Laktionov, succeeding M. M. Somov) divisions are mentioned on p. 12.

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56187. ZENKEVICH, LEV ALEKSANDROVICH, 1889– . Investigations of bottom fauna of the Far Eastern seas and adjacent part of the Pacific. (Pacific Science Congress. 9th, *Bangkok, Thailand*, 1957. Abstracts of papers, p. 181.)

Reports studies by the Institute of Oceanology, Academy of Sciences, U.S.S.R. in the Japanese, Okhotsk and Bering Seas and adjacent Pacific waters since 1949. Some 1,500 stations have yielded about 300 new species and 30 new genera; charts on various types of bottom fauna distributions have been compiled. ***Copy seen:*** DLC.

56188. ZENKEVICH, LEV ALEKSANDROVICH, 1889– . Novyĭ rod i dva novykh vida glubokovodnykh ėkhiurid dal'nevostochnykh morei i severozapadnoĭ chasti Tikhogo okeana. (Akademiîa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 23, p. 291–95, illus., map.) Ref. Text in Russian. ***Title tr.:*** A new genus and two new species of deep-water Echiuroidea from the Far Eastern seas and the Northwest Pacific.

Descriptions of two new species of these peculiar worms: *Tatjanellia grandis* Zenkevitch sp. n. and *T. gracilis* Zenkevitch, sp. n., the two making up a new genus *Tatjanellia* Zenkevitch, gen. n. The first species was found in the southern Okhotsk Sea the second east of Kamchatka. ***Copy seen:*** DLC.

56189. ZENKEVICH, LEV ALEKSANDROVICH, 1889– . O napravlenii biologicheskikh issledovaniĭ Instituta okeanologii AN SSSR na dal'nevostochnykh moriâkh. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 66–74, tables.) Text in Russian. ***Title tr.:*** The course of biological investigations of Far Eastern seas conducted by the Institute of Oceanology of the Academy of Sciences, U.S.S.R.

Account of research in five laboratories (for: plankton, nekton, benthos, microbiological and borer studies) and of the R/V *Vitiaz'*. The work of the subdivisions is discussed, also quantitative aspects of it (number of stations, samples). The trends of the Institute's research are stated to be bio-geographical, biological and ecological; and, for plankton and benthos, analytical as to population composition and distribution. The plans for future research of the various divisions are outlined. ***Copy seen:*** DLC.

56190. ZENKEVICH, LEV ALEKSANDROVICH, 1889– . Study of abyssal bottom fauna in the northwest part of the Pacific by *Vitiaz*. (Pacific Science Congress. 9th, *Bangkok, Thailand*, 1957. Abstracts of papers, p. 182–83.)

Reports investigations of samples collected since 1949. Identified organisms represent new species, genera, families, and a new phylum, Pogonophora; a new vertical zonation is established; and distribution of bottom fauna is assessed in terms of biomass gm./m.^{2}. Differences between faunas in deep sea trenches may elucidate age of trench formation and origin of the population.

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ZENKEVICH, LEV ALEKSANDROVICH, 1889– , *see also* Filatova, Z. A., *and* L. A. Zenkevich. Kolichestvennoe raspredelenie donnoĭ fauny . . . *1957*. No. 50886.

ZENKEVICH, N. L., *see* Bezrukov, P. L., *and others*. Novye dannye . . . stroeniîa podvodnogo rel'efa. *1957*. No. 49709.

56191. ZENKOVICH, VSEVOLOD PAVLOVICH. Nekotorye zakonomernosti razvitiîa berega zapadnoĭ Kamchatki. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1956. t. 1, p. 57–64, illus.) 11 refs. Text in Russian. ***Title tr.:*** Some regularities in the development of the western Kamchatka coast.

The paucity and fragmentary character of knowledge of the morphology and dynamics of these coasts is stressed. Based on aerial and field studies, also analyses of maps, literature, etc., a general outline is offered of the dynamics of the southern part of the area. Seven types of coasts are described, and the factors producing them analyzed. Heavy wave and ice action figure prominently among those factors. ***Copy seen:*** DLC.

56192. ZENKOVICH, VSEVOLOD PAVLOVICH. Osnovnye problemy izucheniîa beregov morei Dal'nego Vostoka; sokrashchennyĭ tekst doklada. (Akademiîa nauk SSSR. Okeanograficheskaîa komissiîa. Trudy, 1958. t. 3, p. 52–54.) Text in Russian. ***Title tr.:*** Basic problems in the study of sea shores of the Far East; a summary.

Among the problems discussed is the protection of buildings and construction work of the fishing combine, harbor

works, etc. in western Kamchatka; study of conditions of harbor construction and estuary regulation in the Okhotsk area; study of the coasts in general, etc.
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ZETLER, B. D., *see* Stewart, H. B., *and others.* Recent . . . coastal water temperature and sea level . . . *1958.* No. 55161.

ZETTERSTEDT, JOHAN VILHELM, 1785–1874, *see* McAlpine, J. F. Identities of lonchaeid flies . . . *1958.* No. 52989.

56193. ZHABREVA, A. V. Pitanie treski. (*In:* Akademiia nauk SSSR. Murmanskaia biologicheskaia stantsiia. Zakonomernosti skopleniĭ . . . 1958. p. 211–22, illus., tables.) 9 refs. Text in Russian. ***Title tr.:*** The food of cod.

Presents and discusses data on the main food components of this fish and their role in the diet; seasonal changes in food composition; comparisons with other regions; relative role of the main food elements (capelin, herring, other fishes, crustaceans); seasonal cycle in intensity of feeding. ***Copy seen:*** DLC.

56194. ZHABREVA, A. V. Pitanie treski v pribrezhnoĭ zone vostochnogo Murmana. (Akademiia nauk SSSR. Murmanskaia biologicheskaia stantsiia. Trudy, 1957. t. 3, p. 140–47, illus.) 8 refs. Text in Russian. ***Title tr.:*** The diet of cod in the coastal zone of eastern Murman.

Account of food according to seasons and the size of this fish. Quantitative aspects of food intake are also considered, including periods of lack of food. Seasonal variation in the composition of species eaten was noted, depending on the availability of these forms. The diet was found to be similar to that in the open sea. ***Copy seen:*** DLC.

ZHABREVA, A. V., *see* TSeeb, R. IA., *and* A. V. Zhabreva. Sravnenie pitaniia treski i pikshi. *1958.* No. 55533.

56195. ZHADRINSKAIA, N. G., *and others.* Metel' v razgar leta. (Problemy Arktiki, 1958, vyp. 4, p. 99–100, illus.) Text in Russian. *Other authors:* IU. A. Kruchinin *and* R. K. Sisko. ***Title tr.:*** Snow storm in the middle of summer.

Heavy snow storms were observed at the end of July 1956 by members of the Physical-Geographic Expedition of the Arctic Institute on Bol'shoy Lyakhovskiy, Kotel'nyy, Stolbovoy and Benneta Islands. ***Copy seen:*** DLC.

56196. ZHDANOV, N. Tak nachalos'. (Fizkul'tura i sport, Apr. 1958. god 28, no. 4, p. 17–19, illus.) Text in Russian. ***Title tr.:*** It started thus.

Describes the pre- and post-Revolutionary sports groups for youths at Arkhangel'sk. The scouts, particularly active during the foreign intervention of 1918–1920, were superseded, in 1922, by komsomol (communist youth) physical education organizations. The first sports events at Mezen', in 1925, are sketched. ***Copy seen:*** DLC.

56197. ZHEBROVSKIĬ, A. N., *and* **V. A. KIAKK.** 0,01 natural'noĭ velichiny. (Nauka i zhizn', Jan. 1957. god 24, no. 1, p. 32–34, illus.) Text in Russian. ***Title tr.:*** 0.01 of the natural size.

Popular description of the study of hydrological conditions, of the Angara River at Bratsk carried on at the B. E. Vedeneev Scientific Research Institute of Hydrotechnics. A model basin was built in the open, representing (in scale 1:100) a 4 km. stretch of the Angara 900 m. wide. This was used to study water and ice movement in relation to dam construction planned for the site. Floating pieces of paraffin were substituted for ice in the experiments. ***Copy seen:*** DLC.

ZHIRKOVA, D. S., *see* Akademiia nauk SSSR. IAkutskiĭ filial. Za sovetskuiu vlast' . . . *1957.* No. 49170.

56198. ZHIROV, K. K., *and others.* Opredeleniia absoliutnogo geologicheskogo vozrasta gelievym metodom po monatsitam. (Geokhimiia, 1958, no. 2, p. 167–71, table.) 15 refs. Text in Russian. Summary in English. *Other authors:* N. V. Baranovskaia and L. A. Litvina. ***Title tr.:*** Determination of the absolute geological age of monazites with the helium method.

Eight samples of altered and unaltered monazites, among them some from Yugas on Kola Peninsula and Alakurtti (approx. 65°50′ N. 30°20′ E.) in northern Karelia, are studied, and their ages tabulated. The suitability of the helium method is considered and some doubt expressed. The main loss of helium "probably occurs during the alteration of the material under the action of superimposed hydrothermal solutions, and not in consequence of the process of gradual diffusion of the destructive action of radioactive radiations." ***Copy seen:*** DLC.

56199. ZHIROV, K. K., *and others.* Vliîanie protsessov gidrotermal'nogo izmeneniîa na opredelenie vozrasta po radioaktivnym mineralam. (Geokhimiîa, 1957, no. 8, p. 657–65, tables.) 24 refs. Text in Russian. Summary in English. ***Title tr.:*** The effects of hydrothermal alteration processes upon age determination according to radioactive minerals. *Other authors:* S. I. Zykov, V. V. Zhirova, *and* N. I. Stupnikova.

Presents the results on age determination of various radioactive minerals derived from 14 samples of pegmatite veins of northern Karelia and two from the Taymyr Peninsula. Tables show: minerals, locations, uranium, thorium and lead percentages, isotopic composition of lead, and relative age. According to isotopes three galena types are distinguished. Hydrothermal processes, which appear most active in lead, are discussed. "A complicating factor is the simultaneous carrying away of uranium and the introducing of considerable ore lead amounts." ***Copy seen:*** DLC.

ZHIROVA, V. V., *see* Zhirov, K. K., *and others.* Vliîanie protsessov gidrotermal'nogo izmeneniîa . . . *1957.* No. 56199.

ZHIVAGO, A. V., *see* Bezrukov, P. L., *and others.* Novye dannye . . . stroeniîa podvodnogo rel'efa. *1957.* No. 49709.

56200. ZHIZHINA, M. S. Nekotorye ordovikskie tabulîaty Vostochnogo Taîmyra. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, 1956. t. 89, Sbornik statei po geologii Arktiki, vyp. 6, p. 91–138, 10 plates, tables, incl. 1 fold., fold. map.) 54 refs. Text in Russian. ***Title tr.:*** Some Ordovician Tabulata of eastern Taymyr Peninsula.

Ordovician corals (oldest in coral fauna) from the Nizhnyaya Taymyra River area north of Lake Taymyr (approx. 73°50′–76° N. 96°–106° E.) are described from the fossil collections made during 1946–1952 by geologists of the Institute of Geology of the Arctic. The Ordovician deposits and their coral fauna, are outlined, locations of corals indicated, and types, species and varieties are described, several as new. The description is according to B. S. Sokolov's system with two groups: Tabulata Communicata Sokolov and T. Incommunicata Sokolov as separate subclasses of Anthozoa. A detailed classification is presented (fold. table). The similarity is noted of Taymyr Ordovician fauna to those of Greenland, Canada, Alaska, and other arctic regions.

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56201. ZHIZHINA, M. S., *and* **M. A. SMIRNOVA.** Novye favozitidy landoveri i venloka Vostochnogo Taîmyra. (*In:* Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statei po paleontologii i biostratigrafii, vyp. 6, 1957. p. 15–59, tables, 16 plates.) 41 refs. Text in Russian. ***Title tr.:*** New Favositidae of the Llandoverian and Wenlockian of eastern Taymyr.

Supplements the senior author's study* of 1957, where 41 species are treated, adding 17 more species and varieties of this fossil coral family, together with necessary changes in nomenclature. Descriptions are presented of 21 forms, with diagnoses, comparisons, location of the finds and the site. Altogether eight new species and four varieties of favosites have been found in the eastern Taymyr, the majority of them in Llandoverian deposits. ***Copy seen:*** DGS.

56202. ZHMUROV, B. Golubye dorogi. (Vokrug sveta, Sept. 1958, no. 9, p. 31, illus.) Text in Russian. ***Title tr.:*** Blue roads.

Notes a field-laboratory housed in a log-cabin mounted on runners and drawn by tractor; it was used by a geological party along a river bank in Chukotka. ***Copy seen:*** DLC.

56203. ZHUĬKOVA, I. V. Morfogenez shpalernogo kustarnika *Arctous alpina* (L.) Nied. v usloviîakh Khibinskikh gor. (Botanicheskiĭ zhurnal, Sept. 1958. t. 43, no. 9, p. 1319–26, 5 illus.) 25 refs Text in Russian. ***Title tr.:*** The morphogenesis of the espalier form of the shrub *Arctous alpina* (L.) Nied. under Khibiny Mountain conditions.

Study of the biological and morphological characteristics of this shrub as found in the central mountainous part of Kola Peninsula. Features of its structure and development of the corona are discussed. It may attain an age of 75–85 years and blooms when 20–25 years old. Corona development and that of the branchlets are diagrammed. ***Copy seen:*** DLC.

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*Novye vidy siluriĭskikh favozitid Taîmyra. (New species of Silurian favosites of the Taymyr.) *Pub.* in 1957, as vyp. 3 of *Sbornik statei* cited above (copy not seen).

56204. ZHUKOV, A. F. Iz opyta primeneniâ "kholodnogo" betona. (Transportnoe stroitel'stvo, Feb. 1958. god 8, no. 2, p. 17–19, diagrs., tables.) Text in Russian. ***Title tr.:*** Experience in the use of "cold" concrete.

A portable concrete mixing unit with boiler, additives and auxiliary equipment is described. The unit was installed near the construction site of a bridge foundation and used at air temperature down to −20° C. The unit was placed in a temporary shed, covered by empty bags. The concrete temperature varied from −1° C. to −8° C., and normal strength (98%) was reached after 90 days.

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56205. ZHUKOV, E. V. Chernaâ ryba. (Priroda, Oct. 1958. god 47, no. 10, p. 118, illus.) Text in Russian. ***Title tr.:*** Black fish.

Notes on *Dallia pectoralis* Bean, common on the Chukotsk Peninsula and in Alaska; its size, color, food, sexual development, hardiness and life in aquaria.

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56206. ZHUKOV, VLADIMIR FEDOROVICH. Ob ustroĭstve sanitarno-tekhnicheskikh kommunikatsiĭ v oblasti rasprostraneniâ mnogoletnemerzlykh gornykh porod. (Akademiâ nauk SSSR. Institut merzlotovedeniâ. Trudy, 1958. t. 14, p. 96–103, table.) Text in Russian. ***Title tr.:*** Installation of utilities in permafrost regions.

Improvements are recommended for heating, water supply and sewage systems in permafrost, based on experience at the Oymyakon (63°28′ N. 142°49′ E.) airport in northeast Yakutia. Advantages of individual (gas or electric) heating of buildings over a central heating system are emphasized. Provisions should be made for automatic separate heating of each section of water and sewage systems according to the section's critical temperature, depending on outside temperatures, pipe diameter, and water velocity. Electrical heating of the insulated pipes is favored.

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56207. ZHUKOV, VLADIMIR FEDOROVICH. Raschet osadki protaivaûshchego sloâ gornoĭ porody s uchetom nagruzki. (Akademiâ nauk SSSR. Institut merzlotovedeniâ, 1958. t. 14, p. 60–63, table graph.) Text in Russian. ***Title tr.:*** Calculation of the settling of the thawing layer of rock, taking load into account.

"Equations are derived for calculating the compression of soil under its own weight and as a result of the disappearance of ice and decreased soil porosity; the values of a coefficient expressing the instability of the cryogenic texture of frozen soil (which determines the settling of soil under its own weight) are tabulated for various soil types; and the variation of the coefficient of porosity of thawing soil as a function of load is graphed. Brief instructions for determining experimentally the various parameters involved are given."—SIPRE

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ZHUKOV, VLADIMIR FEDOROVICH, *see also* TSytovich, N. A., *and others.* O fizicheskikh âvleniâkh . . . v . . . gruntakh. *1957.* No. 55539.

56208. ZHUKOVA, A. N. Slova koriâkskogo âzyka, oboznachaûshchie kachestvennoe sostoâ nie. (Akademiâ nauk SSSR. Institut âzykoznaniâ. Doklady i soobshcheniâ, 1958. no. 11, p. 77–85.) 7 refs. Text in Russian. ***Title tr.:*** Words in the Koryak language designating a qualitative state.

Discusses the semantic origin and morphological properties of affixes. Descriptive adverbs, descriptive adjectives and words of a qualifying character constitute a grammatical unit and should be considered a separate part of speech.

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56209. ZHUKOVA, R. A. Mikrobiologicheskie issledovaniâ tselinnykh pochv Kol'skogo poluostrova. (Mikrobiologiâ, Sept.–Oct. 1956. t. 25, vyp. 5, p. 569–76, tables.) 14 refs. Text in Russian. Summary in English, appendix, p. 4. ***Title tr.:*** Microbiological investigations of virgin soil of the Kola Peninsula.

A study of over 100 samples of podsol and swamp soils, made during 1949–1955. Richest in microflora were lowland marshes, the poorest: sandy podsols. Horizon differences in these soils are also discussed as well as dominant groups and physiological groups. ***Copy seen:*** DLC

56210. ZHUKOVA, R. A. Vliâ nie okul'turennosti na mikrofloru gumusovo-zhelezistogo podzola Kol'skogo poluostrova. (Mikrobiologiâ, Mar.–Apr. 1958. t. 27, vyp. 2, p. 195–200, tables.) 7 refs. Text in Russian. Summary in English. ***Title tr.:*** The effect of cultivation upon the

microflora of the humus-iron podsols of the Kola Peninsula.

Account of investigation aimed to elucidate the effects of organic and mineral melioration upon the bacteria of these soils. Cereal-bean herbage was found to activate the microflora. Cultivation increased the ammonification process and the activity of nitrifying bacteria. Manure, especially when combined with mineral fertilizer greatly stimulates microbial processes; peat on the other hand has but slight effect. ***Copy seen:*** DLC.

56211. ZHURAVINA, O. Pisatel'-kraeved. (Dal'nif Vostok, Mar.–Apr. 1957. god 25, no. 2, p. 179–82.) Text in Russian. ***Title tr.:*** A writer and student of local lore.

Sketch of the life and work of the Soviet writer Trofim Mikhaĭlovich Borisov, devoted to the Far East. His work *Na beregakh Kamchatki* (On the shores of Kamchatka) is noted.

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56212. ZHURAVLEV, IVAN IOSIFOVICH, *and* **T. P. SKABICHEVSKAIÂ.** Patogennost' griba *Alternaria* v otnoshenii vskhodov khvoĭnykh porod v taezhnoĭ zone. (Mikrobiologiiâ, Nov.–Dec. 1953. t. 22, vyp. 6, p. 719–22, tables.) 6 refs. Text in Russian. ***Title tr.:*** Pathogenicity of the fungus *Alternaria* to conifer shoots in the taiga zone.

Six species of this group isolated from seeds and seedlings of coniferous trees and two species isolated from farm plants proved to be poor parasites in the taiga area. The most pathogenic, *A. tenuis* and *A. iridicola* cause 10% loss in seedlings. In hot-house conditions the loss is twice as high. Means of disinfection are given.

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56213. ZHURAVLEV, M. Chem znamenita angarskaiâ sosna. (Ogonëk, July 1956. god 34, no. 29, Sibirskiĭ nomer, p. 6, port.) Text in Russian. ***Title tr.:*** What makes Angara pine famous.

With a small crown at the top of a great trunk, the Angara pine yields a large amount of excellent timber from a small land surface; chemical processing produces high quality fiber and wood alcohol in quantity. Thus the forests of Angara River basin provide a basis for a wood industry development.

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56214. ZHURAVLEVA, F. A. O semeĭstve Pseudorthoceratidae Flower et Caster, 1935. (Akademiiâ nauk SSSR. Doklady, Oct. 1, 1957. t. 116, no. 4, p. 677–80, illus.) 5 refs. Text in Russian. ***Title tr.:*** On the family Pseudorthoceratidae, Flower et Caster, 1935.

Contains descriptions of this fossil family of *Metastromatoceras* n. gen., *M. formosum* n. sp., *Metephippiorthoceras* n. gen., and *M. helenae* n. sp., obtained from Silurian formations (Llandoverian series and Middle Ordovician system) in the basin of the Podkamennaya Tunguska River in Krasnoyarskiy Kray.

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56215. ZHURAVLEVA, Z. A. O vozraste podkrasnoĭsvetnoĭ svity nizhnego kembriiâ rr. Olekmy i Leny. (Akademiiâ nauk SSSR. Doklady, Sept. 1, 1957. t. 116, no. 1, p. 126–28.) 13 refs. Text in Russian. ***Title tr.:*** On the age of the series underlying the red beds of the Lower Cambrian of the Olekma and Lena Rivers.

Study of the geological age of this series thought to be of Middle Cambrian from investigation of outcrops in the lower Olekma basin in 1953 and 1954. The deposits (from bottom upward) are: Olekma series of brown, spotted limestones (100 m.) with remains of *Bergeroniaspis ornatus, Solenopleurella bella, Bergeroniellus divergens, Kutorgina lenaica,* etc.; Charsk series (160 m.) of breccia of carbonate fragments, light-grey limestones, spotted dolomitized limestones and light dolomites, the fossil fauna of the spotted dolomites consisting of *Namanoia namanensis, Bathynotus namanensis* and *Kutorgina pauciornata;* a third series, underlying the red beds, consists of miscellaneous limestones and dolomites, and their fossil fauna includes *Namanoia namanensis, Parapoliella sulcata, P. obrutchevi,* and, in the upper horizon, *Namanoia namanensis, Bathynotus namanensis* and *Kutorgina* species. Analysis of this fauna shows definitely that the age of this series is Lower Cambrian.

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56216. ZHUZE, ANASTASIIÂ PANTELEĬMONOVNA, 1906– . Diatomovye v donnykh osadkakh Beringova moriâ. (Akademiiâ nauk SSSR. Komissiiâ po izucheniiû chetvertichnogo perioda. Trudy, 1957. t. 13, p. 392–401, diagr.) 11 refs. Text in Russian. ***Title tr.:*** Diatoms in the bottom sediments of the Bering Sea.

Reports investigation of diatoms in a 16.5 m. core taken from Bering Sea bottom sediments at over 3,000 m. depth.

The work was carried out by the Institute of Oceanology. Five diatom horizons are distinguished and graphically presented. Diatom species are identified. Comparison is made with a 27 m. core from the Sea of Okhotsk. The longest core taken in the Bering Sea is 33.6 m. The importance of diatom study for determination of the Bering Sea Quaternary history is emphasized. ***Copy seen:*** DLC.

56217. ZHUZE, ANASTASIÏA PANTELEÏMONOVNA, 1906– . Diatomovye v poverkhnostnom sloe osadkov Okhotskogo morîa. (Akademiîa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 22, p. 164–220, illus., tables, maps.) 47 refs. Text in Russian. ***Title tr.:*** Diatoms in the surface layer of the Okhotsk Sea sediments.

A study of the species composition of the diatom flora and its part in forming the surface deposits of the sea bottom, with information on materials and methods; diatoms in the plankton of the area (according to literature); diatoms on the bottom deposits (over 200 species listed), frequency, their ecological and phytogeographical nature, etc.; proportion of fresh- and sea-water forms in the deposits; climatic aspects of this flora; regularities in qualitative distribution; leading forms and their distribution; quantitative distribution.

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ZIBERT, E. V., *see* Zolotarevskaîa, I. A., *and others.* Ethnographical material . . . Russian collections. *1958.* No. 56241.

56218. ZIEMKE, HEIM. Bluthistaminspiegel und örtliche Erfrierung. (Naunyn-Schmiedeberg's Archiv für experimentelle Pathologie und Pharmakologie, 1949. Bd. 206, Heft 2–3, p. 288–91, illus., table.) 19 refs. Text in German. ***Title tr.:*** Level of blood histamine and local frostbite.

Account of experiments on rabbits with blood histamine of the exposed area determined prior and at several intervals after injury. A 50% increase of blood histamine was found immediately after freezing with conditions quickly returning to normal. The effect of local cold injury upon the whole organism is discussed.

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ZIEMLAŃSKI, SWIATOSŁAW, *see* Ryżewski, J., *and* Ziemlański. Orduchy z interoceptorów . . . *1957.* No. 54481.

56219. ZIETZ, ISIDORE, *and others.* Aeromagnetic reconnaissance of the Cook Inlet area, Alaska. (Geological Society of America. Bulletin, Dec. 1957. v. 68, no. 12, pt. 2, p. 1910.) Abstract of paper presented at the Eighth Alaskan Science Conference in Anchorage, Sept. 10–13, 1957. *Other authors:* G. E. Andreasen *and* A. Grantz.

Reports magnetic features of geologic significance shown by 14 aeromagnetic profiles flown across the Cook Inlet area, 1954. Included are arched profiles suggesting existence of a block-shaped rock mass underlying Cook Inlet; an anomaly over Mt. Susitna; an anomaly over Knik Arm, attributed to a zone of buried granitic intrusive rocks, which appears to deepen southward to estimated depths of 5,000–6,000 ft.; anomaly over Susitna flats indicating a 12,000–14,000 ft. depth of the magnetic basement; and an abrupt magnetic rise over the Iniskin-Chinitna Peninsula: possibly a fault with a vertical displacement of several thousands ft.

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56220. ZIETZ, ISIDORE, *and others.* Regional geologic interpretation of aeromagnetic profiles of selected areas in Alaska. (Geological Society of America. Bulletin, Dec. 1958. v. 69, no. 12, pt. 2, p. 1757.) Abstract of paper presented at the Ninth Alaskan Science Conference, College, Sept. 3–5, 1958. *Other authors:* G. E. Andreasen *and* W. J. Dempsey.

Describes results of aeromagnetic traverses over sedimentary basins: Yukon Flats and the adjacent Kandik Segment, the middle Tanana, and the Susitna lowlands north of Cook Inlet, also across many major tectonic elements from Anchorage to Nome. Magnetic data, presented in the form of profiles, indicate that the north end of the Cook Inlet Tertiary basin is shallow; near-surface volcanic rocks are probably present in the Yukon Flats basin; the west and east edges of the Talkeetna geanticline can be delineated; under the Alaska Range geosyncline, the Tanana geanticline, and most of the Kuskokwim geosyncline, the sedimentary section is thick, or the basement rocks are nonmagnetic; and there is no great thickness of sedimentary rocks under Norton Sound. ***Copy seen:*** DGS.

ZIETZ, ISIDORE, *see also* Andreasen, G. E., *and others.* Aeromagnetic study . . . *1957.* No. 49303.

56221. ZIL'BERNIK, ALEKSANDR. Dvadtsat' vosem dneĭ na neobitaemom ostrove. (Vokrug sveta, Nov. 1958, no. 11, p. 33–37, illus., map.) Text in Russian. ***Title tr.:*** 28 days on uninhabited island.

Account of an expedition to Iony Island (56°29′ N. 143°20′ E.) in the Okhotsk Sea in Oct.–Nov. 1946 by a photographer who joined the trip. The Iony (or Kitoboy) Island, a rock protruding from the sea and surrounded by reefs, is almost inaccessible; an attempt was made during the war to establish a meteorological station there, but the rough seas prevented a landing. In 1945, an automatic weather station was set up on the island, but it was silenced a few weeks later, after a storm. In 1946 this party, headed by Gorelelchenko, an engineer, was sent to check and repair the installation. They landed successfully and after two weeks' hazardous work had almost finished the repair job when a severe storm once more destroyed the antenna. On Nov. 6, they left the island with a small and weak, though efficient, automatic station. The difficulties of scaling the steep coast and hard living conditions during the stay are noted. A great number of sea lions (sivuch) are said to lie along the coast. ***Copy seen:*** DLC.

56222. ZIL'BERNIK, ALEKSANDR. Goriachaia dolina. (Vokrug sveta, Feb. 1958, no. 2, p. 33–34, illus., map.) Ref. Text in Russian. ***Title tr.:*** A hot valley.

Reports trip of a motion picture party, headed by the producer, N. I. Tikhonov, in 1957, from Zhupanovo to the valley of geysers in the Shumnaya River basin near Kikhpinych Volcano in Kamchatka: the valley landscape with nearly a hundred geysers, their various intervals of activity, etc. Discovery of Kamchatka geysers by T. I. Ustinova in 1941–42 is noted. ***Copy seen:*** DLC.

56223. ZILLER, W. G. Studies of western tree rusts; 1, a new cone rust on Sitka spruce. (Canadian journal of botany, May 1954. v. 32, no. 3, p. 432–39, plate.) 5 refs. Joint contrib. from the Dept. of Botany University of Toronto, and Contrib. no. 115 from the Forest Biology Div., Science Service, Dept. Agriculture, Canada.

Contains data on a rust found on seeds of Sitka spruce, *Picea sitchensis;* at the same time a *Chrysomyxa* on the one-flowered pyrola, *Moneses uniflora,* was discovered in the same area. The rust has been described and named *Chrysomyxa monesis.* The cone rust is considered the aecial stage of new *Chrysomyxa.* Surface sterilization of spruce seeds before export is therefore recommended. ***Copy seen:*** DLC.

ZIMKIN, A. V., *see* Anikeev, N. P., *and others.* Mezhvedomstvennoe stratigraficheskoe soveshchanie . . . *1957.* No. 49330.

56224. ZIMMER, CARL, 1873– . Einige Cumaceen aus russischen Meeren. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia morei SSSR, 1928. vyp. 9, p. 61–69, illus. table.) Text in German. Summary in Russian. ***Title tr.:*** Some Cumacea from Russian seas.

A description of these crustaceans collected in the Barents and White Sea and in Novaya Zemlya waters, including a new subspecies *Diastylis glabra minor* nov. subsp. Location and date of find, substrate, sexual dimorphism, and morphology in general, distribution, etc. are noted. ***Copy seen:*** DLC.

56225. ZIMMER, CARL, 1873– . Tikhookeanskie Cumacea. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniia morei SSSR, 1937. vyp. 23, p. 38–54, illus.) Text in Russian and German. ***Title tr.:*** Pacific Cumacea.

Description of eight species of these crustaceans four of them new. The material was collected in the Seas of Okhotsk and Japan. Morphology of males and females, location of find, taxonomy and related forms, geographic distribution, etc. are discussed. ***Copy seen:*** DLC.

56226. ZINCHENKO, V., *and* A. EL'NIK. Chto pokazali ispytaniia glavnoĭ silovoĭ ustanovki dizel'-élektrokhoda "Dneprogés." (Morskoĭ flot, Dec. 1958. god 18, no. 12, p. 11–14, graphs, tables.) Text in Russian. ***Title tr.:*** What investigations of the main engine of the diesel-electric vessel *Dneprogés* demonstrated.

Analyzes engine performance (relationships between horsepower, propeller revolutions, fuel consumption, etc.) of this four-engine, dry-cargo vessel at ¼, ½, ¾, and full power, on a Murmansk-Dikson-Tiksi-Vladivostok trip. During navigation in ice (convoy), propulsion by one

engine only gave the most economical operation. Results of the analyses are compared to those obtained on seven other vessels with similar or a different source of propulsion power.

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ZINDLER, M., *see* Gillmann, H., *and others.* Über die Wirkung der tiefen künstlichen Hypothermie . . . *1957.* No. 51193.

56227. ZINGER, MAKS ÈMMANUILOVICH. Ptich'i gory. (Ogonëk, June 1957. god 35, no. 24, p. 32, illus.) Text in Russian. ***Title tr.:*** Bird rocks.

Notes bird colonies observed in Novaya Zemlya, Chukotka and other places, with photograph of the auks' cliff at Terpeniya Bay on Tyuleniy Island.

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56228. ZINGER, MAKS ÈMMANUILOVICH. Risunki na kosti. (Pioner, Sept. 1957. god 34, no. 9, p. 38, illus.) Text in Russian. ***Title tr.:*** Drawings on bone.

Chukchi bone engravings are described with illus.: three hunting scenes and preparation for a dog-sledge trip.

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56229. ZINOVA, ANNA DMITRIEVNA, 1902– . K ponimaniiû vidov roda *Sphaerotrichia* Kyl. (Botanicheskiĭ zhurnal, Oct. 1958. t. 43, no. 10, p. 1462–69, 7 illus.) 16 refs. Text in Russian. ***Title tr.:*** Contribution to knowledge of the species of genus *Sphaerotrichia* Kyl.

Discusses the taxonomy of this algal genus, also the synonymy and distribution of its three species, including *S. divaricata* (Barents, White Sea) and *S. dissessa* (Bering, Okhotsk Sea).

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56230. ZINOVA, ANNA DMITRIEVNA, 1902– . Morskie vodorosli vostochnoĭ chasti sovetskogo sektora Arktiki. (Akademiîa nauk SSSR. Institut okeanologii. Trudy, 1957. t. 23, p. 146–67, illus., tables.) 24 refs. Text in Russian. ***Title tr.:*** Seaweeds of the eastern part of the Soviet Arctic.

A study comprising 58 species, 15 new for the area and one *Leptonema arcticum* n. sp. a new species. Earlier work, distribution in the Laptev, East Siberian and Chukchi Seas, and character of this flora are outlined; taxonomy, morphology and anatomy, occurrence of individual species and their geographic distribution are discussed. ***Copy seen:*** DLC.

56231. ZINOVA, ANNA DMITRIEVNA, 1902– . Vodorosli Murmana v okresnostiâkh ostrova Malogo Olen'ego (Nemetskogo). (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniîa moreĭ SSSR, 1935. vyp. 21, p. 88–97, table.) Text in Russian. Summary in French. ***Title tr.:*** Murman seaweeds in the area of Malyy Oleniy (Nemetskiy) Island.

Contains information on the location (69°15′ N. 34°50′ E., 9 km. east of Kil'din) and nature of Malyy Oleniy; quantitative distribution of its seaweeds; nature of bottom and species distribution; conditions and algal growth in the neighboring areas along the Murman coast; the effect of storms upon the seaweeds. Writer participated in E. S. Zinova's expedition (cf. No. 19942) June–Oct. 1930. ***Copy seen:*** DLC.

ZINOV'EV, ÎU., *see* Vaĭsberg, N., *and* ÎU. Zinov'ev. Polnee . . . fosfornykh udobreniĭ na Urale. *1957.* No. 55706.

56232. ZITOVITZ, LESTER, *and* J. D. HARDY. Influence of cold exposure on thermal burns in the rat. (Journal of applied physiology, Mar. 1958. v. 12, no. 2, p. 147–54, illus., tables.) 15 refs.

Exposure of rats one-half hour post burn to a cold environment (1°–4° C.) reduced the temperature of the scalded area, and the healing time. Fourteen days of cold-exposure had no greater effect than four days. Delaying the cold exposure by two days had a worsening effect. ***Copy seen:*** DNLM.

ZITOVITZ, LESTER, *see also* Hardy, J. D., *and* L. Zitovitz. Influence of cold exposure . . . burns . . . rat. *1957.* No. 51583.

56233. ZLATOGOROV, MIKHAIL. Kak stanoviâtsiâ severîanami. (Ogonëk, Feb. 1957. god 35, no. 8, Severnyĭ nomer, p. 17–18, illus.). Text in Russian. ***Title tr.:*** How to become a northerner.

Story of a worker's family living in Olenegorsk (i.e. Olen'ya, 68°09′ N. 33°18′ E.), Kola Peninsula: born in the Ukraine, he married a girl living near the Polyarnyy Krug station (approx. 66°26′ N. 32°50′ E.) during his military service, and settled in Olenegorsk to become one of the best miners of the area. The rise of this new iron ore center is briefly described. ***Copy seen:*** DLC.

56234. ZLATOGOROV, MIKHAIL. S kraîa zemli. (Ogenëk, July 1957. god

35, no. 31, p. 24, illus.) Text in Russian. ***Title tr.:*** From the edge of the country.

Interview with Aleksandr Batiûk, a carpenter in the town of Nikel' (approx. 69°24′ N. 30°10′ E.) in the Pechenga region, who was chosen to attend the Youth Festival in Moscow: houses in Finland and Norway are praised, and the Scandinavian style of dwelling is recommended as a model. The nearby hydro-electric station Rayakoski, recently constructed with the assistance of Finns, is mentioned. ***Copy seen:*** DLC.

56235. ZLATOVERKHOVNIKOV, L. F., *and* N. A. SMIRNOV. Nablûdeniîa za obshchimi deformat͡siîami gidrotekhnicheskikh sooruzheniĭ v morskikh portakh. (Izvestiîa vysshikh uchebnykh zavedeniĭ. Geodeziîa i aėrofotos"emka, 1958, no. 4, p. 137–42.) Text in Russian. ***Title tr.:*** Observations on general deformations of hydraulic engineering work in sea ports.

Reports on current activities of the Central Scientific Research Institute of the Navy (T͡Sentral'nyĭ n.-issl. institut morskogo flota) in its systematic checking of the condition of harbor installations, initiated in 1947. Anchorage no. 8 at Petropavlovsk-in-Kamchatka is discussed (p. 141–42): it began to settle in 1956, half-a-year after construction.

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56236. ZLOBIN, M. N. O siniĭskom komplekse na Vostochnom Taĭmyre. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informat͡sionnyĭ bûlleten', 1958, vyp. 9, p. 36–43.) 4 refs. Text in Russian. ***Title tr.:*** On the Sinian complex in the eastern Taymyr Peninsula.

Outlines the stratigraphy and paleontology of widespread terrigenous, carbonaceous sediments in the Trautfetter and Leningradskaya River basins (approx. 76°–77° N. 100°–104° E.). From the organic sediments only alga type *Collemia* is identified. Lack of fossil characteristics has led to various stratigraphic definitions, which are outlined. The author considers these sediments to be Sinian complex and divides them into three facies groups: estuary, marine and carbonaceous. Geologic development of the Sinian Sea is discussed.

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ZNACHKO-ÎAVORSKIĬ, G. A., *see* Sokolov, V. N., *and* G. A. Znachko-ÎAvorskiĭ. Novye dannye po geologii Gydanskogo poluostrova. *1957.* No. 55037.

56237. *ZNANIE-SILA.* Za 40 let; bez belykh pi͡aten. (Znanie-sila, Sept. 1957. god 32, no. 9, p. 21.) Text in Russian. ***Title tr.:*** In 40 years; no more white spots.

Notes progress in geographic exploration of the U.S.S.R., which has covered all hitherto unknown areas (white or blank on maps). G. A. Ushakov's exploration of Severnaya Zemlya in 1930–31, and discovery of Cherskogo Range by S. V. Obruchev's expedition in 1926 are cited.

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56238. ZOL'NIKOV, V. G., *and* A. I. POPOVA. Paleogeograficheskai͡a skhema chetvertichnogo perioda ravniny T͡Sentral'noĭ ÎAkutii. (Akademiîa nauk SSSR. ÎAkutskiĭ filial, *Yakutsk.* Institut biologii. Trudy, 1957. vyp. 3, p. 5–38, tables, maps.) 42 refs. Text in Russian. ***Title tr.:*** Paleogeographic plan of the Quaternary period of the Central Yakutia plain.

The plains area of the middle Lena is terminated in the north by the Vilyuy mountains, in the NE. and E. by the Verkhoyansk and Dzhugdzhur ridges, in the SE. and S. by Aldan and Patomsk uplands, and in the west by the Lena block uplift. Development of the plains during the Cretaceous and Tertiary periods is reviewed, and their differentiation caused by movements of the earth's crust in the Tertiary is noted. Development and alluvial processes in the Quaternary are treated generally. Occurrence and age of the Lena, and its main tributaries' terraces are considered. Evolution of vegetation and climate during Quaternary period is reviewed based on numerous spore and pollen analyses, which are appended. ***Copy seen:*** DLC.

ZOLOTAREV, ALEKSANDR MIKHAÎLOVICH, 1907– , *see* Levin, M. G. Anthropological types . . . north-eastern Paleoasiatics . . . *1958.* No. 52783.

56239. ZOLOTAREV, M. A. O nekotorykh voprosakh paleoklimatologii chetvertichnogo perioda. (Akademiîa nauk SSSR. Komissiîa po izucheniû chetvertichnogo perioda. Trudy, 1957. t. 13, p. 423–26.) Text in Russian. ***Title tr.:*** On some questions of paleoclimatology of the Quaternary period.

Paleoclimatologic studies generally and those on the Anthropogene period in particular are surveyed on the basis of recent publications. The comprehensive study of changes in distribution of land and

seas and their configuration, study of atmospheric circulation, and of the distribution of glaciers and ice are considered the most promising approaches for determining climatic history.

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56240. ZOLOTAREV, N. V. Nekotorye teplofizicheskie kharakteristiki namyvnykh peskov. (*In:* Materialy po laboratornym issledovaniîâm merzlykh gruntov, sbornik 3, 1957. p. 227–33, tables, graph, diagr.) Ref. Text in Russian. ***Title tr.:*** Certain thermal characteristics of hydraulically deposited sand.

"Heat exchange and freezing in dams constructed in winter from hydraulically deposited sand are examined in detail on the basis of experiments with thawed and frozen samples of sand of various granulometric composition and moisture. The heat conductivity of frozen sand was about 1.25 times greater than that of thawed samples, the ratio remaining practically unchanged regardless of moisture variations. Samples of maximum field capacity showed maximum conductivity. Moisture increase was accompanied by a smooth increase of heat capacity in frozen and thawed sand."—SIPRE.

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56241. ZOLOTAREVSKAÎÂ, I. A., *and others.* Ethnographical material from the Americas in Russian collections. (International Congress of Americanists, 32nd. *Copenhagen*, 1956. Proceedings, 1958, p. 221–31, illus.) 32 refs. *Other authors:* E. É. Blomkvist *and* E. V. Zibert.

Discusses the origin and acquisition of (mostly) Eskimo, Aleut and Indian artifacts brought home prior to the sale of Alaska: wearing apparel, hunting and fishing gear, tools, weapons, etc. These are described generally and the seven Russian and Siberian museums with such collections (two major, five minor) are indicated. ***Copy seen:*** DSI.

56242. ZOLOTAREVSKAÎÂ, I. A. Rabota Instituta Étnografii AN SSSR v 1957 g. (Sovetskaîâ étnografiîâ, 1958, no. 2, p. 129–33.) Refs. Text in Russian. ***Title tr.:*** The work of the Institute of Ethnography of the Academy of Sciences of U.S.S.R. in 1957.

Mentions (p. 131) the Northern Ethnographic Expedition (Severnaîâ étnograficheskaîâ ékspediîsiîâ) with Taymyr, Evenki, Amur, Chukotka, Ostyak-Vogul, and Kamchatka teams, who collected data on the economy and mores of the small peoples of the North, the Chukotka team doing also archeological and anthropological research. An Eskimo burial near Uelen (66°10′ N. 169°50′ E.) containing paleo-anthropological and archeological material proved of particular interest. G. F. Debeîs' two-month sojourn in the United States is noted (p. 132).

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56243. ZOLOTAREVSKAÎÂ, I. A. *and* **A. P. OKLADNIKOV.** 32-I mezhdunarodnyĭ kongress amerikanistov. (Sovetskaîâ étnografiîâ, 1957, no. 1, p. 157–59.) Text in Russian. ***Title tr.:*** The 32nd International Congress of Americanists.

Reports on the Congress held in Copenhagen Aug. 8–14, 1956 and the papers presented, including those on arctic themes by: Kaj Birket-Smith, Eigil Knuth, Helge Larsen, Henry B. Collins, William Laughlin, A. P. Okladnikov, and M. G. Levin. Work of Danish explorers in Greenland is noted and similarity stressed between Greenlandic paleo-Eskimo flint material and the neolithic artifacts found during the last decade in northeast Asia, especially in the Kolyma valley and on Chukotka. The possibility of finding the roots of paleo-Eskimo, and even paleo-Indian (Alaskan and North American) cultures on U.S.S.R. territory is noted.

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56244. ZOLOTNIT͡SKAÎÂ, R. L. Peterburg-Leningrad i razvitie geograficheskoĭ nauki v Rossii. (Vsesoîûznoe geograficheskoe obshchestvo. Izvestiîâ, May-June 1957. t. 89, vyp. 3, p. 193–202.) 12 refs. Text in Russian. ***Title tr.:*** Petersburg-Leningrad and the development of geographical science in Russian.

Activities of the main educational and scientific institutions located in Petersburg-Leningrad during its 250-year existence are sketched, stressing their influence on the development of geographical science. The Marine Academy founded in 1715, the University with its chair of geography in tsarist times, the Academy of Sciences with its eminent geographers, the Geographical Society founded in 1845, the University's Geography Department since 1925, etc. Their influence on and participation in arctic research is noted.

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ZOLOTOV, D., *see Rabotnit͡sa.* Glîâdîâ na kartu. *1958.* No. 54186.

56245. ZONTOVA, N. K. Nekotorye materialy o bokoplavakh, Amphipoda, i

desi͡atinogikh rakakh, Decapoda, pribrezhnoĭ zony vostochnogo Murmana. (Akademii͡a nauk SSSR. Kol'skiĭ filial. Murmanskai͡a biologicheskai͡a stant͡si͡a. Trudy, 1958. t. 4, p. 130–39, tables, map.) 14 refs. Text in Russian. ***Title tr:*** Certain materials on amphipod and decapod crustaceans of the eastern Murman coastal zone.

Account based on nearly 100 bottom samplings made during 1953–1955, and on stomach examinations of cod-like fishes. Forty-seven species of amphipods and 16 decapods are listed, with data on horizontal and vertical distribution, zoogeographic characteristics, and value as food for edible fish. ***Copy seen:*** DLC.

56246. ZORIN, B., *and* **G. FIBIG.** Vozrozhdennyĭ kraĭ. (Smena, Apr. 1957. god 34, no. 7, p. 12–14, illus.) Text in Russian. ***Title tr.:*** The revived country.

Photographs (by Fibig) with brief text of the life and landscape of Komi A.S.S.R., include the town of Ukhta, center of the petroleum industry. ***Copy seen:*** DLC.

56247. ZOTIN, M. I. Dreĭf sovetskikh nauchno-issledovatel'skikh stant͡siĭ v t͡sentral'noĭ Arktike. (Letopis' Severa, 1957. t. 2, p. 73–78, tables, map.) 5 refs. Text in Russian. ***Title tr.:*** Drift of the Soviet scientific research stations in the central Arctic.

Recounts the activities, 1937–1956, of drifting stations North Pole 1–6: their location, date, leader, movement, speed, type and course of drift, coordinates, distances, etc. Drifts of the ice-breaker *G. Sedov*, and the ice island T–3 are also mentioned. Map and tabular data are included. ***Copy seen:*** DLC.

56248. ZOTIN, M. I. Razvitie seti polia͡rnykh stant͡siĭ. (Problemy Arktiki, 1957, vyp. 1, p. 99–109, tables.) Text in Russian. ***Title tr.:*** Development of the polar station network.

This network comprised seven arctic stations in 1917, 17 in 1932, 80 in 1950 and 107 (including four seasonal navigation stations) in 1956. Since 1933, all polar stations have been administered by the Main Administration of the Northern Sea Route, though they work in close cooperation with the general meteorological service. Their personnel ranges from an average of 13 men at seven radiometeorological centers (Dikson Island, Tiksi Bay, Cape Chelyuskin, Cape Shmidta, etc.) to 3–4 in the navigation stations. Eighty-eight are coastal stations, 18 are on rivers and one at a lake, and all are hydrometeorological stations; 34 stations carry on aerological observations as well, and several stations study geophysical (geomagnetic, actinometric, ionospheric, glaciological, etc.) phenomena. The Arctic Institute maintains observatories at the Barentsburg and Tikhaya Bay stations. Further extension of the network is required as above the Arctic Circle in Asia, there is only one station per 55,000 sq. km., and in some areas only one/100–300,000 sq. km. The 107 stations are listed by name (p. 106–109) with location, year of foundation, coordinates, and notes on transfer, renaming, interruption of activities, etc. The northernmost station is on Rudolf Island (81°44′ N. 58° E.) and the southernmost at Gavriila Bay (Bering Sea, 62°25′ N. 179°08′ E.). This list is reprinted in No. 55109.

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56249. ZRI͡AKOVSKIĬ, MSTISLAV SERGEEVICH, *and* **N. N. MAKAROV.** Taĭna i͡akutskikh almazov. Moskva, Gos. izd-vo geograf. lit-ry, 1958. 110 p., illus., ports., map. Text in Russian. ***Title tr.:*** The mystery of Yakut diamonds.

Popular account of the search for diamonds in Yakutia: diamond possibilities in the central plateau of Siberia were stated on theoretical grounds by two geologists, V. S. Sobolev and A. P. Burov (p. 6–8), and the search was begun in the Nizhnyaya Tunguska basin in 1947 by the Amakinskai͡a expedition of the Irkutsk Geological Administration (p. 3–27). From 1949, the search extended eastward and the first traces of diamonds were found in the Vilyuy River basin. The arctic tundras of the upper reaches of Markha River were explored, pyropes discovered in 1953, the kimberlite pipe "Zarnit͡sa" in 1954 (p. 57–72), and the rich kimberlite pipe "Mir" in the southern part of the Vilyuy basin (p. 72–79). Geophysical prospecting methods, discovery of diamantiferous fields on the Lena and Olenek watershed, founding of the settlement Mirnyy at kimberlite pipe "Mir," transportation difficulties and the beginning of work on a highway along the Lena between Mukhtuy and Mirnyy are described (p. 78–97). Achievements of the Amakinskai͡a Expedition, T͡Sentral'nai͡a Expedition of the Ministry of Geology and Conservation of Mineral Resources of the U.S.S.R., and of other

exploration parties are outlined and their leaders, geologists and successful searchers are characterized. The importance of the diamond discoveries to Soviet industry is stressed. Find of a 54.14 carat diamond in Yakutia is noted (p. 109); mention is made (p. 108) to a recent diamond discovery in the Mezen' District of Arkhangel'sk Province.

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56250. ZSUFFA, LESLIE FRANCIS, 1911– . Design and construction of Quartermaster climatic research chambers at Natick, Massachusetts. (*In:* U.S. Quartermaster Food and Container Institute for the Armed Forces, Chicago. Low temperature test methods and standards for containers, 1954. p. 50–64, plan, 3 tables.)

Design specification and construction details of the Arctic and Tropical climatic chambers are given. Each chamber is oval in shape with axes approx. 140 ft. x 46 ft. The temperature ranges of the Arctic Chamber and clothes conditioning room are from −70° to 70° F. Dew point temperatures are controlled from −40° to +67.5° F. Rain nozzles, an ice-shaving machine to provide fine crystalline ice particles, and two two-man treadmills are among equipment. Details are included on construction of the vapor barrier shells and insulation of the rooms, which were put into operation in 1954. ***Copy seen:*** DLC.

56251. ZUBAKOV, V. A. K voprosu o stratigrafii i kharaktere lednikovykh otlozheniĭ doliny srednego techeniia r. Eniseia. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Materialy, nov. seriia, Chetvertichnaia geologiia i geomorfologiia, 1956. vyp. 1, p. 146–68, tables, cross-sections, maps.) 17 refs. Text in Russian. ***Title tr.:*** On the stratigraphy and nature of glacial deposits in the valley of the middle course of the Yenisey River.

Presents the results of a 1954 investigation by the author and S. V. Épshteĭn between the towns of Vorogovo and Komsa, near the mouth of the Podkamennaya Tunguska. Various cross-sections examined are described in detail. Mechanical and mineralogical composition of the glacial material is outlined. A cross-section is presented in comparison with the stratigraphy of glacial deposits worked out by S. A. Ĭakovlev for the European part of the U.S.S.R.

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56252. ZUBAKOV, V. A. Korelia tsiia chetvertichnykh otlozheniĭ lednikovoĭ i vneledniko voĭ zon Prieniseĭskoĭ Sibiri. (Akademiia nauk SSSR. Doklady, June 11, 1958. god 26, t. 120, no. 5, p. 1093–94, fold. table.) 16 refs. Text in Russian. ***Title tr.:*** Correlation of Quaternary deposits in the glaciated and non-glaciated areas in Siberia along the Yenisey River valley.

Presents a stratigraphic outline of Quaternary deposits in the areas of sea transgressions, glacial- and extra-glacial areas of the Yenisey valley from Krasnoyarsk to its mouth, based on author's 1954–1957 field investigations and others'. Ten climatic phases in the formation of Quaternary deposits and ten corresponding stratigraphic horizons are distinguished; they are briefly characterized in the fold. table by identifying characteristic fossils and location.

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56253. ZUBAKOV, V. A. O lednikovo-morskikh otlozheniiakh Zapadnoĭ Sibiri i granitsakh rasprostraneniia sanchugovskoĭ transgressii po Eniseiu. (Akademiia nauk SSSR. Doklady, Aug. 21, 1957. t. 115, no. 6, p. 1161–64, 2 illus.) 7 refs. Text in Russian. ***Title tr.:*** On the glacial marine deposits of Western Siberia and the distributional boundaries of the Sanchugov transgression along the Yenisey River.

Study of the stratigraphy of Quaternary deposits in the Yenisey valley from the mouth of the Podkamennaya Tunguska River (61°30′ N.) to Karaul village (70° N.). The transition from morainic deposits of the Yenisey horizon to typical marine deposits of Sanchugov series is noted. A fauna of fossil marine molluscs was found in the bank outcrops of the Yenisey between 63° N. and 65° N.; the northern limit of Sanchugov transgression is near Plakhino on the Yenisey (67°40′ N.). Boulder clays of the valley can be divided into two horizons which belong to Sanchugov series. They cannot be considered as continental morainic deposits, but belong, apparently to, glacial marine formations of the so-called secondary Yenisey glaciation which coincided with the Sanchugov transgression of the sea.

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ZUBAKOV, V. A., *see also* Zauer, V. V., *and* V. A. Zubakov. Palinologicheskoe obosnovanie . . . *1958.* No. 56166.

56254. ZUBAREV, S. N., *and others.* Puti usovershenstvovaniĉa skhemy obogashcheniĉa na Olenegorskoĭ fabrike. (Gornyĭ zhurnal, May 1958, no. 5, p. 55–59, diagrs., tables.) 2 refs. Text in Russian. *Other authors:* L. G. Bobrushkin *and* G. A. Golovanov. ***Title tr.:*** Ways to improve ore concentration at the Olenegorsk plant.

Discusses plans advanced by the Olenegorsk (now Olenya) Ore Administration, the Kola Branch of the Academy of Sciences and the Central Research Institute of Ferrous Metallurgy. Improvement is required because the iron content of the concentrates first produced is too low for economic operation of the blast furnaces. ***Copy seen:*** DLC.

56255. ZUBKOV, G. A., *and* V. I. FEĬGIN. Avtomatizaĉsiĉa i dispetcherizaĉsiĉa na gornorudnykh predpriĉatiĉakh. (Gornyĭ zhurnal, Nov. 1957, no. 11, p. 64–72, illus., plates.) 10 refs. Text in Russian. ***Title tr.:*** Automatization and dispatcher control in mining enterprises.

Survey of work done by the Constructors' Bureau for Automatization of the Non-ferrous Metallurgical Industry (Konstruktorskoe bûro T͡Svetmetavtomatika, KB T͡SMA). The new iron ore mining center at Olenegorsk in Kola Peninsula is noted with photos of the concentration plant and the loading, unloading and milling operations.

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56256. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Davlenie vetra na ledĉanye polĉa. (*In his:* Izbrannye trudy po okeanologii. Moskva, 1955, p. 246–48, diagr., graph.) Text in Russian. ***Title tr.:*** Wind pressure on ice fields.

Contains theoretical discussion of the effect of wind pressure on an ice field with uneven surface. The wind's vertical components create irregular pressure even on an ice field with uniform surface, and cause horizontal fluctuations similar to waves on the sea surface; amplitudes of over three mm. were measured in 80 cm. thick ice on the Volga.

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56257. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Dreĭf l'dov po izobaram. (*In his:* Izbrannye trudy po okeanologii. Moskva, 1955, p. 294–311, maps, diagrs., tables.) Text in Russian. ***Title tr.:*** The drift of ice along isobars.

Presents the hypothesis, based on observations of the *Sedov* 1938–1939 in the Arctic Basin, that pure wind drift of solid ice in open waters takes place along courses parallel to the isobars, with the area of higher atmospheric pressure to the right, and the lower pressure to the left of the drift course. The mean deviation angle between wind and isobar, 28° to the left, coincides with the mean deviation between wind and ice drift, 28°–29° to the right. The speed of solid ice drifting with the wind is directly proportional to the gradient of atmospheric pressure, or inversely proportional to the distance between isobars. Values of computed drift are compared with observations of the drifts of the *Sedov*, *Lenin*, and North Pole drifting station 1937–38 (mapped). A theoretical discussion of ice movements in a crossing cyclone is presented. ***Copy seen:*** DLC.

56258. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Izbrannye trudy po okeanologii; k 70-letiĉu so dnĉa rozhdeniĉa avtora. Moskva, Voen. izd-vo, 1955. 547 p., illus., tables, maps. Approx. 103 refs. Text in Russian. ***Title tr.:*** Selected works in oceanology; on the occasion of the author's 70th birthday.

Contains 33 papers preceded (p. 5–11) by a biographical sketch, and an outline (by A. D. Dobrovol'skiĭ) of Zubov's contributions to physical oceanography. The majority of papers deal with general problems of tides, currents and other movements of the sea (No. 33115), deposits, evaporation from the sea, effects of atmospheric factors (No. 19985), etc. Several papers discuss the problems of ice, conditions of its formation and melting, movements (No. 43461), ice islands (No. 43460). One paper deals with theoretical aspects of the regimen in lakes and canals. The first study in the series covers the hydrologic work conducted by the *Persei* in the southwestern areas of the Barents Sea in the summer of 1928 (No. 19976). The papers of arctic interest are abstracted *supra*, *infra*, or (as indicated) in earlier volumes of this Bibliography. A chronologically arranged list of the authors' publications (approx. 150) and a bibliographic guide (103 items) for these 33 papers conclude the collection.

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56259. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Izgib l'da pod gruzom. (*In his:* Izbrannye trudy po okeanologii. . . . Moskva, 1955, p. 215–23, diagrs.)

Text in Russian. ***Title tr.:*** Deflection of ice under load.

Discusses the effects of loads on an ice sheet under various conditions, including vibration caused by moving objects, and permanent deformation. Effects of concentrated loads are considered, and a formula for the relationship between the weight of a concentrated load and thickness, temperature and salinity of the ice, is derived. ***Copy seen:*** DLC.

56260. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . K teorii torosheniĭa morskikh l'dov. (*In his:* Izbrannye trudy po okeanologii . . . Moskva, 1955, p 249–58, diagrs.) Text in Russian. ***Title tr.:*** Theory on the jamming of sea ice.

Offers a theoretical approach to the explanation of processes taking place when two ice sheets collide, or when an ice sheet collides with an immobile mass (seashore). Effects of thawing and freezing during jamming are not considered, and the ice is assumed to be rigid. Distribution of kinetic energy, and effect of prevailing winds during the jamming process are discussed. A measure for the decrease in area of an ice sheet, expressed in percentages of the original size, is presented.

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56261. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . K voprosu o ventiliâtsii pridonnykh vod moriâ. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniâ morei SSSR, 1931. vyp. 12, p. 151–64, illus. tables.) 14 refs. Text in Russian. Summary in English. ***Title tr.:*** The problem of ventilation in marine bottom waters.

Of the three main factors instrumental in aeration of sea water, the author discusses winter cooling as being responsible for vertical circulation and essential in oxygenation of bottom waters. The dynamics of this process are worked out mathematically from observations in the Barents Sea, and the role of the ice cover in this process determined. Based on these calculations, it is determined when and under which conditions surface water reaches the bottom in this area.

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56262. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Nekotorye osobennosti isparenia v more. (*In his:* Izbrannye trudy po okeanologii . . . Moskva, 1955, p. 443–56.) Text in Russian. ***Title tr.:*** Some characteristics of evaporation on the sea.

"Evaporation from the surface of sea ice and water is discussed; related investigations are briefly outlined; and the importance of studying the transfer of salt particles from the sea to the atmosphere is noted. The intensity of evaporation from ice, snow and water surfaces is a function of temperature differences between the air and the ice surface and conditions of air exchange near the surface. Evaporation occurs when the sea surface (water or ice) is warmer than the air. The intense evaporation observed in the Arctic from thin layers of ice is a result of the ease with which the ice is warmed by the water."—SIPRE.

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56263. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . O narastanii l'dov v zavisimosti ot temperatury vozdukha i vertikal'nogo raspredeleniâ podo l'dom temperatury i solenosti. (*In his:* Izbrannye trudy po okeanologii . . . Moskva, 1955, p. 224–45, tables, graphs, diagrs.) Text in Russian. ***Title tr.:*** Growth of ice in relation to air temperatures and vertical distribution of temperatures and salinity under the ice.

Discusses growth of ice under varied conditions. Formulas for increase in ice thickness, expressed as a function of time and temperature, are presented, and their practical application evaluated against field observations in the Arctic (tabulated). The influence of a snow cover, as well as of water salinity, is considered.

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56264. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . O pokazatele nespokoĭnosti atmosfery. (*In his:* Izbrannye trudy po okeanologii . . . Moskva, 1955. p. 171–76, table, graph, maps.) Text in Russian. ***Title tr.:*** Characteristics of atmospheric turbulence.

Indicates use of atmospheric pressure observations for long-term forecasts of ice conditions. Variation in atmospheric pressure in mb./24 hrs. for a 12-month period 1934–35 at seven stations along the Northern Sea Route is tabulated and discussed. Similar observations for Dikson Island for the period 1916–38 are graphed, and isoline charts for the northern coast of U.S.S.R. for June–July 1939 are presented. ***Copy seen:*** DLC.

56265. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . O sosushchestvovanii

vody i l'da (*In his:* Izbrannye trudy po okeanologii . . . Moskva, 1955, p. 183–87.) Text in Russian. ***Title tr.:*** The coexistence of water and ice.

Presents formulas for the thermal and saline reciprocal action between ice and water, and describes the actions which take place under given circumstances. The formulas are applied to actual conditions to illustrate salinity and temperature decreases by ice melting under arctic conditions. ***Copy seen:*** DLC.

56266. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Prilivo-otlivnye dvizheniĭa morskikh l'dov i ponĭatie o ledovom chase. (*In his:* Izbrannye trudy po okeanologii . . . Moskva, 1955, p. 266–70, diagr., table.) Text in Russian. ***Title tr.:*** Tidal movements of sea ice and the meaning of the ice hour.

Attributes the tidal process of squeezing and thinning of ice fields to the varied effect of tidal influence at different locations at a given time. Effects of winds of varied directions are considered. The ice hour is defined as the mean time interval between the moment of upper culmination of the moon and the next squeeze of the ice at a given point at sea. Practical application of the knowledge of the ice hour for navigational purposes is explained, and exemplified from experiences in the Laptev Sea.

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56267. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Soobrazheniĭa o dvizhenii l'dov pod vliĭaniem vetra. (Leningrad. Gosudarstvennyĭ gidrologicheskiĭ institut. Issledovaniĭa moreĭ SSSR, 1935. vyp. 21, p. 113–19, illus.) 3 refs. Text in Russian. Summary in German. ***Title tr.:*** Considerations on ice movements under the influence of wind.

An analytical study of ice movement as affected by wind speed, earth rotation, ice thickness and altitude. Practical conclusions are drawn regarding distribution and movement of ice and suggestions regarding navigation in ice regions are made. ***Copy seen:*** DLC.

56268. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Taĭanie l'dov v rezul'tate teplogo vozdeĭstviĭa atmosfery i moriĭa. (*In his:* Izbrannye trudy po okeanologii . . . Moskva, 1955, p. 259–65, tables.) Text in Russian. ***Title tr.:*** Ice melting due to heating effects of atmosphere and sea.

Contains an approximate theoretical evaluation of decrease in ice thickness with time as a result of solar radiation and heat transfer in the air. Decrease due to heat transfer from the sea as a function of time is expressed as proportional to ice thickness and inversely proportional to the quantity of heat absorbed by the water.

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56269. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885– . Veter i dreĭf l'dov. (*In his:* Izbrannye trudy po okeanologii . . . Moskva, 1955, p. 271–93, diagrs., tables.) Text in Russian. ***Title tr.:*** Wind and the drift of ice.

"Wind pressure on a continuous ice mass causes drift. Drifting ice effects a flow of water generally in the direction of the ice drift. Wind causes a surface water flow, and small ice floes to drift at the same rate as the water in large areas of water. The drift of ice fragments depends on the concentration of ice floes. The drift of fragments resembles the drift of a continuous ice mass when 75% of the water surface is ice-covered, and that of a single ice floe when the coverage is smaller."—SIPRE. ***Copy seen:*** DLC.

56270. ZUBRIKOV, N. Laĭka v Krasnoĭarskom krae. (Okhota i okhotnich'e khozĭaĭstvo, July 1957, no. 7, p. 33–34, illus.) Text in Russian. ***Title tr.:*** Siberian huskies in Krasnoyarskiy Kray.

The status of dog breeding for hunting in the northern areas of Krasnoyarskiy Kray, including Evenki National District and Turukhansk District, is outlined; and measures for controlling the purity of the (Siberian husky) breed are discussed by a hunting expert (*okhotoved*).

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ZUĬKOVA, E. IŪ., *see* Vlodaveĭs, V. V., *and others.* Sravnitel'naĭa oĭsenka bakteriologicheskogo . . . *1958.* No. 55849.

ZUVIRIA, EFRAIN MARTINEZ, *see* Villamil, A., *and others.* Electrocardiographic changes in artificial hibernation. *1957.* No. 55816.

56271. ZVEDER, L. N. Nekotorye osobennosti kimberlitovykh proĭavleniĭ na Severe Siberskoĭ platformy. (Akademiĭa nauk SSSR. Siberskoe otdelenie. Izvestiĭa, 1958, no. 4, p. 13–18, tables, maps.) 6 refs. Text in Russian. ***Title tr.:*** Some features of kimberlite occurrence in the northern Siberian platform.

Outlines the tectonics of kimberlite pipes, discovered in recent years during

the search for diamonds in the Vilyuy River basin. From stratigraphic, petrographic and mineralogical data, the author concludes that the tectonic explosions which formed the pipes, occurred in folds of traps, and he suggests directing further search to areas on the border of trap fields of the Siberian platform. Structural text map shows location of kimberlite pipes. ***Copy seen:*** DLC.

56272. ZVEREVA, O. S. Novaîa forma lichinki Tendipedidae (Diptera) iz reki Pechory. (Ėntomologicheskoe obozrenie, 1957. t. 36, no. 1, p. 231–32, illus.) 4 refs. Text in Russian. ***Title tr.:*** New tendipedid larva (Diptera, Tendipedidae) from the Pechora River.

Contains a description of *Tendipedidae* gen. et. sp. lv. *kanevi*, n. larva, collected near Mutnyy Materik on the Pechora River. ***Copy seen:*** DLC.

56273. ZVER'KOV, S. N., *and* **G. G. LOMONOSOV.** Kakie vzryvchatye veshchestva nuzhny rudniku "Medvezhiĭ ruchet." (Gornyĭ zhurnal, Oct. 1958, no. 10, p. 41–43, illus.) Text in Russian. ***Title tr.:*** What explosives are required for the "Medvezhiy Ruchey" (Bear Brook) mine.

Types of explosives used in open mining of metallic ores in the Noril'sk deposits, are discussed in relation to their effects on nearby industrial and residential buildings. Due to numerous cracks and instability of the rocks, the explosives must have: high shattering characteristics, high water and frost resistance, maximum density and minimum scattering ability. Powdered, pressed molten and pressed cartridge types used are described.

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56274. ZVONKOV, VASILIĬ VASIL'EVICH. Problema ispol'zovaniîa mirovykh vodnykh resursov. (Akademiîa nauk SSSR. Vestnik, July 1957. god 27, no. 7, p. 8–14.) Text in Russian. ***Title tr.:*** The problem of utilizing the world's water resources.

Of the world's ten great rivers with drainage areas in excess of 2 million sq. km., four are in the U.S.S.R., among them the Ob', Lena and Yenisey. The Soviet Union's river discharge amounts to 13% of the world's rivers; and its water power potential is estimated at 420 million kw. or 3680 billion kw.-h., equal to 11.4% of the world's water power. Development of water resources in the U.S.S.R. for power plants, irrigation, transportation, fisheries, etc., is briefly sketched; the outlook for international cooperation in these fields is discussed.

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56275. ZVONKOV, VASILIĬ VASIL'EVICH. Problemy transporta. (Nauka i zhizn', Feb. 1957. god 24, no. 2, p. 7–9, diagr., maps.) Text in Russian. ***Title tr.:*** Problems of transportation.

Discusses prospects of further development of land and water transportation in the U.S.S.R. in view of advances in electrification and new sources of power (atomic power, gas). The significance of atom-powered ice-breaker construction is noted. ***Copy seen:*** DLC.

56276. ZYKOV, ALEKSANDR. 32 gradusa nizhe nulîa. (Vokrug sveta, Apr. 1957, no. 4, p. 63, illus.) Text in Russian. ***Title tr.:*** 32 degrees below zero.

Photographs of Dr. Zykov swimming amidst ice floes and basking in the sun on top of the ice with note on his work at Ugol'naya Bay in Chukotka.

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56277. ZYKOV, IVAN V. Reka Pechora-doroga pereletnykh ptîts. (Priroda, May 1957, no. 5, p. 124–25.) Text in Russian. ***Title tr.:*** The Pechora River as a route of migratory birds.

Contains observations on migratory birds, chiefly waterfowl species, wintering in the Caspian Sea region and returning by way of the Pechora River to summer on the Barents and Kara Seas. Enormous flocks were observed in some places waiting for the river to clear of the ice. ***Copy seen:*** DLC.

56278. ZYKOV, S. I., *and* **N. I. STUPNIKOVA.** Opredelenie vozrasta pegmatitovoĭ zhily Koĭta-tundry po tsirtolitu, ortitu i uraninitu. (Geokhimiîa, 1956, no. 8, p. 35–38, tables.) 7 refs. Text in Russian. Summary in English, p. 2–3. ***Title tr.:*** Age determination of a pegmatite vein in Koyta Tundra by means of cyrtolite, orthite and uraninite.

Presents results of investigation in northern Karelia of three minerals from the same pegmatite vein to determine its absolute age. The uranium and thorium content in cyrtolite and orthite was checked by the radiometric method and lead by calorimetric method. In the uraninite, the uranium and lead

content was defined by weight ratio. By using the isotopic composition of the lead to distinguish the uranium-lead and the thorium-lead ages, the isotopic age of these minerals was determined. The age of the vein is established and data given. ***Copy seen:*** DLC.

ZYKOV, S. I., *see also* Vinogradov, A. P., *and others.* Izotopnyĭ sostav svintsa-primesi . . . *1958.* No. 55823.

ZYKOV, S. I., *see also* Zhirov, K. K., *and others.* Vliîanie profsessov gidrotermal'-nogo izmeneniî . . . *1957.* No. 56199.

LANGUAGE SYMBOLS ATTACHED TO TITLES IN INDEX

Titles of all publications indexed in this volume are represented by key words *in English*, regardless of the language of their text. The latter is indicated by a single letter following the publication date.

B—Bulgarian
Cz—Czech
D—Danish
Du—Dutch
E—English
Es—Eskimo
F—French
Fi—Finnish
G—German
Gr—Greek
H—Hungarian
He—Hebrew
I—Italian
Ic—Icelandic
J—Japanese
L—Latin
La—Latvian
Li—Lithuanian
Lp—Lappish
N—Norwegian
P—Polish
Port—Portuguese
R—Russian
Ro—Romanian
S—Swedish
S-C—Serbo-Croatian
Sp—Spanish
U—Ukrainian

*—Basic work

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Zoogeography.
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Dansereau, P. M. Biogeog. 1957. *E.* **50442**
Davies, J. L. Geog. gray seal. 1957. *E.* **50452**
Davies, J. L. Pinnipedia zoogeog. 1958. *E.* **50454**
Davies, J. L. Pleistocene geog. *& distrib.* pinnipeds. 1958. *E.* **50455**
Deriugin, K. M. Hydrol. *& biol.* 1930. *R.* **50518**
Dunbar, M. J. Amphipod fauna Ungava B. 1956. *E.* **50652**
Filatova, Z. A. Zoogeog. zonation N. seas molluscs. 1957. *R.* **50889**
Gerlach, R. Can. geese Europe. 1958. *G.* **51161**
Greze, V. N. Food resources Yenisey fishes. 1957. *R.* **51364**
Gur'ianova, E. F. Amphipod *& isopod* fauna Kara. 1935. *R.* **51423**
Gur'ianova, E. F. Amphipod fauna Barents, White Sea. 1934. *R.* **51422**
Gur'ianova, E. F., *& P. V. Ushakov*. Fauna Chernaya B. 1928. *R.* **51424**
Gur'ianova, E. F. Hydrobiol. invest. Mezen. 1957. *R.* **51430**
Hall, E. R. Arctic Tropics Am. 1956. *E.* **51512**
Hanson, H. C., *& others*. Coccidia geese *& swans*. 1957. *E.* **51574**
Khmyznikova, V. L. Zooplankton Matochkin Shar. 1931. *R.* **52269**
Knipovich, N. M. Hydrol. indus. 1930. *R.* **52339**
Libby, W. L. Records pika Tanana, Alaska. 1958. *E.* **52816**
Lindroth, C. H. Faunal connections Europe *& N. Am.* 1957. *E.* **52845**
Miloslavskaia, N. M. Temp. *& distrib.* bivalve molluscs. 1958. *R.* **53313**
Neave, F. Origin, speciation *Oncorhynchus*. 1958. *E.* **53520**
Pasternak, F. A. Distrib. *& group benthos*. 1957. *R.* **53876**
Pergament, T. S. Distrib. benthos coastal E. Murman. 1957. *R.* **53934**
Savilov, A. I. Biol. groupings bottom fauna N. Okhotsk. 1957. *R.* **54580**
Scheffer, V. B. Seals sea-lions walruses. 1958. *E.* **54599**
Segerstråle, S. G. Glacial relicts. 1957. *E.* **54667**
Skrobov, V. D. Advance animals tundra. 1958. *R.* **54948**
Spangenberg, E. P., *& V. V. Leonovich*. Human activity, birds. 1958. *R.* **55088**
Tavrovskiĭ, V. A. Sable hunting. 1958. *R.* **55342**
Wilson, J. L. Olenid trilobite distrib. 1957. *E.* **56079**
Zoogeography—Bibliography.
Lindroth, C. H. Faunal connections Europe *& N. Am.* 1957. *E.* **52845**
Zoological specimens, collections or preparation of.
Karyshev, O. Find. 1957. *R.* **52196**
Kurilov, S. Zool. base. 1957. *R.* **52575**
Zoology. *See also* Birds; Fishes; Mammals, etc.
Akademiia nauk SSSR. Keys to fauna. 1956–58. *R.* **49188**
Alcock, F. J. Activities Nat. Museum Canada. 1957. *E.* **49228**
Bernhoft-Osa, A. Norw. vertebrates. 1950. *N.* **49695**
Bertram, G. C. L. Arctic *& Antarctic*. 1958. *E.* **49701**
Curry-Lindahl, K. Vertebrate fauna Sarek. 1958. *S.* **50405**
Eschscholtz, J. F. Zool. atlas new species voyage *Predpriiatie*. 1829–33. *G.* **50788**
*Føyn, B., *& J. Huus*. Animal life Norway. 1947–50. *N.* **50939**
Int. Congress of Zoology 1953. Proceedings. 1956. *E.* **51938**
Kokosov, N. M., *& others*. Khanty-Mansi Nat. Dist. 1956. *R.* **52358**
Lindroth, C. H. Faunal connections Europe *& N. Am.* 1957. *E.* **52845**
Manning, T. H. Exped. Adelaide Pen. 1958. *E.* **53110**
Retallick, H. J. Geog. Umiat. 1950. *E.* **54282**
Saalas, U. Sahlberg. 1958. *Fi.* **54485**
Sablina, T., *& V. Fedotov*. Spring White Sea. 1957. *R.* **54486**

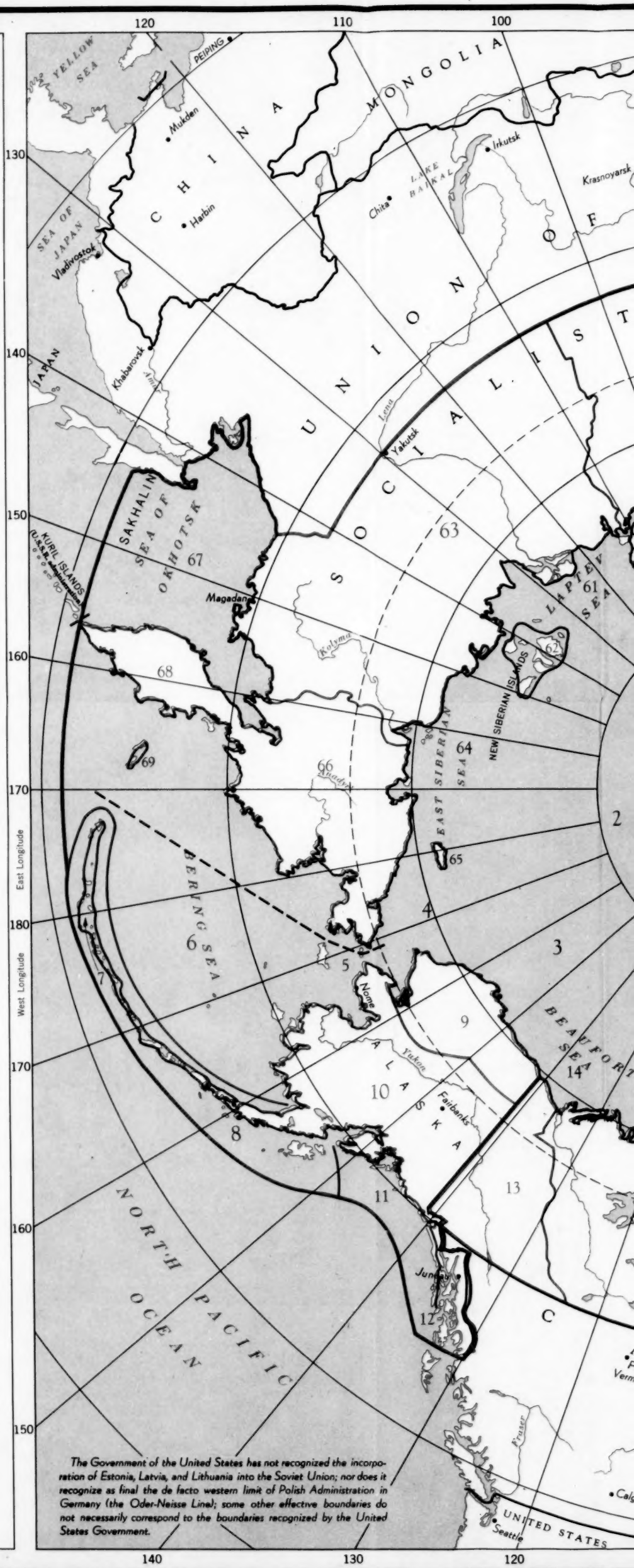
Stroganov, S. U., & K. T. Ïŭrlov. Conference zoologists. 1958. *R.* **55201**
Thorsteinsson, R., & E. T. Tozer. Geol. invest. 1957. *E.* **55422**
Zubov, Nikolaĭ Nikolaevich, 1885– .
Zubov, N. N. Selected works. 1955. *R.* **56258**
Zyryanka (*river & basin*, Kamchatskaya Oblast'; 65°48' N. 150°48' E.).
Pokshishevskiĭ, V. V. Yakutia. 1957. *R.* **54039**
Ushakov, P. N. Mesozoic Kolyma. 1938. *R.* **55667**
Zyryans.
Alekseeva, L. Festival. 1957. *R.* **49246**
Belinovich, N. S., & F. Pleskovskiĭ. Permi. 1957. *R.* **49623**
Beliĭser, V. N. Culture Komi ASSR. 1952. *R.* **49625**
Beliĭser, V. N. Ethnogr. exped. 1947. *R.* **49626**
Gadel'shin, K. A. Russ. phonetics. 1957. *R.* **51038**
Indiana Univ. Zyryans. 1955. *E.* **51923**
König, W., & C. Kupfer. Ethnog. bibliog. 1945–53. 1955. *G.* **52354**
Lagercrantz, S. Eurasian release systems. 1956. *E.* **52622**
Lashuk, L. P. Ethnic formations Komi ASSR. 1958. *R.* **52672**
Lytkin, V. I. Komi dialects. 1957. *R.* **52987**
Sakharova, M. A. Russ.-Zyryan Dict. 1953. *R.* **54516**
Sidorov, A. S. Negative sentences. 1955. *R.* **54876**
Sidorov, A. S. Zyryan language. 1953. *R.* **54877**
Zorin, B., & G. Fibig. Revived country. 1957. *R.* **56246**

U.S. GOVERNMENT PRINTING OFFICE: 1960

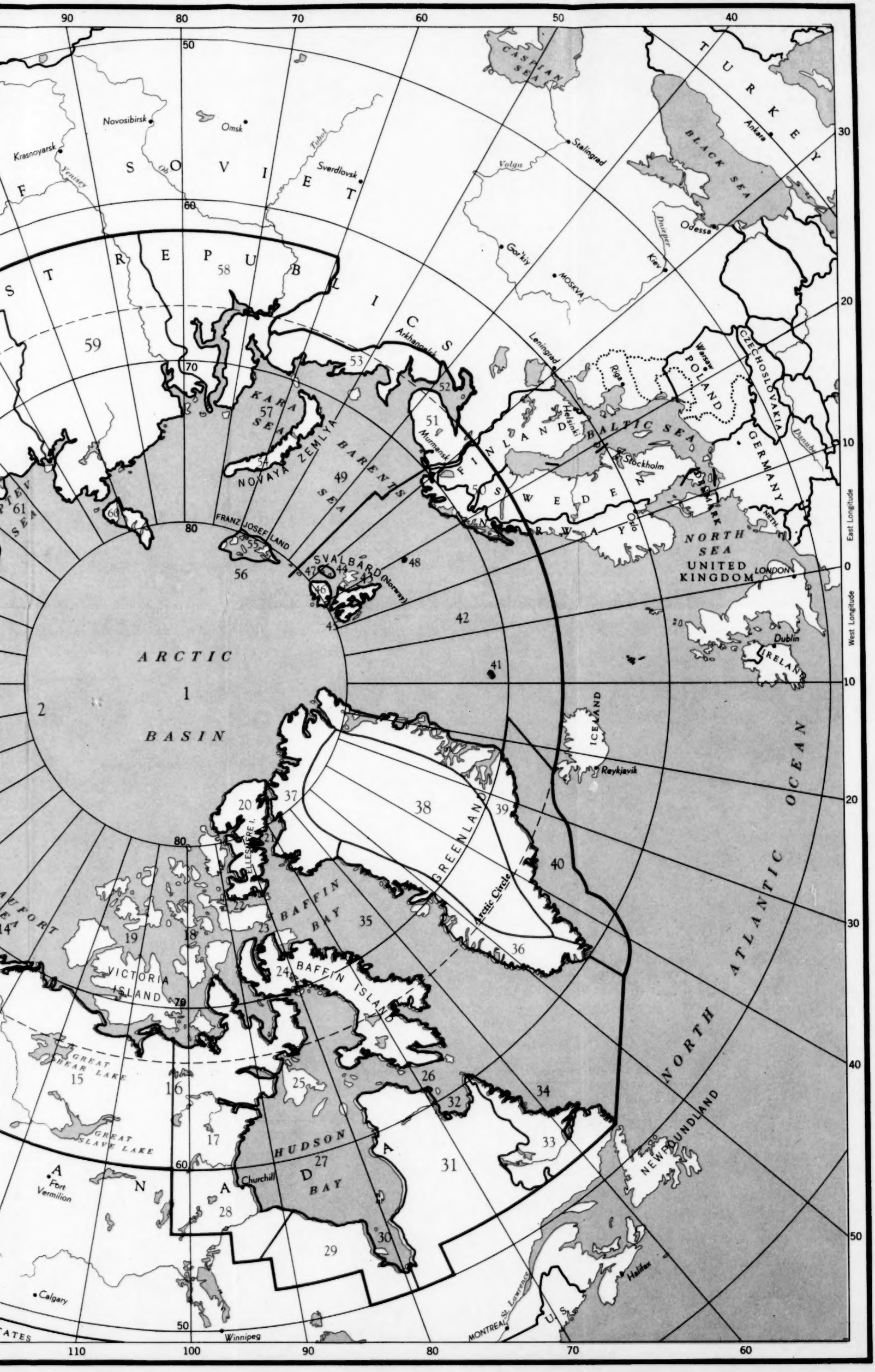
REGIONAL SECTIONS

Used as main index heading

1. Arctic Basin
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66. Kamchatskaya Oblast'
67. Okhotsk, Sea of
68. Kamchatka, Poluostrov
69. Komandorskiye Ostrova



The Government of the United States has not recognized the incorporation of Estonia, Latvia, and Lithuania into the Soviet Union; nor does it recognize as final the de facto western limit of Polish Administration in Germany (the Oder-Neisse Line); some other effective boundaries do not necessarily correspond to the boundaries recognized by the United States Government.


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BARENTS SEA
Murmansk
FRANZ JOSEF LAND
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ARCTIC BASIN
ICELAND
Reykjavik
GREENLAND
Arctic Circle
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BAFFIN BAY
BAFFIN ISLAND
VICTORIA ISLAND
GREAT BEAR LAKE
GREAT SLAVE LAKE
HUDSON BAY
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NOTE

This map depicts the
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REGIONAL SECTIONS

used as *main* Index headings

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70. Kamchatskaya Oblast'
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National districts of the USSR

delineated by broken line

a. Nenetskiy natsional'nyy okrug
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c. Khanty-Mansiyskiy natsional'nyy okrug
d. Taymyrskiy natsional'nyy okrug
e. Evenkiyskiy natsional'nyy okrug
f. Chukotskiy natsional'nyy okrug
g. Koryakskiy natsional'nyy okrug

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Finland, and the USSR.

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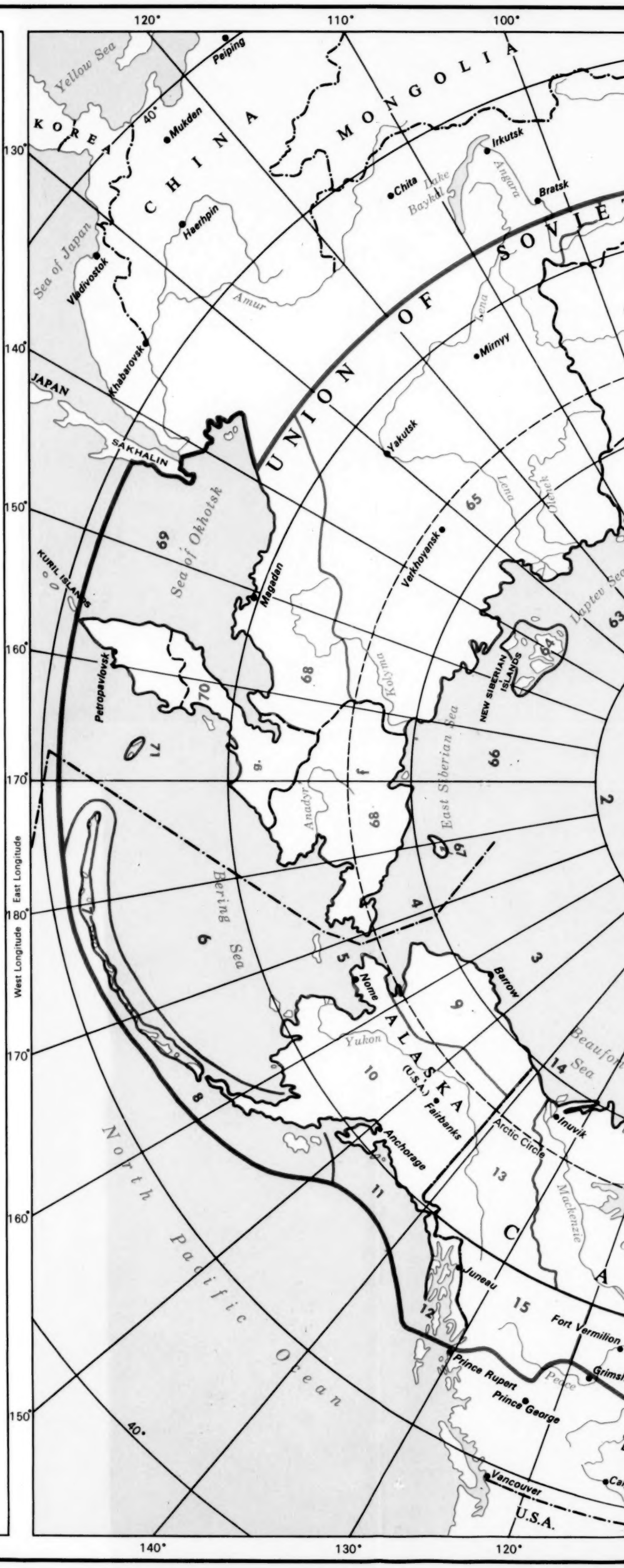
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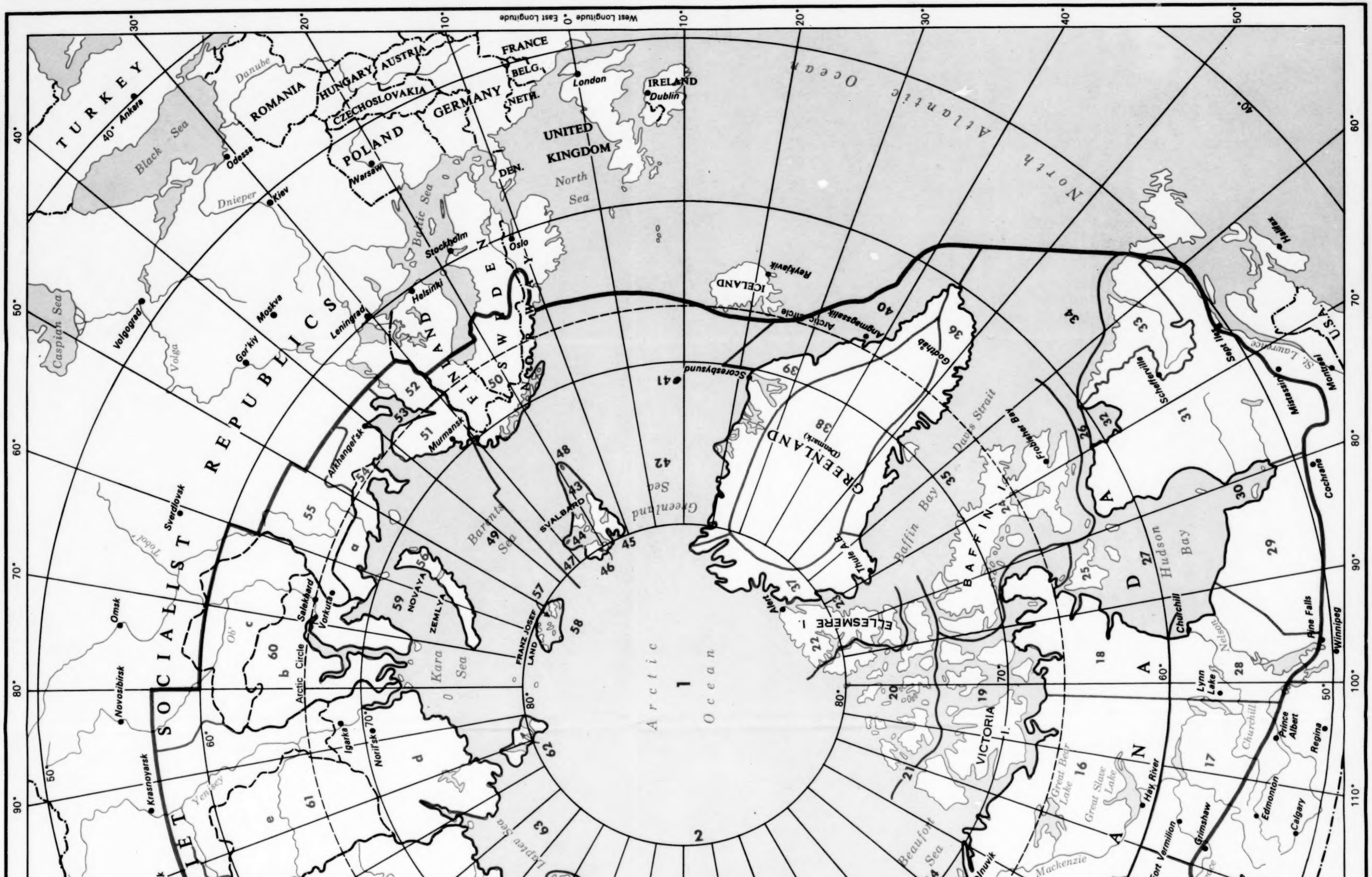
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g. Koryakskiy natsional'nyy okrug




West Longitude
East Longitude
TURKEY
Ankara
Black Sea
Danube
ROMANIA
HUNGARY
AUSTRIA
CZECHOSLOVAKIA
POLAND
GERMANY
FRANCE
BELG.
NETH.
London
IRELAND
Dublin
UNITED KINGDOM
North Sea
DEN.
Odessa
Kiev
Dnieper
Warsaw
Baltic Sea
Stockholm
Oslo
Helsinki
Leningrad
Moskva
Volgograd
Caspian Sea
Volga
Gor'kiy
SOCIALIST REPUBLICS
SWEDEN
FINLAND
NORWAY
Murmansk
Arkhangel'sk
Reykjavik
ICELAND
Arctic Circle
Angmagssalik
Scoresbysund
GREENLAND (Denmark)
Greenland Sea
Barents Sea
SVALBARD
Thule AB
Davis Strait
Baffin Bay
Frobisher Bay
BAFFIN I.
ELLESMERE I.
Alert
Sverdlovsk
Omsk
Novosibirsk
Krasnoyarsk
Yenisey
Ob'
Salekhard
Vorkuta
Arctic Circle
Igarka
Noril'sk
NOVAYA ZEMLYA
FRANZ JOSEF LAND
Kara Sea
Laptev Sea
Arctic Ocean
Beaufort Sea
Inuvik
Mackenzie
Great Bear Lake
Great Slave Lake
Hay River
Fort Vermilion
Grimshaw
Edmonton
Calgary
Lynn Lake
Churchill
Hudson Bay
Prince Albert
Regina
Pine Falls
Winnipeg
Cochrane
Missassing
Sept Iles
Schefferville
Goose Bay
Harbor
U.S.A.
St. Lawrence
Montgomery
Atlantic Ocean
North